

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 Australian 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 Australian 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 Australian and State Governments and of industry. Approximately half its funds are provided by Australian 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 Australian 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. In June 1974, 962 laboratories held NATA registration. A further 25 laboratories had been nominated for registration.

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 Australian 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 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 *Good 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 the magazine *Design Australia* and 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)	Value of—					Land and buildings (e)	Plant and machinery (e)
			Salaries and wages paid(c)	Materials and fuel used	Output	Production (d)			
	No.	'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1901	11,143	198	n.a.	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 736. 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 \$1 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 of a gross value of \$1 million or more.
- (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 1969-70, 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.

<i>Value of production</i> 1967-68	<i>Value added</i> 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 Value of other work done, . . . such as repairing and making up for customers, etc.	Sales and transfers out (to other establishments of the enterprise), of goods manufactured by the establishment, plus 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>Less—</i> Value of materials used Power, fuel and light used Water used Lubricating oils used Repairs, etc. Containers used	<i>Plus:</i> Closing stocks <i>Less:</i> Opening stocks <i>Less—</i> Purchases and transfers in of materials, electricity, fuels, containers, etc. Purchases and transfers in of goods for resale Charges for commission and subcontract work Repair and maintenance expenses Outward freight and cartage, motor vehicle running expenses, sales commission payments
<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.

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.

Summary of operations

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

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS, BY INDUSTRY
SUB-DIVISION: AUSTRALIA, 1971-72 AND 1972-73**

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			
1971-72												
Food, beverages and tobacco	21-2	4,423	148,130	53,460	201,590	790	5,295	620	675	3,666	1,684	180
Textiles	23	873	30,539	24,647	55,186	191	812	171	182	489	334	29
Clothing and footwear	24	3,216	25,096	91,043	116,139	324	1,143	181	190	630	522	19
Wood, wood products and furniture	25	5,884	70,744	10,340	81,084	280	1,077	150	154	590	496	45
Paper and paper products, printing	26	3,588	77,792	28,536	106,328	445	1,616	217	225	806	818	81
Chemical, petroleum, and coal products	27	1,165	47,976	17,634	65,610	314	1,827	327	341	1,037	804	106
Non-metallic mineral products	28	1,854	46,208	5,120	51,328	238	1,002	129	142	519	496	59
Basic metal products	29	627	86,964	5,884	92,848	454	2,657	506	535	1,802	884	444
Fabricated metal products	31	5,170	97,836	22,500	120,336	484	1,774	308	331	973	824	63
Transport equipment	32	1,426	135,807	16,083	151,890	669	2,531	446	504	1,542	1,047	136
Other machinery and equipment	33	4,899	141,391	48,198	189,589	796	2,808	692	716	1,536	1,297	91
Miscellaneous manufacturing	34	3,022	46,655	24,201	70,856	272	1,094	177	191	611	497	46
Total manufacturing		36,147	955,138	347,646	1,302,784	5,257	23,637	3,921	4,187	14,200	9,703	1,298
1972-73												
Food, beverages and tobacco	21-2	4,352	150,250	55,851	206,101	888	6,114	683	734	4,228	1,937	220
Textiles	23	879	30,589	24,227	54,816	215	975	188	208	609	387	25
Clothing and footwear	24	3,151	24,419	87,613	112,032	351	1,207	190	203	662	559	20
Wood, wood products and furniture	25	5,895	72,360	11,006	83,366	317	1,272	159	170	699	584	64
Paper and paper products, printing	26	3,668	77,832	29,933	107,765	494	1,822	231	230	898	924	92
Chemical, petroleum and coal products	27	1,173	47,770	17,646	65,416	351	2,028	349	353	1,134	898	127
Non-metallic mineral products	28	1,856	47,527	5,574	53,101	274	1,167	143	144	602	565	73
Basic metal products	29	639	89,592	6,331	95,923	519	3,024	536	560	2,034	1,014	331
Fabricated metal products	31	5,287	93,895	22,565	116,460	515	1,883	336	336	1,024	861	56
Transport equipment	32	1,524	136,984	16,917	153,901	727	2,688	497	455	1,590	1,056	112
Other machinery and equipment	33	4,856	138,170	48,266	186,436	849	3,014	712	711	1,626	1,388	95
Miscellaneous manufacturing	34	3,159	48,263	25,152	73,415	314	1,264	195	207	698	579	41
Total manufacturing		36,439	957,651	351,081	1,308,732	5,812	26,459	4,218	4,312	15,804	10,750	1,256

(a) Australian Standard Industrial Classification.
fixed tangible assets less disposals.

