

## **CHAPTER 17**

# **MANUFACTURING AND INTERNAL TRADE**



# CHAPTER 17

## MANUFACTURING AND INTERNAL TRADE

### MANUFACTURING

#### Introduction

##### History

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book.

##### Decentralisation and manufacturing industries

The decentralisation of secondary industries, and the steps taken by the Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book.

##### Bounties on manufacture

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards. (See Chapter 22, Public Finance, for products on which bounties are paid.)

##### Government authorities

###### *Industries Assistance Commission*

The Industries Assistance Commission is a statutory authority which came into existence on 1 January 1974 as a result of a passing of the *Industries Assistance Commission Act 1973* by the Australian Parliament. The Commission replaced the Tariff Board, which since 1921 had been responsible for advising the Government on assistance for industries mainly in the secondary sector of the economy. (The *Industries Assistance Commission Act 1973* was amended in March 1978.)

The Commission is an advisory authority, advising the Government. Its functions are to hold inquiries and make reports to the Government in respect to matters of assistance to industries in the primary, secondary and tertiary sectors of the economy and in respect to other matters referred to the Commission by the Government. The Government is required to seek the Commission's advice before it makes changes in the long term assistance afforded industries; but the Government is not obliged to accept the Commission's advice.

References from the Government requiring the Commission to inquire and report on certain matters mainly arise from representations to the Government from organisations, companies or individuals seeking assistance. References are also initiated by the Government and the Commission itself has the power to initiate an inquiry.

The receipt of a reference from the Government is the official document directing the Commission to inquire and report on matters in accordance with the terms of reference and the guidelines as set by the Government.

Public hearings are held by the Commission in Canberra and in capital cities throughout Australia. At these hearings evidence is taken on oath or affirmation. The Act requires the Commission to take into consideration only sworn evidence. The inquiry subject and the date and location of public hearings are advertised in the press and advised by Commission circular.

If after receiving a report from the Commission, the Government decides that assistance afforded a particular industry should be changed, it introduces a proposal to this effect in Parliament. Thus the final responsibility for altering assistance given to particular industries within Australia rests with Parliament.

Copies of the Commission's reports, when released for publication by the Government, are sold by Australian Government Publishing Service bookshops.

The Commission is also required to report annually to the Government on its operations and on the general structure of industry assistance within Australia and its effects on the economy.

*Temporary Assistance Authority*

The Temporary Assistance Authority (TAA), which replaced the Special Advisory Authority set up under the Tariff Board Act, came into operation on 1 January 1974 under the provisions of the *Industries Assistance Commission Act 1973* (since amended).

The main function of the TAA is to undertake inquiries and submit reports to the Government within 45 days of receipt of a reference from the Government on the question of whether urgent action is necessary to provide assistance to any industry that is experiencing difficulty due to the importation of specified goods. If urgent action is necessary the Authority recommends the nature and extent of the assistance to be provided.

The Authority's reports on individual inquiries are normally made public once the Government's decision is announced and are available, as is the annual report, from the Australian Government Publishing Service bookshops.

*Bureau of Industry Economics*

In September 1976, the Australian Government announced that the Bureau of Industry Economics would be established as a centre for research into the manufacturing and commerce sectors. The Bureau began operations in May 1977. Being formally attached to the Department of Industry and Commerce, it has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- carry out research work needed to assist the Government in the formation of industrial policy
- assist the Industries Assistance Commission (IAC) and other government bodies by making submissions on the results of its research
- attract a high standard of professional staff and publish its research findings
- complement the work of other research agencies and co-operate with universities and colleges in developing research programs.

The Bureau is also concerned with developments in mining, rural industry, public services (for example education, health, defence) and trade in goods and services which are linked with the manufacturing and commerce sectors.

A Council has been set up to advise the Minister of Industry and Commerce about the Bureau's work and to ensure that it is relevant to contemporary and long term issues in manufacturing and commerce. Members of the Council are drawn from a wide range of industries and backgrounds, including the universities and the trade union movement. In this way the Council of Advice provides a major link between the Bureau and the community. The Council assists with the development of the work of the Bureau and the effective dissemination of the results of the Bureau's work.

In its investigations, the Bureau principally makes use of economics and related disciplines. Technical and social factors affecting industry structure and performance are also taken into account.

The techniques of economic analysis used include supply and demand estimation, industry structure-performance relationships, input-output analysis, econometrics, cost-benefit methods and socio-demographic investigations. In addition, the Bureau is associated with the large-scale models of the Australian economy under development by the IMPACT team and at the Melbourne University Institute of Applied Economic and Social Research.

The staff of the Bureau includes officers with backgrounds in business, consultancy, government and university teaching and research. An initial nucleus of about 30 persons has been established and it is envisaged that additional recruitment will bring the size of the Bureau to about 100 persons within a few years.

Project control and resource commitments are determined by means of a feasibility study. Within the broad topic under investigation, several specific projects may be justified in relation to previous research findings, data availability, relevance to long-term policy issues and overall budget constraints. Some projects require special surveys where existing data sources are inadequate or more detailed information is required for particular industries. In certain projects the Bureau will undertake joint research with organisations in the private sector and consultants may be engaged where this will significantly enhance the quality of the research or will remedy any lack of in-house expertise.

When initial findings are available, work-in-progress papers are prepared to discuss the methods employed and to ensure that specialist qualified observers have an opportunity to comment on objectives of the research programme. Final reports on projects will be widely distributed with the aim of informing industry groups, government policy makers and teaching and research institutions about industrial and commercial developments.

### Standardisation

The *Commonwealth Scientific and Industrial Research Organization* has functions concerned with the improvement of efficiency in industrial operations. For further particulars see Chapter 25, Science and Technology, in this Year Book.

The *Standards Association of Australia* is the organisation responsible for the preparation, on a national basis, of Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from the sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subject under consideration. This assistance is on a voluntary basis.

Preparation of a standard is undertaken in response to a request from any responsible source, subject to verification that the standard will meet a genuine need. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in many cases where safety of life or property or consumer protection is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the Australian Standard Mark, under conditions established by the Association.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

The *National Standards Commission* was established in 1948 and is presently located at North Ryde, Sydney. The original purpose was to advise the Minister for Science and the Environment on matters relating to weights and measures. It operated under the *Weights and Measures (National Standards) Act*, 1948. This was replaced in 1960 with a new Act which took account of advances in measuring technology and its impact in Australia. Amendments to the 1960 Act were made in 1966 and 1978. The present role of the Commission provides for the establishment and use throughout Australia of uniform units of measurement, uniform standards of measurement of physical quantities and for the examination and approval of the patterns of measuring instruments used for trade in order to control design and quality.

The Commission has close contacts with all States and Territorial weights and measures authorities who ensure by regular inspections that trade instruments continue to comply with the approved patterns.

Close liaison is also maintained with the manufacturing industry, retailers, consumers and other users to ensure a balance between design, quality and cost.

The Commission has regular contacts overseas and provides the Australian member accredited to the International Organisation of Legal Metrology.

The present staff is 28, most of whom are technically qualified. The Commission is directed by a board of five part-time Commissioners.

The *National Association of Testing Authorities* (NATA) organises testing facilities throughout Australia to serve private and governmental needs. Membership is open to authorities whose testing laboratories conform to the standards of staffing and operations defined by the Association. Testing

authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of acoustic and vibration measurement, biological testing, chemical testing, electrical testing, heat and temperature measurement, mechanical testing, metrology, non-destructive testing and optics and photometry.

The *Industrial Design Council of Australia* (IDCA) is engaged in activities aimed at encouraging better design in Australian-made goods and fostering a wider appreciation of good design throughout the community. The Council is representative of industry, commerce and government, together with designers and educationists. It is financed by donations from industry and commerce, and by Commonwealth and State Government grants.

The Council's Field Advisory Service has a diagnostic and counselling role, assisting smaller manufacturers throughout Australia with product development policy and direction. Field advisers are based in IDCA State offices in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart.

The Australian Design Award is granted for high-quality products of Australian design and manufacture. An index of these products is held in each State office. These products are also displayed in Australian Design Centres.

Regular contact is maintained with senior executives of manufacturing companies, departmental officers and designers through the Design Delegate program of lectures. Inquirers seeking professional design services are referred to qualified industrial designers. The Council is also concerned with raising the standard of training in industrial design in co-operation with education authorities.

The Council's National Secretariat is in Melbourne.

The *Australian Standard Commodity Classification* (ASCC) has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items. In a large number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australian Standard Industrial Classification (ASIC)) in which they are typically produced.

The first edition of the ASCC was restricted to commodities originating in manufacturing industries. The second edition, which relates to the year 1977-78 is to be published in 1980, has been amended to also include commodities originating in the agriculture, forestry, fishing, hunting and mining industries.

The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports.

The ABS also publishes a statistical publication *Comparable Commodity Statistics of Production, Imports and Exports, Australia* (1310.0) containing commodity statistics of Australian production, imports and exports based on the standard (ASCC) items contained in the ASCC manual. The second edition of this publication which is to be published in 1980 relates to the year 1977-78 and will contain Australian production, import and export commodity statistics of manufactured goods classified in accordance with the standard (ASCC) items in the second edition of the ASCC manual.

The *Australian Standard Industrial Classification* (ASIC) (1201.0 and 1202.0) was developed by the ABS as part of its program for the integration of economic statistics. Since its introduction by the ABS in the processing of the 1969 Integrated Economic Censuses, the ASIC has gained a wide acceptance by users of statistics outside the ABS and has been progressively applied in most ABS collections and compilations where data are classified by industry.

The ASIC has been devised for the purpose of classifying statistical units by industry. It has been designed primarily as a system for the classification of establishments (e.g. individual mines, factories, shops, etc.) although it may also be used for classifying other economic units such as enterprises.

