

## CHAPTER 21

# MANUFACTURING INDUSTRY

### Introduction

An historical summary of the development of manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book (*see* No. 51, pages 143–4).

#### 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 (*see* No. 51, page 144).

#### 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 18, Public Finance for products on which bounties are paid).

#### *Industries Assistance Commission and Temporary Assistance Authority*

Both of these authorities are described in Chapter 11, Overseas Transactions.

#### Standardisation

*The Commonwealth Scientific and Industrial Research Organization* has functions concerned with the improvement of efficiency in industrial operations. For further particulars *see* the chapter Science and Technology of 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 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 subjects 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 Association of Testing Authorities* 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 metrology, mechanical testing, electrical testing, optics and photometry, non-destructive testing, heat and temperature measurement, chemical testing, biological testing, and acoustic and vibration measurement.

The *Industrial Design Council of Australia* 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 and Perth. The Australian Design Index, published by the Council in five illustrated volumes covering specific product fields, provides details of articles which have received the *IDCA Design Label*. These products are also displayed in Australian Design Centres and in other exhibits arranged by the Council.

Regular contact is maintained with senior executives of manufacturing companies, departmental officers and designers through the Design Delegate program of lectures and information. Inquiries 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.

Publications include a monthly bulletin, *Design Report*. The Council's national office is in Melbourne.

#### *Productivity Action.*

For information about the Productivity Group Movement and Productivity Promotion Council of Australia see the chapter, 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 have been included in Year Book, No. 57, pages 721-9 and earlier issues.

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

Year	Factories	Employment(b)	Salaries and wages paid(c)	Value of—				
				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 electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses, details of which are given on page 734. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The economic censuses of Manufacturing, Mining and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

For the integration of the various censuses it was necessary to undertake three major developments:

- (a) The census units for which the statistics were to be collected (factories, mines, shops, etc.) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them.

- (b) A standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the various economic censuses to be determined without gaps or overlapping between them.
- (c) In order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

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. Previously, the manufacturing establishment covered only a specified manufacturing activity primary to one class of industry. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) Any other manufacturing activity (i.e. production of goods primary to another class of industry).
- (b) Any selling and distribution activities connected with the products manufactured.
- (c) Any non-manufacturing activity (e.g. merchandising of goods not manufactured by the establishment; extraction of raw materials for use by the establishment).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed a specified value (currently \$1.4 million), which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

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. These units were formerly excluded from the manufacturing census. They are units such as head offices, storage premises and manufacturers' sales branches or sales offices (except those of the kind which distribute to customers from stocks held by such branches or offices which are treated as establishments in the Wholesale Census).

The Australian Standard Industrial Classification (ASIC), described in the Bureau publication *Australian Standard Industrial Classification (Preliminary Edition)*, 1969, Vol. 1, 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. The main changes in scope in the manufacturing census, apart from providing for a separate census for electricity and gas, are as follows.

- (a) Establishments mainly engaged in the following activities, previously included in manufacturing censuses, are excluded as from 1968-69: motor vehicle repairs but not engine reconditioning; repair and servicing of agricultural machinery; dry-cleaning, laundering and clothes dyeing services; watch, clock and jewellery repairing; boot and shoe repairing; tyre retreading and repairing; custom dressmaking and tailoring (including clothing repair and alterations); installing and repairing of blinds and awnings, making up and installing of curtains; and repair of domestic appliances. Establishments mainly engaged in these activities are now included in the periodic Retail Trade or Wholesale Trade Censuses.
- (b) Establishments mainly engaged in non-manufacturing activities but which also carry out, as a subsidiary activity, some manufacturing activities, and which in respect of those manufacturing activities, were previously included in the manufacturing census are excluded as from 1968-69 unless such establishments have manufacturing activities in excess of a specified value (currently \$1.4 million).
- (c) Establishments mainly engaged in the following activities, previously excluded in most States from manufacturing censuses, are included as from 1968-69: slaughtering, milk treatment, and publishing.

An indication of the effect of the changes referred to above can be gained from the following comparison. 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 (but see footnote (b) to the following table) would have been included in the 1967-68 census if ASIC had been used. Figures for the individual States and Territories are given below.

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approximate number of manufacturing establishments—									
1967-68 census	24,900	18,000	6,100	6,200	5,300	1,800	180	240	62,600
1967-68 census if ASIC had been used(a)	13,800	11,400	3,500	3,000	2,500	960	70	100	35,400
Approximate number of employees (thousands)—									
1967-68 census	512	433	114	116	63	34	5		1,276
1967-68 census if ASIC had been used(b)	445	376	95	100	51	27	3		1,097

(a) Excludes the establishments referred to in (c), in the paragraph above. (b) These figures relate to employment as defined for the 1967-68 and previous year censuses. They thus exclude employment at the establishments referred to in (c) in the paragraph above, sales and distribution employees, employees connected with non-manufacturing activities and employees at separately located administrative offices and ancillary units serving manufacturing establishments. The figures, therefore, are not directly comparable with those for 1968-69 and subsequent years, which include the aforementioned employees.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, 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. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc., used from the value of output at the factory. A detailed comparison of the method of derivation is shown in the following table.

Value of production 1967-68	Value added as from 1968-69
Selling value at works, exclusive of all delivery costs or charges, of goods manufactured, treated or worked up during the year, including by-products, plus	Sales and transfers out (to other establishments of the enterprise), of goods manufactured by the establishment, plus
Value of other work done, . . . such as repairing and making up for customers, etc.	Sales and transfers out of goods not manufactured by the establishment, plus
	Bounties and subsidies on production, plus
	All other operating income, plus
	Capital work done for own use, or for rental or lease
<i>Equals:</i> Value of output	<i>Equals:</i> Value of turnover
	<i>Plus:</i> Closing stocks
	<i>Less:</i> Opening stocks
<i>Less—</i>	<i>Less—</i>
Value of materials used	Purchases and transfers in of materials, electricity, fuels, containers, etc.
Power, fuel and light used	Purchases and transfers in of goods for resale
Water used	Charges for commission and subcontract work
Lubricating oils used	Repair and maintenance expenses
Repairs, etc.	Outward freight and cartage, motor vehicle running expenses, sales commission payments
Containers used	
<i>Equals:</i> Value of production	<i>Equals:</i> Value added

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and previous figures will not be 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.