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

(c) Outlay on

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: 1969-70, 1971-72 AND 1972-73**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
MALES EMPLOYED										
Food, beverages and tobacco	21-2	48,766	46,851	27,172	12,618	9,770	4,236	385	452	150,250
Textiles	23	9,058	16,946	939	1,425	488	1,733	..	..	30,589
Clothing and footwear	24	7,480	14,288	1,162	1,093	294	102	..	..	24,419
Wood, wood products and furniture	25	23,903	18,498	11,201	7,167	6,739	4,403	84	365	72,360
Paper and paper products, printing	26	29,734	25,607	6,989	5,352	4,270	4,877	106	897	77,832
Chemical, petroleum and coal products	27	21,885	16,658	2,637	2,479	2,751	1,360	..	..	47,770
Non-metallic mineral products	28	19,461	12,926	5,816	3,754	4,034	995	188	353	47,527
Basic metal products	29	55,391	11,355	4,483	9,176	4,683	3,657	(b)	(b)	89,592
Fabricated metal products	31	35,624	31,367	9,842	9,005	6,417	1,186	147	307	93,895
Transport equipment	32	41,718	52,478	12,274	24,701	4,592	1,055	(b)	(b)	136,984
Other machinery and equipment	33	58,896	50,341	7,307	14,981	5,532	950	(b)	(b)	138,170
Miscellaneous manufacturing	34	18,549	21,111	2,943	4,013	1,384	228	..	35	48,263
Total manufacturing	1972-73	370,465	318,426	92,765	95,764	50,954	24,782	1,877	2,618	957,651
	1971-72	376,263	310,882	91,241	96,232	52,049	24,856	1,014	2,601	955,138
	1969-70	380,596	306,959	88,413	94,601	50,963	25,371	821	2,345	950,069
FEMALES EMPLOYED										
Food, beverages and tobacco	21-2	17,680	18,067	7,525	6,395	4,187	1,713	119	165	55,851
Textiles	23	7,376	12,301	1,107	1,137	248	2,058	..	..	24,227
Clothing and footwear	24	30,646	46,575	5,422	3,310	1,428	232	..	..	87,613
Wood, wood products and furniture	25	3,771	2,640	1,909	1,175	1,085	346	16	64	11,006
Paper and paper products, printing	26	12,647	10,012	2,565	1,892	1,597	862	43	315	29,933
Chemical, petroleum and coal products	27	10,266	5,965	442	527	364	82	..	..	17,646
Non-metallic mineral products	28	2,312	1,976	329	421	411	75	15	35	5,574
Basic metal products	29	3,423	1,345	268	698	324	144	(b)	(b)	6,331
Fabricated metal products	31	9,661	7,613	1,974	2,081	967	202	22	45	22,565
Transport equipment	32	5,207	8,716	555	2,019	221	190	(b)	(b)	16,917
Other machinery and equipment	33	23,928	17,099	1,012	5,344	748	85	(b)	(b)	48,266
Miscellaneous manufacturing	34	10,649	11,002	1,038	1,833	575	37	..	18	25,152
Total manufacturing	1972-73	137,566	143,311	24,146	26,832	12,155	6,026	347	698	351,081
	1971-72	140,615	139,307	23,127	25,404	12,168	6,113	180	732	347,646
	1969-70	143,147	138,746	22,102	23,815	11,634	6,389	123	615	346,571
PERSONS EMPLOYED										
Food, beverages and tobacco	21-2	66,446	64,918	34,697	19,013	13,957	5,949	504	617	206,101
Textiles	23	16,434	29,247	2,046	2,562	736	3,791	..	..	54,816
Clothing and footwear	24	38,126	60,863	6,584	4,403	1,722	334	..	..	112,032
Wood, wood products and furniture	25	27,674	21,138	13,110	8,342	7,824	4,749	100	429	83,366
Paper and paper products, printing	26	42,381	35,619	9,554	7,244	5,867	5,739	149	1,212	107,765
Chemical, petroleum and coal products	27	32,151	22,623	3,079	3,006	3,115	1,442	..	..	65,416
Non-metallic mineral products	28	21,773	14,902	6,145	4,175	4,445	1,070	203	388	53,101
Basic metal products	29	58,814	12,700	4,751	9,874	5,007	3,801	(b)	(b)	95,923
Fabricated metal products	31	45,285	38,980	11,816	11,086	7,384	1,388	169	352	116,460
Transport equipment	32	46,925	61,194	12,829	26,720	4,813	1,245	(b)	(b)	153,901
Other machinery and equipment	33	82,824	67,440	8,319	20,325	6,280	1,035	(b)	(b)	186,436
Miscellaneous manufacturing	34	29,198	32,113	3,981	5,846	1,959	265	..	53	73,415
Total manufacturing	1972-73	508,031	461,737	116,911	122,596	63,109	30,808	2,224	3,316	1,308,732
	1971-72	516,878	450,189	114,368	121,636	64,217	30,969	1,194	3,333	1,302,784
	1969-70	523,743	445,705	110,515	118,416	62,597	31,760	944	2,960	1,296,640