The fundamental concept of this classification system is that an industry (i.e. an individual class, group, etc.) in the ASIC is composed of establishments that have been classified to it. Each industry class is defined in terms of the predominant activities of the establishment classified to it and these activities are specified in the ASIC as *primary activities* of the individual industry classes. These industry definitions are revised only at relatively infrequent intervals so as to minimise the disruption to time-series data assembled on an ASIC basis.

As a result of a recent comprehensive review of the classification, the 1978 Edition of ASIC has recently been published. This revised edition is being progressively introduced in all relevant ABS collections.

**Productivity Action**

For information about the Productivity Group Movement and Productivity Promotion Council of Australia see Chapter 25, Science and Technology.

**Manufacturing industry statistics****Manufacturing industry statistics from 1901 to 1967-68**

A series of substantially uniform statistics exist from 1901 up until 1967-68 when the framework within which manufacturing statistics were collected was changed. The following table contains a summary of statistics on manufacturing activities in Australia over that period. More detailed manufacturing statistics in respect of this period were included in Year Book No. 57, pages 721-9, and in earlier issues.

**MANUFACTURING INDUSTRY: AUSTRALIA(a), 1901 TO 1967-68**

Year	Fac- tories	Employ- ment(b)	Value of—					
			Salaries and wages paid(c)	Materials and fuel used	Output	Production (d)	Land and buildings (e)	Plant and machinery (e)
	No.	'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1901	11,143	198	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1911	14,455	312	55,056	163,526	266,044	102,518	65,402	63,032
1920-21	17,113	367	125,864	427,118	647,986	220,868	121,662	137,310
1930-31	21,751	339	124,910	344,978	581,598	236,620	224,422	248,996
1940-41	27,300	650	275,838	773,762	1,289,590	515,828	288,188	322,712
1950-51	43,147	969	983,436	2,613,926	4,301,670	1,687,744	605,570	673,230
1960-61	57,782	1,145	2,289,230	6,115,930	10,465,765	4,349,835	2,389,140	2,785,565
1963-64	59,375	1,210	2,651,620	7,372,682	12,642,686	5,270,003	3,204,685	3,480,673
1964-65	61,042	1,269	2,993,709	8,140,600	14,037,355	5,896,754	3,505,859	3,766,253
1965-66	61,686	1,294	3,162,769	8,437,958	14,689,819	6,251,861	3,776,590	4,154,652
1966-67	62,500	1,309	3,407,683	9,015,844	15,892,845	6,877,001	4,061,193	4,706,843
1967-68	62,954	1,331	3,665,902	9,663,217	17,094,070	7,430,853	4,303,156	4,962,203

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory. (b) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel, etc. used). (e) Depreciated or book values at 30 June. Includes estimated values of rented premises and machinery.

**Manufacturing industry statistics from 1968-69**

As from the year ended June 1969, the Censuses of Manufacturing, Electricity and Gas have been conducted within the framework of the integrated economic censuses which include the Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. As a result, manufacturing industry statistics for 1968-69 and subsequent years are not directly comparable with previous years.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing, but the data supplied for it now cover (with a few exceptions) all activities at the location. The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment.

Census units were classified to industry according to the Australian Standard Industrial Classification (ASIC), described in the Bureau publication *Australian Standard Industrial Classification*. The ASIC defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968-69 and the individual economic censuses conducted in previous years.

In the 1967-68 census there were approximately 62,600 manufacturing establishments (excluding electricity and gas establishments) with employment of 1,276,000. Of these, approximately 35,400, with employment of 1,097,000 would have been included in the 1967-68 census if ASIC had been used.

**MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA, 1968-69 to 1977-78**

Census year	Estab- lishments at		Average employment over whole year (a)			Wages and salaries (b)	Turn- over	Stocks		Purchases, transfers in and selected expenses	Rent and leasing added expenses	Fixed capital expend- iture less disposals
	30 June	Males	Females	Persons	Opening			Closing				
	No.	No.	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1968-69	35,939	927,211	334,066	1,261,277	3,908.1	18,646.5	3,102.5	3,319.6	11,395.2	7,468.5	119.7	903.0
1969-70	35,674	950,055	345,578	1,295,633	4,328.7	20,687.6	3,322.8	3,634.7	12,722.9	8,276.5	139.4	1,030.7
1970-71					No manufacturing census was conducted in respect of this year.							
1971-72	36,206	953,967	347,672	1,301,639	5,250.0	23,620.4	3,920.1	4,182.5	14,186.3	9,696.6	188.5	1,297.8
1972-73	36,437	951,610	345,485	1,297,095	5,820.0	26,352.4	4,187.2	4,306.3	15,745.6	10,725.9	217.4	1,244.4
1973-74	37,143	969,338	369,041	1,338,379	7,176.4	31,246.7	4,299.1	5,268.5	19,067.0	13,149.1	262.8	1,215.5
1974-75(c)	36,836	931,367	333,440	1,264,807	8,588.0	35,468.0	5,267.2	6,572.2	21,382.7	15,390.3	329.6	1,456.4
1974-75(d)	26,973	916,896	328,341	1,245,237	8,533.5	35,133.7	5,241.0	6,542.7	21,203.8	15,231.6	318.5	1,445.9
1975-76	27,507	888,523	311,917	1,200,440	9,472.4	39,485.3	6,581.1	7,023.3	23,006.5	16,921.0	365.2	1,451.7
1976-77	26,780	876,111	299,720	1,175,831	10,535.8	44,814.3	6,985.1	7,996.8	26,591.8	19,234.3	418.2	1,548.0
1977-78(e)	25,996	855,567	290,390	1,145,957	11,150.9	48,184.1	7,889.2	8,511.5	28,574.4	20,231.9	492.1	1,872.9
1977-78(f)	26,064	854,180	290,378	1,144,558	11,137.8	48,081.2	7,863.8	8,500.1	28,486.0	20,231.4	493.3	1,880.2

(a) Including working proprietors. (b) Excluding the drawings of working proprietors. (c) This data and that of previous years includes the data of all manufacturing establishments. (d) These data and those of following years exclude single establishment manufacturing enterprises with fewer than four persons employed. (e) These data and those of previous years are classified to the 1969 (preliminary) edition of ASIC. (f) These data are classified to the 1978 edition of ASIC.

The items of data on the census forms were standardised for all census sectors, which has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the 'value of output' at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different.

Even though the concept of 'value added' is similar to 'value of production', direct comparison of 1968-69 and previous figures is not possible because of the change in census units already mentioned which has resulted in the 'value added' for the whole establishment being reported, not merely the 'value added' for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC. In addition, 'value added' as calculated for the Manufacturing Census differs from the concept used in National Accounts where the concept of 'value added' also excludes some administrative expenses and sundry charges and the change in stocks component is measured by valuing the physical change in stocks at current prices. It is not practicable in the Manufacturing Census to collect data fully in accord with the national accounts concept of 'value added'.

For a more detailed description of the Integrated Economic Censuses reference should be made to Year Book No. 56, Chapter 31.

Since the introduction of the system of integrated economic censuses the comparability of manufacturing census data has been affected by two additional changes to collection practices:

- (i) Commencing with the 1975-76 Manufacturing Census, only a limited range of data (i.e. employment and wages and salaries) is collected from single establishment manufacturing enterprises with less than four persons employed. This procedure significantly reduced both the statistical reporting obligations of small businesses and the collecting and processing costs of the Australian Bureau of Statistics without affecting the reliability of information for the evaluation of trends in the manufacturing sector of the economy (as these small enterprises contribute only marginally to statistical aggregates. In order to provide a link with past and future years, 1974-75 data was processed on both bases.
- (ii) Commencing with the 1977-78 census the classification of census units to industry is based on the 1978 edition of the ASIC which replaces the 1969 preliminary edition in use since the 1968-69 census. In general the impact of the change in industrial classification is minimal at the ASIC Division and Subdivision levels. A document fully describing the differences between the 1969 and 1978 editions of the ASIC is available on request from the Australian Bureau of Statistics.



**Multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed**

Main structural aggregates relating to number of establishments, employment, wages and salaries, turnover, purchases, transfers in and selected expenses, stocks, and value added are shown in the following tables. Further detailed statistics are contained in the following ABS statistical publications: *Manufacturing Establishments, Details of Operations by Industry Class, Australia* (8203.0), *Manufacturing Establishments, Summary of Operations by Industry Class, Australia* (8202.0) and *Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size, Australia* (8204.0).

**Summary of operations**

The following table shows the summary of operations for manufacturing establishments.