*A Census of Manufacturing was not conducted in Australia for the year 1970-71.*

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

## MANUFACTURING INDUSTRY

## Summary of operations

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

MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS, BY INDUSTRY  
SUB-DIVISION: AUSTRALIA, 1972-73 AND 1973-74

Industry sub-division	ASIC code (a)	Number of establishments operating at end of June	Persons employed(b)			Wages and salaries \$m	Turn-over \$m	Stocks at 30 June		Purchases, transfers in and selected expenses \$m	Value added \$m	Fixed capital expenditure(c) \$m
			Males No.	Females No.	Total No.			Opening \$m	Closing \$m			
1972-73												
Food, beverages and tobacco . . . . .	21-2	4,349	149,603	53,495	203,098	890	6,137	675	741	4,260	1,943	223
Textiles . . . . .	23	871	29,924	23,908	53,832	210	946	183	203	589	377	25
Clothing and footwear . . . . .	24	3,147	24,572	87,049	111,621	355	1,216	192	206	667	564	19
Wood, wood products and furniture . . . . .	25	5,906	71,755	11,079	82,834	315	1,269	158	170	697	584	54
Paper and paper products, printing . . . . .	26	3,655	77,450	28,545	105,995	491	1,807	224	224	892	915	90
Chemical, petroleum, and coal products . . . . .	27	1,184	47,886	17,601	65,487	352	2,017	349	352	1,134	886	127
Non-metallic mineral products . . . . .	28	1,854	47,498	5,527	53,025	273	1,150	142	142	587	563	73
Basic metal products . . . . .	29	635	89,113	5,988	95,101	515	3,004	535	558	2,023	1,005	330
Fabricated metal products . . . . .	31	5,306	93,116	22,603	115,719	511	1,875	326	333	1,016	866	56
Transport equipment . . . . .	32	1,528	136,166	16,652	152,818	745	2,699	495	459	1,585	1,078	110
Other machinery and equipment . . . . .	33	4,830	136,860	47,852	184,712	849	3,003	715	713	1,613	1,389	94
Miscellaneous manufacturing . . . . .	34	3,172	48,156	25,190	73,346	314	1,249	193	204	683	577	43
<b>Total manufacturing . . . . .</b>		<b>36,437</b>	<b>952,099</b>	<b>345,489</b>	<b>1,297,588</b>	<b>5,820</b>	<b>26,373</b>	<b>4,187</b>	<b>4,306</b>	<b>15,746</b>	<b>10,745</b>	<b>1,244</b>
1973-74												
Food, beverages and tobacco . . . . .	21-2	4,249	147,622	56,550	204,172	1,060	6,820	737	823	4,780	2,126	249
Textiles . . . . .	23	897	30,101	24,518	54,619	260	1,161	207	274	748	481	45
Clothing and footwear . . . . .	24	3,180	24,217	85,751	109,968	424	1,442	205	258	819	676	20
Wood, wood products and furniture . . . . .	25	6,038	73,142	12,535	85,677	393	1,601	166	219	901	753	58
Paper and paper products, printing . . . . .	26	3,683	78,247	29,787	108,034	602	2,143	228	282	1,087	1,111	73
Chemical, petroleum and coal products . . . . .	27	1,169	48,659	18,448	67,107	422	2,396	347	414	1,387	1,076	106
Non-metallic mineral products . . . . .	28	1,911	49,574	5,882	55,456	339	1,358	144	166	716	664	96
Basic metal products . . . . .	29	642	90,852	7,297	98,149	650	3,866	563	659	2,631	1,331	211
Fabricated metal products . . . . .	31	5,434	94,346	24,694	119,040	621	2,270	330	416	1,269	1,087	56
Transport equipment . . . . .	32	1,608	138,160	20,720	158,880	933	3,056	455	583	1,846	1,337	125
Other machinery and equipment . . . . .	33	5,001	144,134	54,837	198,971	1,069	3,606	712	906	2,027	1,774	110
Miscellaneous manufacturing . . . . .	34	3,332	50,334	28,037	78,371	402	1,526	205	268	856	733	66
<b>Total manufacturing . . . . .</b>		<b>37,144</b>	<b>969,388</b>	<b>369,056</b>	<b>1,338,444</b>	<b>7,177</b>	<b>31,247</b>	<b>4,299</b>	<b>5,268</b>	<b>19,067</b>	<b>13,149</b>	<b>1,215</b>

(a) Australian Standard Industrial Classification.

(b) Average over whole year. Includes working proprietors.

(c) Outlay on fixed tangible assets less disposals.

Employment

The statistics on the number of persons employed shown in the following table relates to the average whole year employment including working proprietors, and including those 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: 1971-72, 1972-73 AND 1973-74

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>MALES EMPLOYED</b>										
Food, beverages and tobacco	21-2	47,919	45,203	26,490	12,960	9,797	4,393	407	453	147,622
Textiles	23	8,787	16,771	871	1,470	517	1,685	..	..	30,101
Clothing and footwear	24	6,986	14,464	1,186	1,152	325	104	..	..	24,217
Wood, wood products and furniture	25	24,319	17,790	11,279	7,543	7,154	4,594	80	383	73,142
Paper and paper products, printing	26	29,324	25,899	7,146	5,545	4,343	4,912	119	959	78,247
Chemical, petroleum and coal products	27	22,051	17,046	2,932	2,456	2,833	1,339	..	2	48,659
Non-metallic mineral products	28	20,035	13,498	6,065	3,849	4,470	1,065	221	371	49,574
Basic metal products	29	54,475	11,698	4,778	9,689	5,528	3,592	1,157	392	90,852
Fabricated metal products	31	35,468	30,846	9,849	9,508	7,075	1,143	(b)	(b)	94,346
Transport equipment	32	41,398	54,201	11,242	25,103	4,874	1,183	(b)	(b)	138,160
Other machinery and equipment	33	60,937	52,122	8,845	15,145	5,920	937	(b)	(b)	144,134
Miscellaneous manufacturing	34	19,665	21,383	3,094	4,351	1,566	256	2	17	50,334
<b>Total manufacturing</b>	1973-74	371,364	320,921	93,777	98,771	54,402	25,203	2,114	2,836	969,388
	1972-73	367,938	314,759	92,861	95,581	51,733	24,668	1,872	2,687	952,099
	1971-72	375,262	310,750	91,241	96,194	52,049	24,856	1,014	2,601	953,967

<b>FEMALES EMPLOYED</b>										
Food, beverages and tobacco	21-2	18,221	18,465	7,481	5,653	4,485	1,955	125	165	56,550
Textiles	23	7,533	12,566	1,015	1,171	275	1,958	..	..	24,518
Clothing and footwear	24	30,113	45,632	4,872	3,370	1,508	256	..	..	85,751
Wood, wood products and furniture	25	4,158	3,131	2,056	1,421	1,317	377	11	64	12,535
Paper and paper products, printing	26	12,494	9,571	2,588	2,047	1,665	900	55	467	29,787
Chemical, petroleum and coal products	27	10,707	6,129	566	570	390	86	..	..	18,448
Non-metallic mineral products	28	2,352	2,161	376	434	435	83	13	28	5,882
Basic metal products	29	3,709	1,483	281	1,100	481	147	126	8	7,297
Fabricated metal products	31	10,424	8,215	2,234	2,354	1,136	214	(b)	(b)	24,694
Transport equipment	32	5,931	10,781	765	2,802	214	217	(b)	(b)	20,720
Other machinery and equipment	33	27,026	19,175	1,234	6,357	890	85	(b)	(b)	54,837
Miscellaneous manufacturing	34	12,189	11,608	1,315	2,185	686	46	..	8	28,037
<b>Total manufacturing</b>	1973-74	144,857	148,917	24,783	29,464	13,482	6,324	336	893	369,056
	1972-73	135,691	141,004	23,484	25,815	12,344	6,016	364	771	345,489
	1971-72	140,656	139,276	23,127	25,382	12,168	6,151	180	732	347,672