(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: 1969-70, 1971-72 AND 1972-73**
(\$ 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	303	285	143	70	57	24	3	3	888
Textiles	23	67	116	6	10	3	12	..	..	215
Clothing and footwear	24	119	198	16	12	5	1	..	..	351
Wood, wood products and furniture	25	113	80	46	30	28	17	..	2	317
Paper and paper products, printing	26	201	161	40	32	25	27	1	6	494
Chemical, petroleum and coal products	27	174	119	18	15	17	8	..	..	351
Non-metallic mineral products	28	115	77	20	23	23	5	1	2	274
Basic metal products	29	311	72	37	51	29	21	(b)	(b)	519
Fabricated metal products	31	207	178	47	46	30	5	1	2	515
Transport equipment	32	228	287	57	128	21	5	(b)	(b)	727
Other machinery and equipment	33	380	317	35	86	27	4	(b)	(b)	849
Miscellaneous manufacturing	34	125	143	15	23	7	1	..	..	314
Total manufacturing	1972-73	2,343	2,031	481	523	272	131	14	17	5,812
	1971-72	2,164	1,801	426	470	256	119	6	12	5,257
	1969-70	1,788	1,497	332	386	208	102	4	11	4,329

(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
1969-70, 1971-72 AND 1972-73**
(\$ 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	1,844	2,143	1,146	420	360	174	15	11	6,114
Textiles	23	309	524	25	56	18	44	..	..	975
Clothing and footwear	24	435	674	42	42	12	2	..	..	1,207
Wood, wood products and furniture	25	449	313	174	134	107	88	2	6	1,272
Paper and paper products, printing	26	733	611	145	125	80	110	2	17	1,822
Chemical, petroleum and coal products	27	1,002	614	175	86	112	40	..	..	2,028
Non-metallic mineral products	28	461	314	153	91	104	23	7	14	1,167
Basic metal products	29	1,675	333	340	262	250	151	(b)	(b)	3,024
Fabricated metal products	31	727	632	192	177	124	22	4	6	1,883
Transport equipment	32	720	1,214	256	413	69	14	(b)	(b)	2,688
Other machinery and equipment	33	1,353	1,124	138	289	95	12	(b)	(b)	3,014
Miscellaneous manufacturing	34	300	585	65	81	29	4	..	1	1,264
Total manufacturing	1972-73	10,207	9,080	2,851	2,176	1,360	682	43	61	26,459
	1971-72	9,293	8,053	2,433	1,942	1,240	596	29	50	23,637
	1969-70	8,277	6,995	2,022	1,764	1,029	542	20	37	20,686