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY SUB-DIVISION: AUSTRALIA 1976-77 AND 1977-78**

Industry sub-division ASIC code description	Establishments operating at 30 June No.	Average employment over whole year (a)			Wages and salaries (b) \$m	Stocks at 30 June			Purchases, transfers in and selected expenses \$m	Rent and leasing expenses \$m	Fixed capital expenditure less disposals \$m	
		Males No.	Females No.	Persons No.		Turn-over \$m	Opening \$m	Closing \$m				
1976-77(c)												
21-2 Food, beverages and tobacco . . . . .	3,382	144,401	51,480	195,881	1,757	9,652	1,048	1,175	6,277	3,502	67	384
23 Textiles . . . . .	667	22,247	16,938	39,185	324	1,393	268	278	840	563	13	26
24 Clothing and footwear . . . . .	2,301	19,294	64,726	84,020	581	1,824	289	310	951	894	24	15
25 Wood, wood products and furniture . . . . .	3,956	66,580	11,303	77,883	603	2,349	304	352	1,280	1,118	34	82
26 Paper and paper products, printing . . . . .	2,603	71,550	25,835	97,385	910	3,134	364	432	1,587	1,614	40	114
27 Chemical, petroleum and coal products . . . . .	912	44,522	15,907	60,429	640	3,663	588	681	2,291	1,465	22	171
28 Non-metallic mineral products . . . . .	1,535	42,696	4,900	47,596	487	2,036	246	310	1,100	999	15	100
29 Basic metal products . . . . .	549	87,171	6,723	93,894	994	5,626	1,112	1,293	3,828	1,978	48	249
31 Fabricated metal products . . . . .	3,901	82,539	20,274	102,813	882	3,237	506	562	1,753	1,541	44	79
32 Transport equipment . . . . .	1,285	126,047	17,184	143,231	1,309	4,709	771	972	2,785	2,126	25	140
33 Other machinery and equipment . . . . .	3,682	125,957	42,243	168,200	1,491	5,078	1,170	1,276	2,740	2,444	58	124
34 Miscellaneous manufacturing . . . . .	2,007	43,107	22,207	65,314	558	2,118	320	358	1,166	990	30	64
<b>Total manufacturing . . . . .</b>	<b>26,780</b>	<b>876,111</b>	<b>299,720</b>	<b>1,175,831</b>	<b>10,536</b>	<b>44,818</b>	<b>6,985</b>	<b>7,997</b>	<b>26,596</b>	<b>19,234</b>	<b>418</b>	<b>1,548</b>
1977-78 (c)												
21-2 Food, beverages and tobacco . . . . .	3,272	143,713	50,405	194,118	1,878	10,705	1,168	1,298	7,082	3,754	78	409
23 Textiles . . . . .	642	21,090	16,176	37,266	337	1,457	272	277	876	585	15	27
24 Clothing and footwear . . . . .	2,137	19,189	61,809	80,998	613	1,978	305	329	1,036	967	26	20
25 Wood, wood products and furniture . . . . .	3,747	64,156	11,304	75,460	622	2,436	338	354	1,321	1,131	39	53
26 Paper and paper products, printing . . . . .	2,572	71,147	26,091	97,238	1,005	3,498	420	437	1,751	1,763	44	133
27 Chemical, petroleum and coal products . . . . .	897	45,372	16,072	61,444	717	4,147	690	782	2,551	1,690	29	347
28 Non-metallic mineral products . . . . .	1,573	41,587	4,936	46,523	515	2,160	307	354	1,169	1,038	20	131
29 Basic metal products . . . . .	539	85,168	6,503	91,671	1,090	5,851	1,291	1,415	4,006	1,970	55	272
31 Fabricated metal products . . . . .	3,802	81,485	20,083	101,568	923	3,514	561	612	1,922	1,643	51	71
32 Transport equipment . . . . .	1,250	119,605	15,487	135,092	1,350	4,858	942	956	2,840	2,032	29	189
33 Other machinery and equipment . . . . .	3,565	120,904	39,880	160,784	1,537	5,287	1,224	1,314	2,780	2,598	70	136
34 Miscellaneous manufacturing . . . . .	2,001	42,178	21,662	63,840	566	2,303	362	385	1,262	1,064	36	83
<b>Total manufacturing . . . . .</b>	<b>25,997</b>	<b>855,594</b>	<b>290,408</b>	<b>1,146,002</b>	<b>11,152</b>	<b>48,195</b>	<b>7,880</b>	<b>8,513</b>	<b>28,595</b>	<b>20,235</b>	<b>492</b>	<b>1,874</b>

For footnotes see end of table.

MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY SUB-DIVISION:  
AUSTRALIA 1976-77 AND 1977-78—continued

Industry sub-division ASIC code description	Establish- ments operating at 30 June No.	Average employment over whole year (a)			Wages and salaries (b) \$m	Stocks at 30 June			Purchases, transfers in and selected expenses \$m	Rent and leasing expenses \$m	Fixed capital expend- iture less disposals \$m	
		Males No.	Females No.	Persons No.		Turn- over \$m	Opening \$m	Closing \$m				Value added \$m
1977-78 (d)												
21 Food, beverages and tobacco	3,358	143,998	51,340	195,338	1,884	10,825	1,176	1,305	7,186	3,768	79	414
23 Textiles	634	21,021	16,160	37,181	337	1,442	272	276	864	581	15	27
24 Clothing and footwear	2,136	19,203	61,910	81,113	614	1,980	306	330	1,037	968	26	20
25 Wood, wood products and furniture	3,751	63,916	11,227	75,143	621	2,431	338	354	1,319	1,129	39	53
26 Paper, paper products, printing and publishing	2,573	71,117	26,027	97,144	1,005	3,481	420	436	1,735	1,763	44	133
27 Chemical, petroleum and coal products	873	45,649	16,082	61,731	720	4,154	694	786	2,549	1,697	29	349
28 Non-metallic mineral products	1,573	41,412	4,926	46,338	513	2,155	306	353	1,166	1,036	20	132
29 Basic metal products	508	82,313	6,248	88,561	1,050	5,518	1,240	1,366	3,736	1,908	54	268
31 Fabricated metal products	3,829	82,977	20,324	103,301	941	3,635	585	638	2,006	1,681	51	73
32 Transport equipment	1,248	119,550	15,421	134,971	1,350	4,858	942	956	2,840	2,032	30	189
33 Other machinery and equipment	3,558	120,684	39,675	160,359	1,533	5,271	1,222	1,312	2,769	2,592	70	137
34 Miscellaneous manufacturing	2,023	42,340	21,038	63,378	571	2,333	365	387	1,279	1,077	36	83
<b>Total manufacturing</b>	<b>26,064</b>	<b>854,180</b>	<b>290,378</b>	<b>1,144,558</b>	<b>11,138</b>	<b>48,081</b>	<b>7,864</b>	<b>8,500</b>	<b>28,486</b>	<b>20,231</b>	<b>493</b>	<b>1,880</b>

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors. (c) Based on 1969 edition of ASIC. (see page 442).  
(d) Based on 1978 edition of ASIC. (see page 442).

### Employment

The statistics on the number of persons employed shown in the following table relate to the average whole year employment, including working proprietors and those persons working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED BY  
INDUSTRY SUB-DIVISION, 1977-78(a), AND TOTAL MANUFACTURING 1976-77, 1977-78(b)**

Industry sub-division											
ASIC code	Description	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
MALES EMPLOYED											
21	Food, beverages and tobacco	46,241	42,425	28,239	12,777	9,581	4,209	183	343	143,998	
23	Textiles	6,119	11,238	640	1,458	477	1,089	—	—	21,021	
24	Clothing and footwear	5,889	11,231	768	1,008	239	68	—	—	19,203	
25	Wood, wood products and furniture	20,582	16,120	9,563	7,258	6,320	3,673	64	336	63,916	
26	Paper, paper products, printing and publishing	25,845	23,300	6,903	5,378	4,068	4,676	86	861	71,117	
27	Chemical, petroleum and coal products	20,565	15,874	2,917	2,328	2,800	n.p.	752	181	45,649	
28	Non-metallic mineral products	14,932	11,177	5,795	3,746	4,588	880				
29	Basic metal products	48,539	11,205	5,360	8,438	4,971	3,162	113	368	82,313	
31	Fabricated metal products	30,076	28,097	8,841	7,108	6,996	1,378				
32	Transport equipment	32,863	49,775	10,622	20,158	5,581	n.p.	82	153	119,550	
33	Other machinery and equipment	51,271	41,605	7,975	12,464	6,321	842				
34	Miscellaneous manufacturing	15,346	18,681	2,690	3,870	1,394	349	1,369	2,569	120,684	
	<b>Total manufacturing</b>										
	1977-78(a)	318,268	280,728	90,313	85,991	53,336	22,022	1,280	2,242	854,180	
	1977-78(b)	319,172	280,489	90,485	86,097	53,596	22,177	1,280	2,298	855,594	
	1976-77(b)	325,159	288,743	90,975	89,917	54,337	23,042	1,369	2,569	876,111	

For footnotes see end of table.

MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED BY INDUSTRY SUB-DIVISION, 1977-78(a), AND TOTAL MANUFACTURING 1976-77, 1977-78(b)—continued