<b>PERSONS EMPLOYED</b>										
Food, beverages and tobacco	21-2	66,140	63,668	33,971	18,613	14,282	6,348	532	618	204,172
Textiles	23	16,320	29,337	1,886	2,641	792	3,643	..	..	54,619
Clothing and footwear	24	37,099	60,096	6,058	4,522	1,833	360	..	..	109,968
Wood, wood products and furniture	25	28,477	20,921	13,335	8,964	8,471	4,971	91	447	85,677
Paper and paper products, printing	26	41,818	35,470	9,734	7,592	6,008	5,812	174	1,426	108,034
Chemical, petroleum and coal products	27	32,758	23,175	3,498	3,026	3,223	1,425	..	2	67,107
Non-metallic mineral products	28	22,387	15,659	6,441	4,283	4,905	1,148	234	399	55,456
Basic metal products	29	58,184	13,181	5,059	10,789	6,009	3,739	1,283	479	98,149
Fabricated metal products	31	45,892	39,061	12,083	11,862	8,211	1,357	(b)	(b)	119,040
Transport equipment	32	47,329	64,982	12,007	27,905	5,088	1,400	(b)	(b)	158,880
Other machinery and equipment	33	87,963	71,297	10,079	21,502	6,810	1,022	(b)	(b)	198,971
Miscellaneous manufacturing	34	31,854	32,991	4,409	6,536	2,252	302	2	25	78,371
<b>Total manufacturing</b>	1973-74	516,221	469,838	118,560	128,235	67,884	31,527	2,450	3,729	1,338,444
	1972-73	503,629	455,763	116,345	121,396	64,077	30,684	2,236	3,458	1,297,588
	1971-72	515,918	450,026	114,368	121,576	64,217	31,007	1,194	3,333	1,301,639

(a) Australian Standard Industrial Classification. (b) Not available for publication.

## 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: 1971-72, 1972-73 AND 1973-74  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	357	342	173	86	66	29	3	3	1,060
Textiles	23	79	143	7	12	4	14	..	..	260
Clothing and footwear	24	141	240	20	16	6	1	..	..	424
Wood, wood products and furniture	25	136	98	56	40	37	23	..	3	393
Paper and paper products, printing	26	238	201	50	40	30	34	1	8	602
Chemical, petroleum and coal products	27	207	145	22	18	21	10	..	..	422
Non-metallic mineral products	28	143	95	38	25	28	7	1	3	339
Basic metal products	29	382	88	35	67	43	25	11	3	630
Fabricated metal products	31	249	206	58	58	40	6	(b)	(b)	621
Transport equipment	32	272	396	63	167	28	7	(b)	(b)	933
Other machinery and equipment	33	474	395	53	105	36	5	(b)	(b)	1,069
Miscellaneous manufacturing	34	164	176	20	31	9	1	..	..	402
Total manufacturing	1973-74	2,842	2,524	596	666	347	161	18	22	7,177
	1972-73	2,332	2,045	483	523	275	131	14	16	5,820
	1971-72	2,159	1,800	426	469	256	119	6	15	5,250

(a) Australian Standard Industrial Classification. (b) Not available for publication.

## 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  
1971-72, 1972-73 AND 1973-74  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	2,079	2,391	1,200	497	427	196	18	12	6,820
Textiles	23	362	621	33	69	18	58	..	..	1,161
Clothing and footwear	24	516	800	56	52	15	3	..	..	1,442
Wood, wood products and furniture	25	556	393	214	177	134	116	2	9	1,601
Paper and paper products, printing	26	857	725	165	153	93	130	2	20	2,143
Chemical, petroleum and coal products	27	1,182	751	186	94	140	44	..	..	2,396
Non-metallic mineral products	28	522	369	178	108	128	29	9	16	1,358
Basic metal products	29	1,968	467	459	360	375	183	55	11	3,866
Fabricated metal products	31	865	758	224	218	168	25	(b)	(b)	2,270
Transport equipment	32	791	1,387	280	492	87	17	(b)	(b)	3,056
Other machinery and equipment	33	1,632	1,315	182	340	119	13	(b)	(b)	3,606
Miscellaneous manufacturing	34	603	693	84	102	39	4	..	..	1,526
Total manufacturing	1973-74	11,933	10,669	3,261	2,663	1,741	818	87	76	31,247
	1972-73	10,119	9,078	2,845	2,172	1,376	679	43	61	26,373
	1971-72	9,276	8,055	2,433	1,941	1,240	596	29	50	23,620

(a) Australian Standard Industrial Classification. (b) Not available for publication.

## 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: 1971-72, 1972-73 AND 1973-74**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,458	1,695	855	324	298	131	12	8	4,780
Textiles	23	233	402	21	48	10	34	..	..	748
Clothing and footwear	24	302	451	29	29	7	1	..	..	819
Wood, wood products and furniture	25	313	221	115	108	73	65	1	5	901
Paper and paper products, printing	26	437	371	80	81	41	72	..	5	1,087
Chemical, petroleum and coal products	27	669	422	127	55	87	27	..	5	1,387
Non-metallic mineral products	28	277	188	97	56	68	14	..	11	716
Basic metal products	29	1,290	332	319	244	298	121	..	..	2,631
Fabricated metal products	31	471	423	127	128	99	14	27	6	1,269
Transport equipment	32	443	848	176	329	41	7	(b)	(b)	1,846
Other machinery and equipment	33	912	737	106	194	69	6	(b)	(b)	2,027
Miscellaneous manufacturing	34	330	395	50	55	23	2	..	..	856
Total manufacturing	1973-74	7,135	6,486	2,100	1,651	1,116	495	46	39	19,067
	1972-73	5,891	5,392	1,834	1,286	894	395	23	31	15,746
	1971-72	5,443	4,812	1,584	1,169	777	359	18	25	14,186

(a) Australian Standard Industrial Classification. (b) Not available for publication.