(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: 1969-70, 1971-72 AND 1972-73**
(\$ 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	1,267	1,499	813	275	248	110	9	7	4,228
Textiles	23	188	322	15	44	13	27	..	..	609
Clothing and footwear	24	244	370	19	23	5	1	..	..	662
Wood, wood products and furniture	25	250	172	87	83	55	48	1	4	699
Paper and paper products, printing	26	364	305	72	58	36	59	1	4	898
Chemical, petroleum and coal products	27	533	350	119	46	64	23	..	..	1,134
Non-metallic mineral products	28	240	157	80	46	56	10	4	10	602
Basic metal products	29	1,077	231	221	162	241	95	(b)	(b)	2,034
Fabricated metal products	31	391	334	112	100	72	12	2	2	1,024
Transport equipment	32	380	749	165	252	39	5	(b)	(b)	1,590
Other machinery and equipment	33	738	597	80	151	52	5	(b)	(b)	1,626
Miscellaneous manufacturing	34	269	330	37	43	17	2	..	..	698
Total manufacturing	1972-73	5,940	5,414	1,821	1,281	897	397	23	31	15,804
	1971-72	5,454	4,814	1,584	1,169	776	359	18	25	14,201
	1969-70	5,002	4,307	1,346	1,085	632	318	13	19	12,722

(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 1969-70, 1971-72
AND 1972-73 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.
OPENING STOCKS AT 30 JUNE 1972										
Food, beverages and tobacco	21-2	216	253	72	96	21	22	2	..	683
Textiles	23	64	99	5	7	2	10	..	..	188
Clothing and footwear	24	71	103	8	7	2	..	..	..	190
Wood, wood products and furniture	25	52	40	21	16	15	15	..	..	159
Paper and paper products, printing	26	90	81	19	14	9	17	..	2	231
Chemical, petroleum and coal products	27	186	112	19	12	14	6	..	..	349
Non-metallic mineral products	28	64	40	16	10	13	3	1	1	143
Basic metal products	29	269	58	74	57	39	35	(b)	(b)	536
Fabricated metal products	31	133	120	27	29	18	4	..	1	334
Transport equipment	32	143	225	34	83	9	3	(b)	(b)	497
Other machinery and equipment	33	313	289	26	62	20	2	(b)	(b)	712
Miscellaneous manufacturing	34	77	91	11	13	4	1	..	..	195
Total manufacturing		1,679	1,506	331	405	167	117	9	5	4,218
CLOSING STOCKS AT 30 JUNE 1973										
Food, beverages and tobacco	21-2	233	267	80	103	25	22	2	1	734
Textiles	23	69	104	5	12	4	14	..	..	208
Clothing and footwear	24	71	112	8	10	2	..	..	..	203
Wood, wood products and furniture	25	57	41	22	18	15	16	..	1	170
Paper and paper products, printing	26	92	81	19	13	10	14	..	2	230
Chemical, petroleum and coal products	27	184	118	21	10	15	6	..	..	353
Non-metallic mineral products	28	64	35	17	11	13	3	1	1	144
Basic metal products	29	291	66	57	54	48	32	(b)	(b)	560
Fabricated metal products	31	129	123	29	30	20	4	..	1	336
Transport equipment	32	125	213	32	74	8	4	(b)	(b)	455
Other machinery and equipment	33	309	292	27	60	21	2	(b)	(b)	711
Miscellaneous manufacturing	34	81	95	11	15	5	1	..	..	207
Total manufacturing		1,706	1,545	328	410	184	116	17	6	4,311
Opening stocks	1971-72	1,558	1,403	317	368	160	108	4	4	3,921
	1969-70	1,334	1,197	254	301	135	99	2	4	3,326
Closing stocks	1971-72	1,666	1,490	338	399	169	117	4	5	4,187
	1969-70	1,442	1,294	291	336	153	101	3	3	3,623

(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 731.

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION
1969-70, 1971-72 AND 1972-73
(\$ 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	595	658	341	152	116	65	6	4	1,937
Textiles	23	125	207	10	18	6	21	..	..	387
Clothing and footwear	24	192	313	23	22	7	1	..	..	559
Wood, wood products and furniture	25	205	143	88	53	52	40	1	3	584
Paper and paper products, printing	26	371	306	73	67	44	48	1	13	924
Chemical, petroleum and coal products	27	466	270	58	38	49	17	..	..	898
Non-metallic mineral products	28	221	155	74	46	49	13	3	4	565
Basic metal products	29	620	111	101	97	19	52	(b)	(b)	1,014
Fabricated metal products	31	332	301	83	77	54	9	2	3	861
Transport equipment	32	321	453	90	152	29	10	(b)	(b)	1,056
Other machinery and equipment	33	611	530	59	136	44	7	(b)	(b)	1,388
Miscellaneous manufacturing	34	235	259	28	41	13	2	..	..	579
Total manufacturing	1972-73	4,293	3,706	1,027	900	481	285	28	30	10,750
	1971-72	3,947	3,328	871	803	472	245	11	26	9,703
	1969-70	3,383	2,785	713	715	415	226	9	17	8,262