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>FEMALES EMPLOYED</b>										
21	Food, beverages and tobacco . . . . .	16,395	15,809	7,546	5,445	4,053	1,923	53	116	51,340
23	Textiles . . . . .	4,818	8,222	612	1,034	287	1,187	—	—	16,160
24	Clothing and footwear . . . . .	21,024	33,781	3,140	2,616	1,189	160	—	—	61,910
25	Wood, wood products and furniture . . . . .	3,807	2,969	1,727	1,226	1,178	258	9	53	11,227
26	Paper, paper products, printing and publishing . . . . .	10,853	8,354	2,249	1,891	1,638	690	37	315	26,027
27	Chemical, petroleum and coal products . . . . .	9,263	5,300	580	475	391	np	90	15	16,082
28	Non-metallic mineral products . . . . .	1,895	1,773	426	353	390	62			
29	Basic metal products . . . . .	3,420	1,270	297	736	333	114	28	76	20,324
31	Fabricated metal products . . . . .	7,940	7,174	2,018	1,687	1,202	199			
32	Transport equipment . . . . .	3,350	8,982	606	2,069	285	n.p.	1	51	15,421
33	Other machinery and equipment . . . . .	18,966	13,815	1,168	4,641	941	99			
34	Miscellaneous manufacturing . . . . .	9,003	8,572	1,027	1,862	517	52			21,038
<b>Total manufacturing</b>										
	1977-78(a) . . . . .	110,734	116,021	21,396	24,035	12,404	4,944	218	626	290,378
	1977-78(b) . . . . .	111,499	115,788	21,395	23,754	12,204	4,851	218	699	290,408
	1976-77(b) . . . . .	113,737	120,453	21,782	25,477	12,413	4,724	255	879	299,720
<b>PERSONS EMPLOYED</b>										
21	Food, beverages and tobacco . . . . .	62,636	58,234	35,785	18,222	13,634	6,132	236	459	195,338
23	Textiles . . . . .	10,937	19,460	1,252	2,492	764	2,276	—	—	37,181
24	Clothing and footwear . . . . .	36,913	45,012	3,908	3,624	1,428	228	—	—	81,113
25	Wood, wood products and furniture . . . . .	24,389	19,089	11,290	8,484	7,498	3,931	73	389	75,143
26	Paper, paper products, printing and publishing . . . . .	36,698	31,654	9,152	7,269	5,706	5,366	123	1,176	97,144
27	Chemical, petroleum and coal products . . . . .	29,828	21,174	3,497	2,803	3,191	n.p.	842	196	61,731
28	Non-metallic mineral products . . . . .	16,827	12,950	6,221	4,099	4,978	942			
29	Basic metal products . . . . .	51,959	12,475	5,657	9,174	5,304	3,276	141	444	88,561
31	Fabricated metal products . . . . .	38,016	35,271	10,859	8,795	8,198	1,577			
32	Transport equipment . . . . .	36,213	58,757	11,228	22,227	5,866	n.p.	83	204	134,971
33	Other machinery and equipment . . . . .	70,237	55,420	9,143	17,105	7,262	941			
34	Miscellaneous manufacturing . . . . .	24,349	27,253	3,717	5,732	1,911	401			63,378
<b>Total manufacturing</b>										
	1977-78(a) . . . . .	429,002	396,749	111,709	110,026	65,740	26,966	1,498	2,868	1,144,558
	1977-78(b) . . . . .	430,671	396,277	111,880	109,851	65,800	27,028	1,498	2,997	1,146,002
	1976-77(b) . . . . .	438,896	409,196	112,757	115,394	66,750	27,766	1,624	3,448	1,175,831

(a) Based on 1978 edition of ASIC (see page 442). (b) Based on 1969 edition of ASIC (see page 442).

**Wages and salaries**

The following table shows wages and salaries of all employees of manufacturing establishments including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY INDUSTRY  
SUB-DIVISION, 1977-78 (a) AND TOTAL MANUFACTURING 1976-77, 1977-78 (b)**  
(*\$ million*)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	631	571	342	155	128	49	2	5	1,884
23	Textiles . . . . .	102	176	10	23	7	19	-	-	337
24	Clothing and footwear . . . . .	205	343	27	29	9	1	-	-	614
25	Wood, wood products and furniture . . . . .	209	157	86	70	60	35	1	4	621
26	Paper, paper products, printing and publishing . . . . .	385	336	86	71	54	58	1	13	1,005
27	Chemical, petroleum and coal products . . . . .	347	249	39	32	39	n.p.	} 11	} 2	{ 720
28	Non-metallic mineral products . . . . .	192	145	67	43	51	10			
29	Basic metal products . . . . .	622	149	66	97	67	39			
31	Fabricated metal products . . . . .	348	333	93	75	74	13	1	4	941
32	Transport equipment . . . . .	377	590	105	215	56	n.p.	} 1	} 2	{ 1,350
33	Other machinery and equipment . . . . .	682	533	84	155	69	8			
34	Miscellaneous manufacturing . . . . .	221	249	30	51	16	4			571
<b>Total manufacturing</b>										
	1977-78(a) . . . . .	4,322	3,831	1,035	1,015	629	258	18	30	11,138
	1977-78(b) . . . . .	4,324	3,829	1,036	1,016	639	260	18	30	11,152
	1976-77(b) . . . . .	4,027	3,656	982	981	595	246	18	31	10,536

(a) Based on 1978 edition of ASIC (see page 442).

(b) Based on 1969 edition of ASIC (see page 442).

**Turnover**

The following table shows the value of turnover of manufacturing establishments. The figures include sales of goods whether produced by the establishment or not, transfers out of goods to other establishments of the same enterprise; bounties and subsidies on production; plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue and the value of capital work done on own account. Rents, leasing revenue, interest (other than hire purchase), royalties and receipts from the sale of fixed tangible assets are excluded.

**MANUFACTURING ESTABLISHMENTS—TURNOVER, BY INDUSTRY SUB-DIVISION,  
1977-78 (a) AND TOTAL MANUFACTURING 1976-77, 1977-78 (b)**  
(*\$ million*)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	3,407	3,477	2,019	830	748	318	12	14	10,825
23	Textiles . . . . .	495	710	38	97	28	74	-	-	1,442
24	Clothing and footwear . . . . .	727	1,073	72	84	20	4	-	-	1,980
25	Wood, wood products and furniture . . . . .	822	618	316	279	221	159	3	13	2,431
26	Paper, paper products, printing and publishing . . . . .	1,356	1,165	286	243	167	226	4	34	3,481
27	Chemical, petroleum and coal products . . . . .	1,994	1,216	493	157	224	n.p.	} 116	} 18	{ 4,154
28	Non-metallic mineral products . . . . .	730	586	318	199	249	47			
29	Basic metal products . . . . .	2,726	773	634	428	611	238			
31	Fabricated metal products . . . . .	1,334	1,196	410	308	313	52	8	14	3,635
32	Transport equipment . . . . .	1,097	2,440	494	671	135	n.p.	} 3	} 6	{ 4,858
33	Other machinery and equipment . . . . .	2,331	1,886	304	486	233	23			
34	Miscellaneous manufacturing . . . . .	887	1,032	137	186	75	15			2,333
<b>Total manufacturing</b>										
	1977-78(a) . . . . .	17,906	16,171	5,524	3,967	3,023	1,246	145	99	48,081
	1977-78(b) . . . . .	17,912	16,170	5,529	3,983	3,080	1,277	145	99	48,195
	1976-77(b) . . . . .	16,433	15,040	5,261	3,768	2,888	1,199	124	104	44,818

(a) Based on 1978 edition of ASIC (see page 442).

(b) Based on 1969 edition of ASIC (see page 442).

**Purchases, transfers in and selected expenses**

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuel, power, containers, etc., plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

**MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES,  
BY INDUSTRY SUB-DIVISION, 1977-78(a) AND TOTAL MANUFACTURING 1976-77, 1977-78(b)**  
(\$ million)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	2,254	2,339	1,344	531	504	201	6	6	7,186
23	Textiles . . . . .	303	420	22	65	17	38	-	-	864
24	Clothing and footwear . . . . .	409	551	31	37	7	2	-	-	1,037
25	Wood, wood products and furniture . . . . .	438	335	167	166	117	88	2	6	1,319
26	Paper, paper products, printing and publishing . . . . .	675	604	143	115	74	111	1	12	1,735
27	Chemical, petroleum and coal products . . . . .	1,156	723	398	96	137	n.p.	76	13	2,549
28	Non-metallic mineral products . . . . .	392	299	179	108	137	31			
29	Basic metal products . . . . .	1,730	486	448	299	532	173	5	7	3,736
31	Fabricated metal products . . . . .	728	240	238	178	182	30			
32	Transport equipment . . . . .	541	1,510	294	429	57	n.p.	1	2	2,840
33	Other machinery and equipment . . . . .	1,214	1,005	162	250	125	11			
34	Miscellaneous manufacturing . . . . .	484	561	78	99	46	11	84	47	2,769
	Total manufacturing									
	1977-78(a) . . . . .	10,322	9,473	3,503	2,373	1,937	742	91	46	28,486
	1977-78(b) . . . . .	10,324	9,476	3,506	2,393	2,000	758	91	46	28,593
	1976-77(b) . . . . .	9,599	8,696	3,382	2,280	1,809	694	84	47	26,592

(a) Based on 1978 edition of ASIC (see page 442). (b) Based on 1969 edition of ASIC (see page 442).

### Stocks

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures included all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

**MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS BY INDUSTRY  
SUB-DIVISION, 1977-78(a) AND TOTAL MANUFACTURING 1976-77, 1977-78(b)**  
(\$ million)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>OPENING STOCKS AT 30 JUNE</b>										
21	Food, beverages and tobacco . . . . .	381	407	124	173	50	40	1	-	1,176
23	Textiles . . . . .	92	141	8	14	4	13	-	-	272
24	Clothing and footwear . . . . .	103	169	13	18	2	-	-	-	306
25	Wood, wood products and furniture . . . . .	106	82	42	48	27	31	-	1	338
26	Paper, paper products, printing and publishing . . . . .	163	145	33	25	19	31	-	3	420
27	Chemical, petroleum and coal products . . . . .	374	202	53	17	35	n.p.	42	1	694
28	Non-metallic mineral products . . . . .	125	73	44	26	32	5			
29	Basic metal products . . . . .	620	152	111	111	133	71	2	3	1,240
31	Fabricated metal products . . . . .	204	215	58	53	42	8			
32	Transport equipment . . . . .	199	462	101	159	17	n.p.	-	1	942
33	Other machinery and equipment . . . . .	524	473	68	108	44	3			
34	Miscellaneous manufacturing . . . . .	134	176	18	25	8	3	35	11	1,222
	Total manufacturing									
	1977-78(a) . . . . .	3,026	2,696	674	779	411	224	45	9	7,864
	1977-78(b) . . . . .	3,027	2,696	674	784	415	229	45	9	7,880
	1976-77(b) . . . . .	2,672	2,451	579	680	352	204	35	11	6,985

For footnotes see end of table.

MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION, 1977-78(a) AND TOTAL MANUFACTURING 1976-77, 1977-78(b)—*continued* (\$ million)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
CLOSING STOCKS AT 30 JUNE										
21	Food, beverages and tobacco . . .	416	464	141	189	55	38	1	—	1,305
23	Textiles . . . . .	83	144	10	18	5	15	—	—	276
24	Clothing and footwear . . . . .	109	187	14	18	2	—	—	—	330
25	Wood, wood products and furniture . . . . .	108	85	46	47	33	33	—	1	354
26	Paper, paper products, printing and publishing . . . . .	167	160	37	26	19	24	—	3	436
27	Chemical, petroleum and coal products . . . . .	411	232	73	18	38	n.p.	43	1	786
28	Non-metallic mineral products . . . . .	131	91	52	30	41	7			
29	Basic metal products . . . . .	640	139	132	131	218	65	2	3	1,366
31	Fabricated metal products . . . . .	231	226	60	60	47	9			
32	Transport equipment . . . . .	193	478	92	174	16	n.p.	—	1	956
33	Other machinery and equipment . . . . .	558	515	68	115	50	4			
34	Miscellaneous manufacturing . . . . .	146	178	18	30	9	6	42	11	1,312
	Total manufacturing									
	1977-78(a) . . . . .	3,193	2,899	743	857	533	218	47	10	8,500
	1977-78(b) . . . . .	3,194	2,898	744	862	533	224	47	11	8,513
	1976-77(b) . . . . .	3,057	2,744	691	789	430	232	42	11	7,997

(a) Based on 1978 edition of ASIC (see page 442). (b) Based on 1969 edition of ASIC (see page 442).

### Value added

The statistics on 'value added' contained in the following table have been calculated by adding to the value of turnover the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchasers, transfers in and selected expenses. A more detailed description of the method of deriving 'value added' is given on page 442.

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION, 1977-78(a) AND TOTAL MANUFACTURING, 1976-77, 1977-78(b) (\$ million)

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . .	1,189	1,195	691	315	248	115	5	8	3,768
23	Textiles . . . . .	183	293	19	36	12	38	—	—	581
24	Clothing and footwear . . . . .	323	540	42	47	13	2	—	—	968
25	Wood, wood products and furniture . . . . .	387	285	154	113	111	72	1	7	1,129
26	Paper, paper products, printing and publishing . . . . .	685	576	147	129	93	109	3	22	1,763
27	Chemical, petroleum and coal products . . . . .	875	523	116	62	90	n.p.	41	5	1,697
28	Non-metallic mineral products . . . . .	345	305	147	95	120	17			
29	Basic metal products . . . . .	1,017	275	207	148	166	59	3	8	1,908
31	Fabricated metal products . . . . .	633	567	174	137	135	23			
32	Transport equipment . . . . .	550	945	191	257	76	n.p.	3	4	2,032
33	Other machinery and equipment . . . . .	1,151	922	143	243	115	13			
34	Miscellaneous manufacturing . . . . .	415	474	60	91	30	7	46	57	1,077
	Total manufacturing									
	1977-78(a) . . . . .	7,752	6,901	2,090	1,672	1,209	498	56	54	20,231
	1977-78(b) . . . . .	7,755	6,897	2,093	1,669	1,197	513	56	54	20,235
	1976-77(b) . . . . .	7,219	6,637	1,991	1,597	1,154	533	46	57	19,234

(a) Based on 1978 edition of ASIC (see page 442). (b) Based on 1969 edition of ASIC (see page 442).

### Number of establishments

The following table shows the number of establishments in each State in operation at 30 June for the years indicated. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION AT 30 JUNE 1978(a) BY INDUSTRY SUB-DIVISION, AND TOTAL MANUFACTURING 1976-77, 1977-78(b)**

<i>Industry sub-division</i>										
<i>ASIC code</i>	<i>Description</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
21	Food, beverages and tobacco . . . . .	960	984	561	383	318	129	15	8	3,358
23	Textiles . . . . .	223	301	34	35	28	13	-	-	634
24	Clothing and footwear . . . . .	843	1,079	84	73	49	8	-	-	2,136
25	Wood, wood products and furniture . . . . .	1,226	1,078	559	318	372	170	9	19	3,751
26	Paper, paper products, printing and publishing . . . . .	1,103	848	217	187	149	45	6	18	2,573
27	Chemical, petroleum and coal products . . . . .	408	276	58	50	64	n.p.	20	16	873
28	Non-metallic mineral products . . . . .	538	380	254	145	173	53			
29	Basic metal products . . . . .	207	166	48	40	33	10	10	17	1,573
31	Fabricated metal products . . . . .	1,484	1,097	442	353	349	76			
32	Transport equipment . . . . .	387	409	167	121	142	n.p.	4	11	1,248
33	Other machinery and equipment . . . . .	1,510	1,228	246	293	230	40			
34	Miscellaneous manufacturing . . . . .	807	725	168	172	130	18	67	101	2,023
	<b>Total manufacturing</b>									
	1977-78(a) . . . . .	9,696	8,571	2,838	2,170	2,037	599	64	89	26,064
	1977-78(b) . . . . .	9,712	8,542	2,840	2,146	2,016	586	64	91	25,997
	1976-77(b) . . . . .	9,982	8,735	3,001	2,242	2,035	617	67	101	26,780

(a) Based on 1978 edition of ASIC (see page 442).

(b) Based on 1969 edition of ASIC (see page 442).

## Single establishment manufacturing enterprises with less than four persons employed

### Summary of operations

The following table shows the summary of operations for single establishment manufacturing enterprises with less than four persons employed.

### SINGLE ESTABLISHMENT MANUFACTURING ENTERPRISES WITH LESS THAN FOUR PERSONS EMPLOYED: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION: AUSTRALIA, 1977-78(a) AND TOTAL MANUFACTURING 1976-77(b)

<i>Industry sub-division</i>		<i>Establishments operating at 30 June</i>	<i>Employment at 30 June (c)</i>			<i>Wages and salaries (d)</i>
<i>ASIC code</i>	<i>Description</i>		<i>Males</i>	<i>Females</i>	<i>Persons</i>	
		<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>\$m</i>
21	Food, beverages and tobacco . . . . .	746	1,165	556	1,721	4.8
23	Textiles . . . . .	217	266	187	453	1.4
24	Clothing and footwear . . . . .	514	435	627	1,062	3.2
25	Wood, wood products and furniture . . . . .	2,785	4,555	979	5,534	13.9
26	Paper, paper products, printing and publishing . . . . .	1,171	1,577	848	2,425	8.2
27	Chemical, petroleum and coal products . . . . .	231	350	117	467	2.1
28	Non-metallic mineral products . . . . .	455	801	159	960	3.7
29	Basic metal products . . . . .	91	155	24	179	0.8
31	Fabricated metal products . . . . .	1,903	3,249	694	3,943	13.3
32	Transport equipment . . . . .	582	993	205	1,198	3.3
33	Other machinery and equipment . . . . .	1,563	2,496	681	3,177	12.2
34	Miscellaneous manufacturing . . . . .	1,566	2,190	853	3,043	7.9
	<b>Total manufacturing</b>					
	1977-78(a) . . . . .	11,824	18,232	5,930	24,162	74.9
	1976-77(b) . . . . .	11,039	16,624	5,543	22,167	61.2

(a) Based on 1978 edition of ASIC (see page 442).

(b) Based on 1969 edition of ASIC (see page 442).

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

## Electricity and gas establishments

For the section on electricity and gas establishments see Chapter 18, Energy.

## Principal manufacturing commodities

The factory production of certain commodities is shown in the monthly and quarterly publications of the ABS, and in the annual publication, *Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary)* (8365.0). A more comprehensive list of articles produced is contained in the annual publication, *Manufacturing Commodities, Principal Articles Produced, Australia* (8303.0).

The following table shows the total recorded production of some of the principal articles (i.e. of those for which production can be represented in quantitative terms) manufactured in Australia. A more complete list, where available, is published in ABS publication 8303.0 mentioned above.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA

Commodity code	Article		1975-76	1976-77	1977-78 <sup>a</sup>
	<b>Acid (in terms of 100%)—</b>				
401.29	Hydrochloric . . . . .	tonnes	48,046	47,735	50,215
401.37	Nitric . . . . .	"	165,091	152,899	174,436
401.57	Sulphuric . . . . .	'000 tonnes	1,281	1,752	1,831
171.03, 04, 07, 08	Aerated and carbonated waters . . . . .	'000 litres	891,234	951,238	998,664
	<b>Air-conditioning equipment—</b>				
657.03, 05	Room air conditioners (refrigerated) . . . . .	No.	31,666	37,213	40,811
657.13, 15	Room air coolers (evaporative coolers) . . . . .	"	85,752	103,726	61,374
657.21, 22, 23	Package unit air conditioners . . . . .	"	17,901	26,689	22,217
	<b>Animal feeds—</b>				
	<b>From wheat—</b>				
152.06	Pollard . . . . .	'000 tonnes	254	205	228
159.11	Poultry pellets and crumbles . . . . .	"	1,104	1,127	1,200
159.15	Poultry mash . . . . .	"	235	240	203
159.21	Other prepared stock and poultry feed . . . . .	"	490	548	635
159.01	Canned dog and cat foods . . . . .	'000 kg	150,866	174,260	163,365
159.02	Dog biscuits (whole) . . . . .	"	19,223	20,215	19,628
159.03	Other manufactured dog and cat food . . . . .	"	42,879	53,025	58,492
475.04, 06, 07, 85	Asbestos cement building sheets (finished) . . . . .	'000 m <sup>2</sup>	39,976	43,713	39,436
	<b>Bags, leather, fibre, etc.—</b>				
	<b>Handbags—</b>				
864.31	Leather . . . . .	'000	336	306	378
864.33	Plastic . . . . .	"	1,158	959	612
864.39	Other . . . . .	"	410	329	292
946.01-52	Hessian and calico bags . . . . .	'000 doz	1,113	n.a.	n.a.
864.11-19	Suitcases, kitbags and trunks . . . . .	'000	1,149	857	874
	<b>Bath heaters—</b>				
652.01	Electric . . . . .	No.	8,819	7,079	6,399
652.03, 06, 08	Gas . . . . .	"	n.a.	n.a.	n.a.
652.05	Solid fuel . . . . .	"	1,669	1,158	884
779.02-37	Bathing suits(a) . . . . .	'000 doz	273	252	311
	<b>Baths (exclude infants' baths)—</b>				
671.03	Pressed steel—Enamelled . . . . .	'000	142	149	136
671.01, 04, 08	Other (exclude pressed steel, galvanised) . . . . .	"	37	29	27
	<b>Batteries, wet cell type—</b>				
685.13, 15	Auto (S.L.I.) 6 volts . . . . .	"	314	300	279
685.17, 19	Auto (S.L.I.) 12 volts . . . . .	"	2,468	2,656	2,773
685.33, 35	Radio, homelighter, fencer . . . . .	No. of 2 volts cells	26,159	18,206	13,269
685.43-65	Traction, plant and other . . . . .	"	163,767	158,314	175,926
172.02, 04, 06	Beer (excluding waste beer) . . . . .	mil. litres	1,916	1,955	2,055
064.21	Biscuits . . . . .	'000 kg	117,863	124,706	121,341
372.52-66, 374.51-57	Blankets, Woollen—Pure and Mixtures . . . . .	'000	2,022	1,580	1,427
152.02	Bran (wheaten) . . . . .	'000 tonnes	130	116	96
172.21	Brandy . . . . .	'000 litre al	1,552	1,963	2,678
777.41, 49	Brassieres . . . . .	'000 doz	723	665	641
066.01-31	Breakfast food, cereal (ready to eat) . . . . .	tonnes	67,344	73,780	77,814
472.01, 03	Bricks, clay . . . . .	million	1,815	2,033	1,911
261.41	Briquettes, brown coal . . . . .	'000 tonnes	946	1,035	1,064
051.30, 052.20	Butter—from cream (exclude whey cream) . . . . .	'000 kg	145,916	116,095	110,558
773.51, 53, 74, 75, 83	Cardigans, jumpers, etc. . . . .	'000 doz	1,965	2,065	2,040
474.02	Cement, Portland . . . . .	'000 tonnes	5,100	5,083	5,016

(a) Includes swim shorts. Excludes infants' and babies' swim-wear.



QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—continued

Commodity code	Article		1975-76	1976-77	1977-78p
053.45	Cheese (non-processed)	'000kg	112,617	103,549	115,583
	Cloth (including mixtures)—				
373.10-52	Cotton(a)	'000m <sup>2</sup>	44,708	39,210	37,490
374.02-16	Rayon and acetate	"	16,936	16,594	14,218
374.20-34	Synthetic (non-cellulosic)	"	100,994	98,501	103,571
372.02-50	Wool (excluding blanketing and rug)	"	14,297	11,494	n.y.a.
435.22	Coke—Metallurgical	'000 tonnes	4,732	4,501	4,310
475.90	Concrete, ready mixed	'000m <sup>3</sup>	10,273	10,548	10,331
	Confectionery—				
104.06-18	Chocolate	'000 kg	55,251	55,663	69,304
104.21-29	Other	"	63,273	58,961	59,161
452.04	Copper, refined(b)	'000 tonnes	164	157	155
171.06, 10	Cordials and syrups	'000 litres	100,759	104,415	115,468
777.01-29	Corsets and corselets	'000 doz	188	n.a.	n.a.
611.01	Cycles (complete)	'000	217	274	190
804.01	Dentifrices (toothpaste)	'000 kg	6,704	7,496	7,738
499.42	Electricity	mil. kWh	76,597	85,522	85,981
523.76-78	Electrodes for manual welding	'000 kg	22,997	20,508	17,659
502.22-39	Engines, spark and compression ignition(c)	'000	342	311	246
	Essences, flavouring—				
139.31	Domestic	'000 litres	332	431	539
139.35	Industrial	"	4,609	5,553	6,407
696.01, 03, 05	Fans, electric (propellor type)	No.	541,766	486,347	443,528
045.01, 51	Fish, canned (including fish loaf)	'000 kg	7,273	6,385	7,898
	Floorboards—				
332.06	Australian timber	m <sup>3</sup> }	276,536	247,705	265,292
332.08	Imported timber	" }			
	Floor coverings—				
841.01-07	Textile	'000 m <sup>2</sup>	31,939	29,901	27,422
841.31-61, 69	Smooth surface and embossed	"	7,366	5,799	6,085
841.67, 68	Timber parquetry	"	122	150	109
841.85	Underfelts, underlays, etc.(d)	"	11,641	10,491	9,127
692.21, 23	Floor polishers, electric	No.	23,586	17,316	12,391
	Flour—				
068.01	Self-raising	'000 kg	37,423	33,922	59,121
062.01, 10, 32	Wheaten(e)	'000 tonnes	1,242	1,067	1,090
	Fruit juices, natural—				
074.61-69, 79	Single strength	'000 litres	187,762	156,508	227,474
074.76, 89	Concentrated(f)	"	16,269	10,718	22,476
781.06-29	Gloves, work(g)	'000 doz pairs	3,829	4,039	3,017
127.21	Glucose	'000 kg	51,880	50,523	49,240
832.58, 59	Golf clubs	doz	52,324	34,173	27,338
	Handkerchiefs—				
786.01	Men's	'000 doz }	865	766	735
786.11	Women's	" }			
	Heaters, room—				
651.01, 03	Solid fuel	No.	3,547	3,274	3,537
651.11-20	Electric radiators and fires	'000	648	658	738
651.04, 05, 21, 22, 26, 27	Gas fires and space heaters	No.	61,620	77,769	70,784
775	Hosiery—				
	Women's (including panty hose)	'000 doz pairs	6,756	5,909	5,387
	Men's	"	1,993	1,876	1,847
	Childrens' and infants'	"	1,112	1,122	1,152
051.61	Ice cream(h)	'000 litres	213,275	190,679	211,923
051.87, 89, 90	Infants', invalids' and health beverages from cows milk(i)	'000 kg	29,804	30,968	28,078
	Ink, printing—				
419.31	News	"	6,596	n.a.	n.a.
419.43-59	Other	"	n.a.	n.a.	n.a.

(a) Excludes tyre-cord fabric and towelling. (b) Primary origin only. (c) Petrol and diesel. Excludes car, motorcycle, truck, tractor, aero, and marine engines. (d) Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes). (e) Includes wheatmeal for baking and sharps and other flour. (f) Excludes grape must. (g) Excludes fabric liners for dipped gloves but includes moulded or heat-sealed work gloves. (h) Includes ice cream combined with other confections, including those aerated milk-based confections which contain 10% or more butterfat. (i) Includes malted milk and milk sugar (lactose).

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—continued

Commodity code	Article		1975-76	1976-77	1977-78 <sup>p</sup>
	<b>Iron and steel—</b>				
442.04, 08	Pig iron . . . . .	'000 tonnes	7,331	7,005	6,989
442.80-83	Steel ingots . . . . .	"	7,832	7,558	7,445
442.28	Blooms and slabs( <i>a</i> ) . . . . .	"	6,477	6,544	6,520
693.51, 61, 63	Irons, electric (hand, domestic) . . . . .	'000	746	876	774
076.60	Jams (including conserves, jellies, etc.) . . . . .	'000 kg	31,121	27,267	28,998
391.04	Lard . . . . .	"	2,466	2,737	3,399
	<b>Lawn mowers—</b>				
699.52, 53	Petrol, rotary . . . . .	No.	336,866	316,793	268,790
699.41, 45, 55, 61	Other types( <i>b</i> ) . . . . .	"	19,559	12,917	14,359
453.04	Lead refined( <i>c</i> ) . . . . .	'000 tonnes	168	166	208
	<b>Leather—</b>				
	<b>Dressed or finished—</b>				
301.43-65	Chrome tanned (including retanned) . . . . .	'000 m <sup>2</sup>	5,015	5,090	6,044
301.31-37, 83-89	Vegetable tanned, by weight . . . . .	'000 kg	n.a.	n.a.	n.a.
301.67, 69	Vegetable tanned, by measurement . . . . .	'000 m <sup>2</sup>	178	162	225
	<b>Lime—</b>				
275.43, 45	Crushed . . . . .	tonnes	228,220	205,070	212,032
479.18	Hydrated . . . . .	'000 tonnes	110	120	115
479.12	Quick . . . . .	"	564	532	563
802.21	Lipstick . . . . .	'000 kg	41	40	40
063.11-21, 31	Malt (excluding extract) . . . . .	'000 tonnes	403	388	423
	<b>Margarine—</b>				
121.01	Table . . . . .	'000 kg	46,482	69,902	76,214
121.06, 08	Other . . . . .	"	56,635	52,812	45,876
	<b>Mattresses—</b>				
844.22, 25, 27	Inner spring . . . . .	'000	630	695	683
844.42, 45, 47	Rubber . . . . .	"	16	15	10
844.52-67	Other . . . . .	"	542	601	581
027.02-77	Meat, canned( <i>d</i> ) . . . . .	'000 kg	43,878	52,173	51,778
	<b>Meters (domestic)—</b>				
702.01	Electricity consumption . . . . .	'000	248	235	206
703.01	Gas consumption . . . . .	"	62	69	88
703.11	Water consumption . . . . .	"	189	178	171
	<b>Milk, condensed, concentrated and evaporated—</b>				
051.21, 22	Full cream, coffee and milk, sweetened . . . . .	'000 kg	15,364	19,777	17,996
051.23, 052.42	Full cream, unsweetened . . . . .	"	34,350	37,925	37,703
051.28	Skim . . . . .	"	22,312	22,176	25,704
	<b>Milk powder in powdered form—</b>				
051.72, 73	Full cream . . . . .	"	43,977	57,550	76,367
051.76-79	Skim . . . . .	"	149,097	103,924	84,302
051.81, 82	Buttermilk or mixed skim and buttermilk . . . . .	"	11,676	8,881	9,297
503.13-32	Motors, electric (excl. automotive) . . . . .	'000	4,140	3,319	2,872
	<b>Motor vehicles, finished—</b>				
581.02-08	Cars . . . . .	No.	308,537	322,607	264,959
581.10-16	Station wagons . . . . .	"	55,289	58,511	53,186
582.04	Utilities . . . . .	"	26,031	24,937	21,979
582.06	Panel vans . . . . .	"	28,195	25,844	20,221
582.08-24	Truck and truck-type vehicles . . . . .	"	7,488	10,223	10,091
	<b>Motor vehicles, partly finished—</b>				
581.22-28, 582.31, 32	Cars, station wagons, utilities, vans . . . . .	"	1,489	1,508	1,358
582.33-46	Trucks and truck-type vehicles . . . . .	"	22,834	23,719	18,927
589.81-89	Motor vehicle safety belts . . . . .	'000	2,193	2,129	1,605
465.16, 17	Nails . . . . .	"	22,683	22,336	20,269
	<b>Oatmeal and rolled oats—</b>				
062.61, 63	For porridge, etc. . . . .	tonnes	14,863	13,059	15,637
393, 394	Oils and fats, crude—Vegetable . . . . .	'000 kg	72,395	61,345	78,885
	<b>Paints, etc.—</b>				
	<b>Architectural and decorative(<i>e</i>)—</b>				
	<b>Solvent thinned—</b>				
410.01	Primers and undercoats . . . . .	'000 litres	12,596	11,918	11,764
410.03, 05, 07	Finishing coats . . . . .	"	30,823	29,266	27,585