**Stocks**

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures include 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 1971-72, 1972-73 AND 1973-74 BY INDUSTRY SUB-DIVISION**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>OPENING STOCKS AT 30 JUNE 1973</b>										
Food, beverages and tobacco	21-2	235	266	85	101	26	23	2	..	737
Textiles	23	66	105	5	12	3	14	..	..	207
Clothing and footwear	24	72	113	9	9	2	..	..	..	205
Wood, wood products and furniture	25	55	41	22	18	16	15	..	1	166
Paper and paper products, printing	26	90	81	18	13	9	15	..	2	228
Chemical, petroleum and coal products	27	175	119	22	10	15	6	..	..	347
Non-metallic mineral products	28	65	35	16	10	13	3	1	1	144
Basic metal products	29	289	64	57	55	53	31	..	..	563
Fabricated metal products	31	126	118	31	30	19	4	13	1	330
Transport equipment	32	114	220	34	75	8	4	(b)	(b)	455
Other machinery and equipment	33	308	295	29	56	22	2	(b)	(b)	712
Miscellaneous manufacturing	34	81	95	10	14	4	1	..	..	205
Total manufacturing		1,675	1,553	337	404	191	117	17	6	4,299
<b>CLOSING STOCKS AT 30 JUNE 1974</b>										
Food, beverages and tobacco	21-2	278	296	90	105	28	24	2	..	823
Textiles	23	86	149	9	11	3	17	..	..	274
Clothing and footwear	24	90	141	13	11	2	..	..	..	258
Wood, wood products and furniture	25	72	55	28	26	20	17	..	1	219
Paper and paper products, printing	26	113	100	22	17	11	17	..	2	282
Chemical, petroleum and coal products	27	218	135	22	12	20	7	..	..	414
Non-metallic mineral products	28	73	44	19	12	13	3	1	1	166
Basic metal products	29	330	81	62	74	53	38	..	..	659
Fabricated metal products	31	154	148	41	40	26	4	..	..	416
Transport equipment	32	155	276	38	100	9	5	(b)	(b)	583
Other machinery and equipment	33	387	368	37	77	33	2	(b)	(b)	906
Miscellaneous manufacturing	34	107	122	15	18	6	1	..	..	268
Total manufacturing		2,062	1,915	397	502	224	134	26	8	5,268
Opening stocks	1972-73	1,661	1,502	331	399	164	117	9	5	4,187
	1971-72	1,556	1,404	317	368	160	108	3	4	3,920
Closing stocks	1972-73	1,689	1,553	333	410	183	116	17	6	4,306
	1971-72	1,662	1,489	338	399	169	117	4	5	4,183

(a) Australian Standard Industrial Classification. (b) Not available for publication.

## 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 purchases, transfers in and selected expenses. A more detailed description of the method of deriving value added is given on page 729.

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION  
1971-72, 1972-73 AND 1973-74  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	664	727	350	176	131	67	6	5	2,126
Textiles	23	149	263	16	20	7	27	..	..	481
Clothing and footwear	24	231	377	33	25	8	2	..	..	676
Wood, wood products and furniture	25	260	186	106	77	66	52	1	5	753
Paper and paper products, printing	26	443	372	90	77	52	60	2	15	1,111
Chemical, petroleum and coal products	27	555	345	60	41	57	17	..	..	1,076
Non-metallic mineral products	28	254	189	83	54	60	15	4	5	664
Basic metal products	29	719	151	145	135	76	69	38	5	1,331
Fabricated metal products	31	422	365	106	100	75	11	38	5	1,087
Transport equipment	32	388	596	108	187	46	12	(b)	(b)	1,337
Other machinery and equipment	33	799	651	84	168	61	7	(b)	(b)	1,774
Miscellaneous manufacturing	34	299	325	39	51	17	2	..	..	733
Total manufacturing	1973-74	5,184	4,546	1,220	1,110	658	340	51	40	13,149
	1972-73	4,257	3,738	1,013	897	501	283	28	30	10,746
	1971-72	3,940	3,328	871	803	472	245	11	26	9,697

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## 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 END OF YEAR 1971-72, 1972-73 AND 1973-74, BY INDUSTRY SUB-DIVISION

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,236	1,205	757	443	421	152	24	11	4,249
Textiles	23	309	420	64	50	35	19	..	..	897
Clothing and footwear	24	1,222	1,613	156	108	68	13	..	..	3,180
Wood, wood products and furniture	25	1,974	1,569	1,027	509	579	336	12	32	6,038
Paper and paper products, printing	26	1,561	1,238	309	248	225	65	8	29	3,683
Chemical, petroleum and coal products	27	536	373	79	80	80	21	..	..	1,169
Non-metallic mineral products	28	688	472	276	163	208	66	21	17	1,911
Basic metal products	29	240	219	59	62	43	13	4	2	642
Fabricated metal products	31	2,165	1,553	643	452	476	99	25	21	5,434
Transport equipment	32	478	507	223	184	172	37	5	2	1,608
Other machinery and equipment	33	2,134	1,740	342	410	285	72	3	15	5,001
Miscellaneous manufacturing	34	1,266	1,161	354	277	226	42	..	6	3,332
Total manufacturing	1973-74	13,809	12,070	4,289	2,986	2,818	935	102	135	37,144
	1972-73	13,619	11,734	4,212	2,914	2,814	912	100	132	36,437
	1971-72	13,943	11,408	4,001	2,979	2,727	933	80	135	36,206

(a) Australian Standard Industrial Classification.

## Electricity and gas establishments

As mentioned on page 727, the electricity and gas industries, which were previously included in the Annual Factory Census, have been the subject of separate censuses as from 1968-69. In addition the electricity and gas census has been extended to cover distribution as well as production. The following tables show statistics for the years 1969-70 and 1971-72. Censuses were not conducted for 1970-71, 1972-73 or for 1973-74.

For electricity and gas, the basic census unit is an exception to the general concept of the standardised unit. Because of the nature of the activities of electricity and gas undertakings, the single

operating location basis is not suitable. The establishment unit used consists of all locations, including administrative offices and ancillary units, mainly concerned with the production and/or distribution of electricity or gas, operated by the undertaking in the one State. The use of this concept is one of the reasons for the number of electricity and gas establishments since 1968-69 being considerably less than in previous years. The other main reason is that until 1967-68, a number of electricity generating stations operated by enterprises principally for their own use were included. However, as from 1968-69 these generating stations have been included in the electricity census only if sales and transfers of electricity exceeded \$100,000 in value.