(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 1969-70, 1971-72 AND 1972-73, 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	1,292	1,214	785	445	420	159	23	14	4,352
Textiles	23	310	405	62	48	35	19	..	..	879
Clothing and footwear	24	1,202	1,601	160	106	70	12	..	..	3,151
Wood, wood products and furniture	25	1,921	1,485	1,019	496	576	351	15	32	5,895
Paper and paper products, printing	26	1,567	1,202	303	246	246	67	8	29	3,668
Chemical, petroleum and coal products	27	550	359	81	76	86	21	..	..	1,173
Non-metallic mineral products	28	675	447	270	170	206	55	17	16	1,856
Basic metal products	29	242	211	64	59	45	14	3	1	639
Fabricated metal products	31	2,105	1,513	623	440	476	84	25	21	5,287
Transport equipment	32	490	467	196	177	155	31	6	2	1,524
Other machinery and equipment	33	2,065	1,715	329	392	279	63	2	11	4,856
Miscellaneous manufacturing	34	1,208	1,113	317	261	218	36	..	6	3,159
Total manufacturing	1972-73	13,627	11,732	4,209	2,916	2,812	912	99	132	36,439
	1971-72	13,883	11,409	4,001	2,979	2,727	933	80	135	36,147
	1969-70	13,631	11,394	3,848	2,977	2,705	945	65	111	35,676

(a) Australian Standard Industrial Classification.

Electricity and gas establishments

As mentioned on page 729, 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 or for 1972-73.

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)			
1969-70											
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										
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
1971-72											
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										
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 this Bureau, and in the bulletin *Manufacturing Commodities—Principal Articles Produced*.