(a) Primary mills output. excludes lead-silver bullion.

(b) Petrol cylinder, electric and hand.  
(d) Excludes poultry and baby food.

(c) Includes lead content of lead alloys from primary sources but  
(e) Excludes heavy duty coatings.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—continued

Commodity code	Article		1975-76	1976-77	1977-78p
	Water thinned—				
410.11, 13, 15	Plastic latex . . . . .	..	32,277	35,855	35,826
410.17	Other water based . . . . .	..	254	315	382
410.25	Tinting colours (all types) packed for sale or transfer out . . . . .	'000 litres	508	539	509
	Paper—				
351.11	Newsprint . . . . .	'000 tonnes	206	207	208
351.18-79	Other . . . . .	..	536	586	606
352.11-33	Paperboard . . . . .	..	380	431	415
336.12	Particle board (resin bonded) . . . . .	'000 m <sup>2</sup>	460	496	522
975.04, 09, 11	Perambulators, pushers and strollers . . . . .	'000	n.a.	n.a.	n.a.
479.22	Plaster of paris . . . . .	'000 tonnes	347	384	348
479.32, 33	Plaster sheets—Non-acoustic . . . . .	'000 m <sup>2</sup>	44,794	49,947	48,034
334.32, 34, 36, 38	Plywood, 1 mm basis . . . . .	..	78,191	78,227	84,681
	Preserves—				
	Fruit—				
076.01-50	Canned or bottled . . . . .	'000 kg	175,317	182,833	182,429
074.01	Pulp and puree—single strength . . . . .	..	5,598	6,540	3,022
	Vegetables—				
094.02-47	Canned or bottled . . . . .	..	122,856	122,146	127,814
092.02, 06, 10, 19	Quick frozen . . . . .	..	130,627	129,888	130,321
	Pyjamas—				
774.20, 22, 27, 29	Men's, youth's and boy's (suits only) . . . . .	'000 doz	340	n.a.	n.a.
774.50-59, 64, 66	Women's, maid's and girl's (incl. nightdresses) . . . . .	..	748	731	694
832.65, 85	Racquet frames (all types) . . . . .	doz.	12,792	12,792	11,078
643.01-37	Radio receiving sets (including radiograms) . . . . .	No.	117,350	62,569	216,174
	Records (phonograph)—				
646.35, 65	Single play . . . . .	'000	5,512	7,131	7,233
646.37, 41, 67, 71	Extended play . . . . .	..	328	195	144
646.43, 45, 73, 75	Long play . . . . .	..	21,245	21,502	21,143
657.33, 34, 35, 41	Refrigerators, domestic, electric and gas . . . . .	..	230	276	249
403.404	Resins, plastics and synthetic, for all purposes . . . . .	'000 tonnes	380	459	484
061.67, 69	Rice, polished, unpolished and broken . . . . .	'000 kg	298,051	279,779	n.a.
372.70, 72, 374.59	Rugs . . . . .	'000	159	129	131
123.18-25	Sauce . . . . .	'000 litres	28,142	34,248	31,531
062.04	Semolina . . . . .	'000 tonnes	27	24	28
773.02-09	Shirts (men's, youths' and boys'), collar attached (a) . . . . .	'000 doz	595	477	522
653.01	Sink heaters, electric . . . . .	No.	9,838	10,439	9,340
671.11-18	Sinks, steel and other (standard size) . . . . .	..	244,821	300,872	220,855
805.01-13	Soap, for personal toilet use (b) . . . . .	tonnes	28,464	28,390	29,891
	Soup—				
122.02, 09	Canned . . . . .	'000 litres	37,572	37,708	36,268
122.13, 15	Dry-mix . . . . .	'000 kg	5,524	6,359	5,227
127.11-19	Starch (incl. cornflour) . . . . .	..	126,478	139,603	149,556
401.53	Stearine (stearic acid) . . . . .	..	4,602	7,890	n.a.
461.20	Steel, constructional, fabricated . . . . .	tonnes	537,124	469,414	431,823
	Stoves, ovens and ranges, domestic cooking—				
661.01-11	Electric (c) . . . . .	No.	247,148	255,662	232,595
662.26, 31, 34, 36, 42, 43	Gas (d) . . . . .	..	108,448	110,476	94,890
662.01, 03	Solid fuel . . . . .	..	4,048	3,745	3,190
	Sugar—				
102.01	Raw . . . . .	'000 tonnes	2,850	3,288	3,343
102.12	Refined . . . . .	..	702	698	636
405.36	Sulphate of ammonia . . . . .	tonnes	223,784	207,167	229,453
415.07, 405.25	Superphosphate (e) . . . . .	'000 tonnes	2,316	3,180	3,430
803.61	Talcum powder . . . . .	'000 kg	4,173	4,097	4,451
	Tallow (including dripping), rendered—				
391.15	Edible . . . . .	..	86,908	77,767	78,380
391.24	Inedible . . . . .	..	294,573	300,861	329,269
643.57-60, 68	Television sets (colour) . . . . .	No.	441,735	512,042	367,109
645.51-58	Television picture tubes incorp. new screens . . . . .	..	45,606	17,832	7,841

(a) Business or formal. (b) Excludes powdered shampoo. (c) Includes wall ovens but excludes cooking tops and portable units. (d) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (e) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate i.e. 22% P<sub>2</sub>O<sub>5</sub> equivalent.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS:  
AUSTRALIA—*continued*

Commodity code	Article		1975-76	1976-77	1977-78p
475.30	Tiles, roofing—				
	Concrete . . . . .	'000 }	219,663	226,704	205,572
472.12	Terracotta . . . . .	'' }			
	Timber—				
	From native logs—				
331.01-07	Hardwood, etc. . . . .	'000 m <sup>3</sup>	2,372	3,228	3,057
331.09-19	Softwood . . . . .	''	856		
331.23, 25	From imported logs . . . . .	''	2	2	n.a.
661.21, 23	Toasters, electric (domestic) . . . . .	No.	592,344	557,752	520,698
183.21-28	Tobacco . . . . .	'000 kg	2,101	1,935	1,947
094.51	Tomato juice . . . . .	'000 litres	7,229	8,130	8,818
094.53	Tomato paste and puree . . . . .	''	n.a.	56,728	n.a.
373.58-64	Towels . . . . .	'000 doz	784	811	838
671.51-59	Toilet cisterns . . . . .	No.	494,363	545,468	n.a.
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc. . . . .	''	15,185	18,358	18,888
863.01	Umbrellas, street and general purpose . . . . .	'000	666	528	n.a.
773.90-97					
774.01-18, 36-49, 61-73, 91-97	Underwear (men's, women's, children's) . . . . .	'000 doz	6,271	6,660	6,051
692.02,04	Vacuum cleaners (domestic) . . . . .	'000	251	200	175
	Wash basins—				
671.37	Earthenware . . . . .	''	276	252	251
693.02-18	Washing machines, household, electric . . . . .	''	351	301	282
	Weatherboards—				
332.12	Australian timber . . . . .	m <sup>3</sup>	33,457	15,272	11,317
332.14	Imported timber . . . . .	''	2,317	2,857	1,791
152.14	Wheatmeal for stock feed . . . . .	'000 tonnes	539	492	417
519.01	Wheelbarrows (metal) . . . . .	No.	182,794	155,905	200,234
	Wine, beverage—				
172.42	Fortified . . . . .	'000 litres	68,586	65,519	45,031
172.46	Unfortified . . . . .	''	164,014	194,800	185,413
341.31-45	Wood pulp (air dried) . . . . .	'000 tonnes	555	600	614
242.07-11	Wool, scoured or carbonised . . . . .	tonnes	69,272	62,167	70,456
242.33, 35	Wool tops, pure . . . . .	'000 kg	15,416	16,709	17,173
	Yarn (including mixtures)—				
364.11-50	Cotton . . . . .	''	24,486	22,181	22,460
363.47-75	Woollen . . . . .	''	16,247	14,008	13,821
363.17-31	Wool worsted . . . . .	''	6,131	5,422	5,453
365.38-65	Rayon and acetate, spun . . . . .	''	2,321	n.a.	n.a.
365.90, 366.03, 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun . . . . .	''	15,033	11,615	9,289
457.04	Zinc, refined(a) . . . . .	'000 tonnes	205	262	263

(a) Primary origin only includes small quantities of zinc dust.