**ELECTRICITY AND GAS ESTABLISHMENTS(a), SUMMARY OF OPERATIONS  
STATES AND TERRITORIES, 1969-70 AND 1971-72**

State or Territory	Number of establishments operating during year	Persons employed(b)			Wages and salaries (\$m)	Turnover (c) (\$m)	Stocks at 30 June		Purchases, transfers in and selected expenses (\$m)	Value added (\$m)	Fixed capital expenditure(d) (\$m)
		Males (No.)	Females (No.)	Total (No.)			Opening (\$m)	Closing (\$m)			
<b>1969-70</b>											
New South Wales—											
Electricity . . .	51	23,628	2,358	25,986	113	580	45	47	277	305	165
Gas . . .	34	2,769	502	3,271	12	44	3	3	18	27	2
Victoria—											
Electricity . . .	13	13,558	1,311	14,869	64	289	21	23	94	197	96
Gas . . .	8	3,447	574	4,021	19	57	6	5	17	39	20
Queensland—											
Electricity . . .	21	7,760	772	8,532	32	158	11	11	63	94	52
Gas . . .	7	592	115	707	2	10	1	1	4	6	1
South Australia—											
Electricity . . .	18	5,576	185	5,761	23	91	7	6	26	64	25
Gas . . .											
Western Australia—											
Electricity . . .	57	3,598	291	3,889	15	62	6	7	18	44	39
Gas . . .											
Tasmania—											
Electricity . . .	6	2,552	202	2,754	12	39	5	5	1	39	44
Gas . . .											
Northern Territory—											
Electricity . . .	6	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Gas . . .											
Australian Capital Territory—											
Electricity . . .	1	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Gas . . .											
Australia—											
Electricity . . .	166	55,753	5,071	60,824	255	1,213	94	99	480	738	425
Gas . . .	56	8,338	1,312	9,650	39	129	11	10	44	84	27
<b>1971-72</b>											
New South Wales—											
Electricity . . .	49	23,469	2,395	25,864	140	707	50	54	345	367	154
Gas . . .	23	2,352	524	2,876	13	49	3	3	18	30	4
Victoria—											
Electricity . . .	13	16,409	1,816	18,225	99	375	27	28	136	239	116
Gas . . .											
Queensland—											
Electricity . . .	21	8,038	837	8,875	45	194	13	14	79	116	66
Gas . . .	7	565	104	669	3	12	1	1	5	7	1
South Australia—											
Electricity . . .	16	6,174	358	6,532	34	106	9	9	29	78	42
Gas . . .											
Western Australia—											
Electricity . . .	48	4,275	331	4,606	23	82	8	8	23	60	81
Gas . . .											
Tasmania—											
Electricity . . .	5	2,727	244	2,971	15	48	5	5	2	46	35
Gas . . .											
Northern Territory—											
Electricity . . .	6	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Gas . . .											
Australian Capital Territory—											
Electricity . . .	1	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Gas . . .											
Australia—											
Electricity . . .	153	57,089	5,391	62,480	332	1,444	105	112	591	861	452
Gas . . .	40	7,409	1,298	8,707	41	148	10	11	57	91	43

(a) Covers production and distribution. (b) At end of June. Includes working proprietors. (c) In some States electricity is produced by certain undertakings and sold to other undertakings for distribution. In these States sales of electricity are duplicated due to the inclusion of the bulk sales to these distributors. (d) Outlay on fixed tangible assets less disposals. (e) Not available for publication. Included in total for Australia.

## Principal factory products

The factory production of certain commodities is shown in the monthly and quarterly publications of the ABS, and in the bulletin *Manufacturing Commodities—Principal Articles Produced* (12.26).

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 the aforementioned bulletin.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA

Commodity code	Article	1971-72	1972-73	1973-74	1974-75
	Acid (in terms of 100%)—				
401.29	Hydrochloric . . . . . tonnes	47,370	40,719	53,888	41,968
401.37	Nitric . . . . . "	140,317	149,092	185,646	173,970
401.57	Sulphuric . . . . . '000 tonnes	1,756	2,266	2,434	1,770
171.03, 04, 07, 08	Aerated and carbonated waters . . . . . '000 litres	773,620	861,070	884,757	834,034
	Air-conditioning equipment—				
657.03, 05	Room air conditioners (refrigerated) . . . . . No.	41,843	29,506	49,860	51,625
657.13, 15	Room air coolers (evaporative coolers) . . . . . "	50,007	44,033	105,317	(a)
657.21, 22, 23	Package unit air conditioners . . . . . "	9,277	8,623	20,037	22,027
475.04, 06, 07, 85	Asbestos cement building sheets (finished) . . . . . '000 m <sup>2</sup>	36,647	38,646	43,723	42,040
	Bags, leather, fibre, etc.—				
	Handbags—				
864.31	Leather . . . . . '000	509	371	334	n.a.
864.33	Plastic . . . . . "	1,655	1,271	1,279	n.a.
864.39	Other . . . . . "	383	359	346	n.a.
946.01-52	Hessian and calico bags . . . . . '000 doz	3,948	2,085	2,689	n.a.
864.11-19	Suitcases, kitbags and trunks . . . . . '000	1,778	1,707	1,543	n.a.
	Bath heaters—				
652.01	Electric . . . . . No.	7,394	7,001	7,556	6,117
652.03, 06, 08	Gas . . . . . "	3,358	2,767	2,346	1,288
652.05	Solid fuel . . . . . "	6,516	3,779	3,932	3,287
779.02-36	Bathing suits(b) . . . . . '000 doz	342	322	345	216
	Baths (exclude infants baths)—				
671.03	Pressed steel—Enamelled . . . . . '000	125	153	165	130
671.01, 04, 08	Other (exclude pressed steel, galvanised) . . . . . "	75	51	47	45
	Batteries, wet cell type—				
685.13, 15	Auto (S.L.I.) 6 volts . . . . . '000	380	372	375	368
685.17, 19	Auto (S.L.I.) 12 volts . . . . . "	2,095	2,089	2,168	2,428
685.33, 35	Radio, homelighter, fencer . . . . . No. of 2 volt cells	57,396	47,194	50,233	39,890
685.43-65	Traction, plant and other . . . . . "	157,971	140,399	196,132	217,147
172.02, 04, 06	Beer (excluding waste beer) . . . . . mil. litres	1,665	1,756	1,868	1,957
064.21	Biscuits . . . . . '000 kg	116,633	117,701	120,628	119,271
372.374	Blankets, Woolen—Pure and Mixtures . . . . . '000	1,832	1,688	1,700	1,475
152.02	Bran (wheaten) . . . . . '000 tonnes	134	126	124	135
172.21	Brandy . . . . . '000 litre Al	4,484	3,561	2,474	n.a.
777.41, 49	Brassieres . . . . . '000 doz	819	807	812	595
066.01-31	Breakfast food, cereal (ready to eat) . . . . . tonnes	55,318	57,366	58,780	64,602
472.01, 03	Bricks, clay . . . . . million	1,744	1,881	2,050	1,713
261.41	Briquettes, brown coal . . . . . '000 tonnes	1,308	1,221	1,164	1,092
051.30, 052.20, 32	Butter—from cream (exclude whey cream) . . . . . '000 kg	195,407	184,081	174,122	161,274
773.51, 53, 74, 75, 83	Cardigans, jumpers, etc. . . . . '000 doz	1,930	2,050	2,041	1,679
474.02	Cement, Portland . . . . . '000 tonnes	4,884	5,097	5,412	5,086
051	Cheese (non-processed) . . . . . '000kg	80,871	93,445	95,793	98,789
	Cloth (including mixtures)—				
373.10-52	Cotton(c) . . . . . '000m <sup>2</sup>	47,147	46,391	50,361	41,364
374.02-16	Rayon and acetate . . . . . "	21,258	22,957	23,082	16,551
374.20-34	Synthetic (non-cellulosic) . . . . . "	41,555	85,761	107,278	84,831
372.02-50	Wool (excluding blanketing and rug) . . . . . "	13,870	9,946	9,250	7,308
435.22	Coke—Metallurgical . . . . . '000 tonnes	4,136	4,926	4,291	5,497
475.90	Concrete, ready mixed . . . . . '000m <sup>3</sup>	9,748	10,403	10,849	10,044
	Confectionery—				
104.06-18	Chocolate . . . . . '000 kg	52,597	50,151	55,799	63,647
104.21-29	Other . . . . . "	59,062	61,191	60,993	62,740
452.04	Copper, refined(d) . . . . . '000 tonnes	131	136	149	178
	Coppers (wash boilers)—				
653.31	Electric . . . . . No.	2,792	2,248	(a)	n.a.
653.33, 38, 39	Gas . . . . . "	273	134	(a)	n.a.

(a) Not available for publication. (c) Includes swim shorts. Excludes infants' and babies' swim-wear. (c) Excludes tyre-cord fabric and towelling. (d) Primary origin only.

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

Commodity code	Article	1971-72	1972-73	1973-74	1974-75	
171.06, 10	Cordials and syrups . . . . .	'000 litres	68,495	81,217	92,833	91,273
777.01-29	Corsets and corselets . . . . .	'000 doz	255	n.a.	237	183
611.01	Cycles (complete) . . . . .	'000	131	166	193	216
804.01	Dentifrices (toothpaste) . . . . .	'000 kg	5,546	5,266	5,653	n.a.
503.06	Electric generators—					
503.08	Non-automotive—					
499.42	Alternating current . . . . .	No.	3,081	2,691	5,679	n.a.
523.76-78	Direct current . . . . .	"	139	n.a.	n.a.	n.a.
502.22-39	Electricity . . . . .	mil. kWh	59,501	64,802	69,743	73,933
139.31	Electrodes for manual welding . . . . .	'000 kg	23,453	21,000	24,890	26,958
139.35	Engines, spark and compression ignition(a) . . . . .	'000	355	430	484	374
802.11, 12	Essences, flavouring—					
696.01, 03, 05	Domestic . . . . .	'000 litres	417	398	393	n.a.
045.01, 51	Industrial . . . . .	"	5,017	5,409	6,310	n.a.
332.06	Face powder . . . . .	'000 kg	126	113	144	n.a.
332.08	Fans, electric (propeller type) . . . . .	No.	405,196	457,110	622,993	616,430
841.01-07	Fish, canned (including fish loaf) . . . . .	'000 kg	6,322	7,136	6,140	12,262
841.31-61, 69	Floorboards—					
841.67, 68	Australian timber . . . . .	m <sup>3</sup>	310,041	331,516	320,319	n.a.
841.85	Imported timber . . . . .	"	1,006	366	286	n.a.
692.21, 23	Floor coverings—					
068.01	Textile . . . . .	'000 m <sup>2</sup>	21,594	25,671	30,747	23,308
062.01, 10, 32	Smooth surface and embossed . . . . .	"	13,104	13,057	11,893	8,187
074.61-69, 79	Timber parquetry . . . . .	"	234	224	201	135
074.76, 89	Underfelts, underlays, etc.(b) . . . . .	"	17,459	16,454	17,116	15,150
781.06-31	Floor polishers, electric . . . . .	No.	35,998	30,816	30,234	24,981
127.21	Flour—					
832.58, 59	Self-raising . . . . .	'000 kg	42,451	38,496	43,057	n.a.
786.01	Wheat(en)c . . . . .	'000 tonnes	1,204	1,134	1,178	1,263
651.01, 03	Fruit juices, natural—					
651.11-17	Single strength . . . . .	'000 litres	91,547	186,769	166,327	n.a.
651.04, 05, 21, 22, 26, 27	Concentrated(d) . . . . .	"	12,808	13,939	7,634	n.a.
786.11	Gloves, work(e) . . . . .	'000 doz pairs	2,791	3,141	3,560	3,848
651.01, 03	Glucose . . . . .	'000 kg	52,632	57,414	59,661	59,205
651.11-17	Golf clubs . . . . .	doz	50,131	59,725	64,769	38,917
651.04, 05, 21, 22, 26, 27	Handkerchiefs					
775	Men's . . . . .	'000 doz	1,672	1,215	1,213	n.a.
281.04	Women's . . . . .	"	1,249	1,212	1,395	n.a.
051.61	Heaters, room—					
051.87, 89, 90	Solid fuel . . . . .	No.	9,767	6,823	5,246	3,842
419.31	Electric radiators and fires . . . . .	'000	813	801	845	813
419.43-59	Gas fires and space heaters . . . . .	No.	58,421	67,583	74,764	68,861
442.04, 08	Hosiery—					
442.80-83	Women's (including panty hose) . . . . .	'000 doz pairs	7,518	8,920	n.a.	7,108
442.28	Men's . . . . .	"	1,831	1,975	2,172	1,709
693.51, 61, 63	Childrens' and infants' . . . . .	"	1,147	1,244	1,189	891
076.60	Ice, made . . . . .	'000 tonnes	116	116	126	n.a.
391.04	Ice cream(f) . . . . .	'000 litres	196,522	210,387	215,063	206,857
699.52, 53	Infants', invalids' and health beverages					
699.41, 45, 55, 61	from cows milk(g) . . . . .	'000 kg	26,999	26,882	24,247	33,489
453.04	Ink, printing—					
699.52, 53	News . . . . .	"	11,243	10,940	9,486	n.a.
699.41, 45, 55, 61	Other . . . . .	"	11,716	13,880	n.a.	n.a.
453.04	Iron and steel—					
699.52, 53	Pig iron . . . . .	'000 tonnes	6,006	7,021	7,444	7,591
699.41, 45, 55, 61	Steel ingots . . . . .	"	6,480	7,209	7,504	8,017
453.04	Blooms and slabs (h) . . . . .	"	5,569	6,180	6,467	6,260
699.52, 53	Irons, electric (hand, domestic) . . . . .	'000	593	643	675	781
699.41, 45, 55, 61	Jams (including conserves, jellies, etc.) . . . . .	'000 kg	34,927	34,769	32,745	30,285
453.04	Lard . . . . .	"	2,385	2,736	3,207	n.a.
699.52, 53	Lawn mowers—					
699.41, 45, 55, 61	Petrol, rotary . . . . .	No.	293,350	340,656	395,399	298,753
453.04	Other types(i) . . . . .	"	19,219	15,883	21,769	18,858
699.52, 53	Lead refined(j) . . . . .	'000 tonnes	191	174	201	171

(a) Petrol and diesel. Excludes car, motor cycle, truck, tractor, aero, and marine engines. (b) Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes). (c) Includes wheatmeal for baking and sharps and other flour. (d) Excludes grape must. (e) Excludes fabric liners for dipped gloves but includes moulded or heat-sealed work gloves. (f) Includes ice-cream combined with other confections. Including those aerated milk-based confections which contain 10% or more butterfat. (g) Includes malted milk and milk sugar (lactose). (h) Primary mills output. (i) Petrol cylinder, electric and hand. (j) Includes lead content of lead alloys from primary sources, but excludes lead-silver bullion.