## Enterprise and Industry Concentration Statistics

Industry statistics shown earlier in this chapter relate to *establishments*. Statistics are also available for *enterprises* engaged in manufacturing industry. Enterprise statistics for manufacturing have been produced from the 1968-69 and 1974-75 economic censuses and were published in *Enterprise Statistics: Details by Industry Class, Australia* (8103.0). Enterprise statistics for manufacturing will be produced annually commencing with data for 1977-78 and should be available within two years of the end of the financial year to which they relate. A description of the statistics is given in Year Book No. 61, pages 1077-81.

Similarly, *industry concentration* statistics have been published for 1968-69 and 1972-73. These aim to show the extent to which individual enterprise groups dominate particular industries. A description and summary tables of these statistics are given in Year Book No. 61, pages 1081-4 for 1968-69, and the publication *Manufacturing Census, Industry Concentration Statistics, Australia* (8207.0) for 1972-73.

## Foreign Ownership and Control in Manufacturing Industry

Summary information on foreign ownership and control in manufacturing industry is shown in Chapter 24. More detailed statistics are available in *Foreign Control in Manufacturing Industry, Study of Large Enterprise Groups, 1972-73 (Advance Release)* (5314.0), *Foreign Control in Manufacturing Industry, Study of Large Enterprise Groups, 1975-76* (5315.0), *Foreign Ownership and Control in Manufacturing Industry, 1972-73 (Advance Release)* (5321.0) and *Foreign Ownership and Control in Manufacturing Industry, 1972-73* (5322.0).

### INTERNAL TRADE

#### Wholesale Trade

For summary tables showing final figures from the 1968-69 census of Wholesale Trade see Year Book No. 61, pages 1070-2. Further and more detailed statistics are included in separate publications published by Central and State offices of ABS.

#### Retail Trade

##### Retail census

The definition of retail trade, for the purpose of the most recent retail census which was taken for the year ended 30 June 1974, is the resale of new and used goods to final consumers for personal and household consumption. For information and detailed tables relating to the 1973-74 Retail Census, reference should be made to Year Book No. 61, pages 1072-6, and census publications *Census of Retail Establishments and Selected Service Establishments 1973-74—Final Bulletins* (8614.0 to 8619.0, 8620.0 and 8621.0). Summary of operations details of establishments classified by industry group for Australia for 1973-74 are set out in the following table.

RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY GROUP, 1973-74

Industry group	Number of establishments at 30 June 1974	Employment at end of June 1974 (a)			Wages and salaries (b)	Retail sales	Wholesale sales	Other operating revenue	Turn-over
		Males	Females	Persons					
<b>RETAIL ESTABLISHMENTS</b>									
	No.	No.	No.	No.	\$m	\$m	\$m	\$m	\$m
Department variety and general stores . . . . .	1,672	36,721	85,582	122,303	407.2	2,399.8	85.0	52.1	2,536.9
Food stores . . . . .	47,957	99,692	127,582	227,274	429.0	5,073.8	25.1	34.5	5,133.5
Clothing, fabrics and furniture stores . . . . .	19,334	30,308	57,170	87,478	239.2	2,076.1	7.5	10.0	2,093.6
Household appliance and hardware stores . . . . .	9,734	26,625	20,044	46,669	151.5	1,110.0	47.2	129.2	1,286.4
Motor vehicle dealers, petrol and tyre retailers . . . . .	28,170	155,807	36,445	192,252	681.6	5,340.0	1,222.5	915.9	7,478.4
Other retailers . . . . .	20,139	30,436	48,147	78,583	171.2	1,461.1	13.4	26.7	1,501.2
<b>Total retail establishments . . . . .</b>	<b>127,006</b>	<b>379,589</b>	<b>374,970</b>	<b>754,559</b>	<b>2,079.7</b>	<b>17,460.9</b>	<b>1,400.7</b>	<b>1,168.4</b>	<b>20,030.1</b>
<b>SELECTED SERVICE ESTABLISHMENTS</b>									
Restaurants and licensed hotels . . . . .	11,478	63,364	88,871	152,235	416.9	1,290.9	1.7	625.1	1,917.6
Licensed clubs . . . . .	3,287	33,526	18,186	51,712	185.6	310.9	0.8	348.4	660.0
Hairdressing and beauty salons . . . . .	9,349	5,896	20,562	26,458	46.7	8.0	—	117.9	125.9
<b>Total selected service establishments . . . . .</b>	<b>24,114</b>	<b>102,786</b>	<b>127,619</b>	<b>230,405</b>	<b>649.2</b>	<b>1,609.8</b>	<b>2.5</b>	<b>1,091.3</b>	<b>2,703.6</b>
<b>Total retail and selected service establishments . . . . .</b>	<b>151,120</b>	<b>482,375</b>	<b>502,589</b>	<b>984,964</b>	<b>2,729.0</b>	<b>19,070.7</b>	<b>1,403.2</b>	<b>2,259.8</b>	<b>22,733.7</b>

(a) At end of June; includes working proprietors but excludes unpaid helpers.

(b) Excludes drawings by working proprietors.

##### Retail surveys

In intercensal periods, estimates of the value of retail sales by broad commodity groups are obtained quarterly by means of sample surveys for each State and Australia.

The following table shows the value of retail sales of goods in each of the commodity groups specified. The figures have been obtained from a sample based on the 1973-74 Retail Census. More detailed information concerning the quarterly surveys of retail trade is contained in the quarterly publication *Retail Sales of Goods, Australia* (8503.0).

**VALUE OF RETAIL SALES: COMMODITY GROUPS (a)**  
(\$ million)

<i>Commodity group</i>	<i>1976-77</i>	<i>1977-78</i>	<i>1978-79</i>
Groceries . . . . .	3,714.4	4,257.2	4,795.9
Butchers' meat . . . . .	1,272.6	1,417.5	1,649.8
Other food (b) . . . . .	2,091.1	2,356.8	2,632.4
<i>Total, food and groceries</i> . . . . .	<i>7,078.1</i>	<i>8,031.5</i>	<i>9,078.1</i>
Beer, wine and spirits . . . . .	2,845.3	3,133.7	3,558.1
Clothing and drapery . . . . .	3,252.6	3,585.9	3,852.6
Footwear . . . . .	509.6	574.5	632.3
Hardware, china and glassware(c) . . . . .	840.9	962.5	1,088.4
Electrical goods(d) . . . . .	1,934.1	1,850.2	1,867.0
Furniture and floor coverings . . . . .	1,216.3	1,283.0	1,344.3
Chemists' goods . . . . .	1,140.2	1,235.0	1,334.9
Newspapers, books and stationery . . . . .	775.2	863.2	951.5
Other goods(e) . . . . .	1,840.3	2,033.9	2,267.4
<b>Total (excluding motor vehicles, etc.)</b> . . . . .	<b>21,432.6</b>	<b>23,553.4</b>	<b>25,974.6</b>

(a) Excludes Northern Territory and Australian Capital Territory. (b) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish and wrapped lunches. (c) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (d) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (e) Includes tobacco, cigarettes, etc., sporting goods, etc., but excludes grain and produce and business machines.

**Retail sales of goods at constant prices**

The following table shows series of the value of retail sales of goods at constant prices. The scope of the series at average 1968-69 prices is identical to that of the series at current prices based on the 1968-69 Retail Census, while the scope of the series at average 1974-75 prices is identical to that of the series at current prices based on the 1973-74 Retail Census.

A detailed description of the nature of these estimates at constant prices, and of the sources and methods used in preparing them, can be found in the Explanatory Notes of the March 1978 issue of *Retail Sales of Goods* (8503.0).

**VALUE OF RETAIL SALES OF GOODS AT CONSTANT PRICES BY BROAD COMMODITY GROUPS (a)**  
(\$ million)

<i>Broad commodity group</i>	<i>At average 1968-69 prices(b)</i>	<i>At average 1974-75 prices(c)</i>				
	<i>1974-75</i>	<i>1974-75</i>	<i>1975-76</i>	<i>1976-77</i>	<i>1977-78</i>	<i>1978-79</i>
Food and drink . . . . .	5,023.0	7,429.6	7,621.0	7,932.8	8,197.9	8,236.9
Clothing, hardware, electrical and furniture . . . . .	4,115.1	5,984.9	6,217.3	6,221.2	6,073.5	6,083.5
Other . . . . .	1,901.2	2,925.2	2,929.9	2,973.7	3,048.5	3,099.2
<b>Total (excluding motor vehicles, parts, petrol, etc.)</b> . . . . .	<b>11,039.3</b>	<b>16,339.7</b>	<b>16,768.2</b>	<b>17,127.7</b>	<b>17,319.9</b>	<b>17,419.6</b>

(a) Excludes Northern Territory and Australian Capital Territory. (b) Series based on 1968-69 Retail Census. (c) Series based on 1973-74 Retail Census.