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

Commodity code	Article		1971-72	1972-73	1973-74	1974-75
	Leather—					
	Dressed or finished—					
301.43-65	Chrome tanned (including retanned)	'000 m <sup>2</sup>	6,123	5,489	5,982	n.a.
301.31-37, 83-89	Vegetable tanned, by weight	'000 kg	3,684	3,873	n.a.	n.a.
301.67, 69	Vegetable tanned, by measurement	'000 m <sup>2</sup>	233	191	165	n.a.
	Lime—					
275.43, 45	Crushed	tonnes	206,327	222,598	239,047	n.a.
479.18	Hydrated	"	139,181	147,131	163,780	n.a.
479.12	Quick	"	423,196	447,782	538,721	n.a.
802.21	Lipstick	kg	45,422	41,925	53,006	n.a.
063.11-21, 31	Malt (excluding extract)	'000 kg	372,536	339,243	378,004	440,876
	Margarine—					
121.01	Table	"	17,599	21,615	25,963	31,582
121.06, 08	Other	"	54,426	55,972	57,120	55,377
	Mattresses—					
844.22, 25, 27	Inner spring	'000	696	738	749	671
844.42, 45, 47	Rubber	"	45	34	39	18
844.52-67	Other	"	332	477	583	513
027.02-76	Meat, canned(a)	'000 kg	59,032	51,019	52,903	43,481
	Meters (domestic)—					
702.01	Electricity consumption	'000	215	287	312	308
703.01	Gas consumption	"	68	65	66	69
703.11	Water consumption	"	158	167	193	196
	Milk, condensed, concentrated and evaporated—					
051.21, 22	Full cream, coffee and milk, sweetened	'000 kg	16,705	14,635	13,392	14,428
051.26, 27, 052.42	Full cream, unsweetened	"	47,832	38,293	33,203	34,627
051.28	Skim	"	11,489	11,943	11,949	11,033
	Milk powder in powered form—					
051.72, 73	Full cream	"	28,763	37,080	36,991	44,447
051.76-79	Skim	"	92,680	117,576	143,789	157,651
051.81, 82	Buttermilk or mixed skim and buttermilk	"	14,528	15,422	16,199	11,544
503.17-32	Motors, electric	'000	3,466	3,680	4,658	4,516
	Motor vehicles, finished—					
581.02-08	Cars	No.	340,122	319,561	331,303	306,007
581.10-16	Station wagons	"	51,931	50,017	51,028	55,382
582.04	Utilities	"	34,105	31,411	29,215	29,935
582.06	Panel vans	"	20,330	25,456	26,715	28,868
582.08-24	Truck and truck-type vehicles	"	3,357	5,496	4,786	7,653
	Motor vehicles, partly finished—					
581.22-28	Cars, station wagons, utilities vans	"	2,244	1,729	1,424	995
582.31, 32	Trucks and truck-type vehicles	"	18,982	20,256	24,943	25,498
582.33-46	Motor vehicle safety belts	'000	3,727	3,139	2,997	n.a.
589.81-89						
465.16, 17	Nails	tonnes	24,392	25,259	27,351	22,686
782.03, 04	Neckties	'000 doz	620	616	n.a.	n.a.
	Oatmeal and rolled oats—					
062.61, 63	For porridge, etc.	tonnes	17,247	14,419	19,268	14,092
393						
394	Oils and fats, crude—Vegetable	000 kg	66,533	75,390	75,048	n.a.
	Paints, etc.—					
	Architectural and decorative(b)—					
	Solvent thinned—					
410.01	Primers and undercoats	'000 litres	13,334	13,139	12,797	11,933
410.03, 05, 07	Finishing coats	"	29,654	31,957	32,524	30,262
	Water thinned—					
410.11, 13, 15	Plastic latex	"	24,567	27,241	28,908	28,345
410.17	Other water based	"	441	377	322	317
410.25	Tinting colours (all types) packed for sale or transfer out	"	327	407	445	527
	Paper—					
351.11	Newsprint	'000 tonnes	181	199	204	196
351.18-79	Other	"	526	548	653	571
352.11-33	Paperboard	"	382	411	444	417
975.04, 09, 11	Perambulators, pushers and strollers	'000	177	197	207	126
479.22	Plaster of paris	tonnes	314,748	341,954	361,189	336,301
479.32, 33	Plaster sheets—Non-acoustic	'000 m <sup>2</sup>	34,315	39,151	44,105	42,008
334.32, 34, 36, 38	Plywood, 1 mm basis	"	103,078	114,173	n.a.	n.a.
152.06	Pollard from wheat	'000 tonnes	256	232	242	272

(a) Excludes poultry and baby food.

(b) Excludes heavy duty coatings.

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

Commodity code	Article		1971-72	1972-73	1973-74	1974-75
	Preserves—					
	Fruit					
076.01-50	Canned or bottled . . . . .	'000 kg	253,791	272,983	213,112	239,406
074.01	Pulp and puree—single strength . . . . .	"	4,464	3,876	4,708	n.a.
	Vegetables—					
094.02-47	Canned or bottled . . . . .	"	113,892	105,933	121,940	132,382
092.02, 06, 10, 19	Quick frozen . . . . .	"	91,624	94,380	93,250	105,540
	Pyjamas—					
774.20, 22, 27, 29	Men's, youths' and boy's (suits only) . . . . .	'000 doz	468	413	414	345
774.50-59, 64, 66	Women's, maid's and girl's (incl. night-dresses) . . . . .	"	883	814	853	802
	Racquet frames (all types) . . . . .	"	19,019	19,896	19,952	14,262
832.65, 85	Radio receiving sets (including radiograms) . . . . .	No.	770,343	879,848	n.a.	285,114
643.01-37	Records (phonograph)—					
	Single play . . . . .	'000	5,965	5,470	6,050	5,927
646.35, 65	Extended play . . . . .	"	805	862	676	375
646.37, 41, 67, 71	Long play . . . . .	"	15,066	15,666	20,212	21,444
646.43, 45, 73, 75	Refrigerators, domestic, electric and gas . . . . .	"	263	236	274	222
657.32, 41	Resins, plastics and synthetic, for all purposes '000 tonnes		285	339	386	366
403.404	Rice, polished, unpolished and broken . . . . .	'000 kg	202,434	216,187	203,536	n.a.
061.67, 69	Rugs . . . . .	'000	186	126	133	117
372.70, 72						
374.59						
	Sauce . . . . .	'000 litres	29,107	27,392	30,434	n.a.
123.18-25	Semolina . . . . .	'000 tonnes	24	22	25	25
062.04	Shirts (men's, youths' and boys'), collar attached(a) . . . . .	'000 doz	650	700	770	520
773.02-09	Sink heaters, electric . . . . .	No.	9,315	9,509	10,463	7,796
653.01	Sinks, steel and other (standard size) . . . . .	"	239,902	253,758	262,275	209,894
671.11-18	Soap, for personal toilet use (b) . . . . .	tonnes	29,028	29,069	31,433	27,071
805.01-13	Soup—					
	Canned . . . . .	'000 litres	41,960	48,825	51,202	53,801
122.02, 09	Dry-mix . . . . .	'000 kg	5,882	6,693	9,048	n.a.
122.13, 15	Starch (incl. cornflour) . . . . .	"	132,666	143,799	164,787	145,169
127.11-19	Stearine (stearic acid) . . . . .	"	6,490	5,620	5,854	n.a.
401.53	Steel, constructional, fabricated . . . . .	tonnes	696,790	651,204	600,138	n.a.
461.20	Stoves, ovens and ranges, domestic cooking—					
	Electric(c) . . . . .	No.	227,314	247,460	258,984	254,678
661.01-11	Gas(d) . . . . .	"	89,343	92,996	113,649	106,301
662.26-31, 34, } 36, 42, 43 }	Solid fuel . . . . .	"	7,612	6,200	5,150	4,751
662.01, 03	Sugar—					
	Raw . . . . .	'000 tonnes	2,793	2,811	2,531	n.a.
102.01	Refined . . . . .	"	664	653	657	729
102.12	Sulphate of ammonia . . . . .	tonnes	111,107	227,864	246,014	266,483
405.36	Superphosphate(e) . . . . .	'000 tonnes	3,612	4,962	5,288	3,309
415.07						
	Talcum powder . . . . .	'000 kg	4,738	4,148	4,133	n.a.
803.61	Tallow (including dripping), rendered—					
	Edible . . . . .	"	89,927	94,892	88,655	n.a.
391.14, 16	Inedible . . . . .	"	294,602	278,485	230,331	n.a.
391.24	Television sets . . . . .	No.	361,169	396,540	446,988	465,401
643.49-67	Television picture tubes incorp. new screens . . . . .	"	432,309	355,307	393,287	152,571
645.51-58	Tiles, roofing—					
	Concrete . . . . .	'000 }	196,192	222,970	241,386	200,080
475.30	Terracotta . . . . .	"				
472.12	Timber—					
	From native logs—					
	Hardwood, etc . . . . .	'000 m <sup>3</sup>	2,582	2,560	2,563	n.a.
331.01-07	Softwood . . . . .	"	782	848	773	n.a.
331.09-19	From imported logs . . . . .	"	9	5	1	n.a.
331.23, 25	Toasters, electric (domestic) . . . . .	No.	373,399	453,637	547,591	617,621
661.21, 23	Tobacco . . . . .	'000 kg	3,038	2,671	2,399	n.a.
183.21-28	Tomato juice . . . . .	'000 litres	15,140	9,786	9,845	13,913
094.51	Tomato paste and puree . . . . .	"	9,392	9,342	15,367	n.a.
094.53	Towels . . . . .	'000 doz	936	889	1,020	662
373.58-64	Toilet cisterns . . . . .	No.	430,205	463,828	545,346	449,603
671.51-59	Transformers, chokes and ballasts, for distribution of power and light, etc. . . . .	"	14,946	11,754	13,397	17,456
683.03-11						
	Umbrellas, street and general purpose . . . . .	No.	731,658	734,814	896,065	n.a.
863.01	Underwear (men's, women's, children's) . . . . .	'000 doz	6,728	6,884	8,428	6,457
774						

(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 ammonium phosphate.

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

Commodity code	Article		1971-72	1972-73	1973-74	1974-75
692.02,04	Vacuum cleaners (domestic)	'000	174	209	240	250
	Wash basins—					
671.37	Earthenware	"	233	278	292	274
693.02-18	Washing machines, household, electric	"	312	340	375	315
	Weatherboards—					
332.12	Australian timber	m <sup>3</sup>	33,496	35,083	34,148	n.a.
332.14	Imported timber	"	5,535	5,944	2,291	n.a.
152.14	Wheatmeal for stock feed	'000 tonnes	313	496	621	458
519.01	Wheelbarrows (metal)	No.	144,080	169,400	179,841	n.a.
	Wine, beverage—					
172.42	Fortified	'000 litres	59,922	54,536	62,353	69,952
172.46	Unfortified	"	94,387	115,738	149,448	170,561
341.31-45	Wood pulp (air dried)	'000 tonnes	506	532	617	571
242.07-11	Wool, scoured or carbonised	tonnes	68,254	59,338	53,687	51,772
242.33,35	Wool tops, pure	'000 kg	17,493	19,735	14,240	8,296
	Yarn (including mixtures)—					
364.11-50	Cotton	"	27,763	28,216	30,996	24,204
363.47-75	Woollen	"	19,147	17,914	17,721	13,780
363.17-31	Wool worsted	"	8,665	8,759	7,219	4,232
365.38-65	Rayon and acetate, spun	"	5,575	5,088	3,610	1,925
365.90, 366.03, 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun	"	7,009	11,467	16,521	10,096
457.04	Zinc, refined(a)	'000 tonnes	274	299	282	243

(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 from the 1968-69 Economic Censuses for *enterprises* engaged in manufacturing industry. A description of the statistics and broad summary tables are given in the Miscellaneous chapter.

Similarly *industry concentration* statistics have been published for 1968-69. These aim to show the extent to which individual enterprise groups dominate particular industries. A description and summary tables of these statistics are also given in the Miscellaneous chapter.

### Foreign Ownership and Control in Manufacturing Industry

Summary information on foreign ownership and control in manufacturing industry is shown in Chapter 11. More detailed statistics are available in *Foreign Control in Manufacturing Industry. Study of Large Enterprise Groups, 1972-73 (Advance Release)* (12.34), *Foreign Control in Manufacturing Industry. Study of Large Enterprise Groups, 1972-73* (12.35), *Foreign Ownership and Control in Manufacturing Industry, 1972-73 (Advance Release)* (12.37) and *Foreign Ownership and Control in Manufacturing Industry, 1972-73* (12.38).