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		1969-70	1970-71	1971-72	1972-73
401.29	Acid (in terms of 100%)—					
401.37	Hydrochloric	tonnes	38,040	43,207	47,370	40,969
401.57	Nitric	"	125,601	119,870	140,317	162,680
171.03, 04, 07, 08	Sulphuric	'000 tonnes	1,762	1,612	1,756	2,265
	Aerated and carbonated waters	'000 litres	655,286	725,191	773,620	876,455
657.03, 05	Air-conditioning equipment—					
657.13, 15	Room air conditioners (refrigerated)	No.	38,966	34,252	41,843	29,090
657.21, 22, 23	Room air coolers (evaporative coolers)	"	46,147	41,429	50,007	44,033
475.04, 06, 07, 85	Package unit air conditioners	"	7,600	7,977	9,277	8,641
	Asbestos cement building sheets (finished)	'000 m ²	34,171	33,646	36,647	39,802
	Bags, leather, fibre, etc.—					
	Handbags—					
864.31	Leather	No.	475,841	n.a.	509,214	370,529
864.33	Plastic	'000	2,278	n.a.	1,655	1,271
864.39	Other	No.	398,773	n.a.	383,430	358,707
946-01-52	Hessian and calico bags	'000 doz (a)	n.a.	n.a.	3,948	2,085
864.11-19	Suitcases, kitbags and trunks	'000	1,646	n.a.	1,778	1,706
864.41-49	All other(b)	"	1,655	n.a.	1,346	n.a.
	Bath heaters—					
652.01	Electric	No.	7,831	7,724	7,394	7,007
652.03, 08, 09	Gas	"	3,953	2,981	3,358	2,650
652.05	Solid fuel	"	4,703	7,716	6,516	3,744
779.02-36	Bathing suits(c)	'000 doz	358	306	342	278
	Baths (exclude infants baths)—					
671.03	Pressed steel—Enamelled	'000	115	110	125	153
671.01, 04, 08	Other (exclude pressed steel, galvanised)	"	69	80	75	51
	Batteries, wet cell type—					
685.1-1, 15	Auto (S.L.I.) 6 volts	'000	420	378	380	355
685.17, 19	Auto (S.L.I.) 12 volts	"	1,822	1,894	2,095	2,084
685.33, 35	Radio, homelighter, fencer	No. of 2 volt cells	76,202	59,992	57,396	48,839
685.43-65	Traction, plant and other	"	136,061	146,526	157,971	159,046
172.02, 04, 06	Beer (excluding waste beer)	mil. litres	1,553	1,619	1,665	1,745
064.21	Biscuits	'000 kg	111,108	113,152	116,633	115,982
372.374	Blankets, Woollen—Pure and Mixtures	'000	1,687	1,891	1,832	1,687
152.02	Bran (wheat)	'000 tonnes	164	157	134	128
172.21	Brandy	'000 litre Al	3,486	n.a.	4,484	3,561
777.41, 49	Brassieres	'000 doz	835	821	819	811
066.01-31	Breakfast food, cereal (ready to eat)	tonnes	51,025	52,858	55,318	56,235
472.01, 03	Bricks, clay	million	1,694	1,669	1,744	1,874
261.41	Briquettes, brown coal	'000 tonnes	1,564	1,398	1,308	1,221
051.30, 052, 20, 32	Butter—from cream (exclude whey cream)	'000 kg	222,958	203,220	195,407	184,857
773.51, 53, 74, 75, 83	Cardigans, jumpers, etc.	'000 doz	1,582	1,542	1,930	1,890
474.02	Cement, Portland	'000 tonnes	4,499	4,685	4,884	5,037
051	Cheese (non-processed)	'000kg	76,303	77,566	80,871	93,441
	Cloth (including mixtures)—					
373.10-52	Cotton(d)	'000 m ²	47,648	47,235	47,147	45,324
374.02-16	Rayon and acetate	"	29,193	26,666	21,258	23,005
374.20-34	Synthetic (non-cellulosic)	"	31,573	31,754	41,555	87,834
372.02-50	Wool (excluding blanketing and rug)	"	27,092	15,829	13,870	14,208
435.22	Coke—Metallurgical	'000 tonnes	4,033	4,542	4,136	4,925
475.90	Concrete, ready mixed	'000 m ³	8,290	8,933	9,748	9,726
	Confectionery—					
104.06-18	Chocolate	'000 kg	46,435	49,537	52,569	49,633
104.21-29	Other	"	55,904	56,892	59,062	60,342
452.04	Copper, refined(e)	'000 tonnes	105	115	131	136
	Coppers (wash boilers)—					
653.31	Electric	No.	(a)	3,972	2,792	2,248
653.33, 38, 39	Gas	"	1,502	335	273	228

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

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

Commodity code	Article		1969-70	1970-71	1971-72	1972-73
171.06, 10	Cordials and syrups	'000 litres	51,879	60,638	69,768	78,409
777.01-29	Corsets and corselets	'000 doz	345	271	255	251
611.01	Cycles (complete)	'000	126	125	131	165
804.01	Dentifrices (toothpaste)	'000 kg	5,378	n.a.	5,546	5,266
	Electric generators—					
503.06	Non-automotive—Alternating current	No.	2,790	n.a.	3,081	2,691
503.08	Direct current		297	n.a.	139	n.a.
499.42	Electricity	mil. kWh	53,887	57,974	59,501	64,802
523.76-78	Electrodes for manual welding	'000 kg	23,270	24,226	23,453	20,914
502.22-39	Engines, spark and compression ignition(a)	'000	364	354	355	430
	Essences, flavouring—					
139.31	Domestic	'000 litres	520	n.a.	417	398
139.35	Industrial	"	4,290	n.a.	5,017	5,409
802.11, 12	Face powder	'000 kg	140	n.a.	126	113
696.01, 03, 05	Fans, electric (propeller type)	No.	429,018	374,167	405,196	473,453
045.01, 51	Fish, canned (including fish loaf)	'000 kg	7,047	5,149	6,322	7,264
	Floorboards—					
332.06	Australian timber	m ³	369,197	n.a.	310,041	331,516
332.08	Imported timber	"	2,298	n.a.	1,006	366
	Floor coverings—					
841.01-07	Textile	'000 m ²	15,311	17,422	21,594	25,187
841.31-61, 69	Smooth surface and embossed	"	12,056	12,842	13,104	12,804
841.67, 68	Timber parquetry	"	465	322	234	217
841.85	Underfelts, underlays, etc.(b)	"	16,950	17,741	17,459	16,874
692.21, 23	Floor polishers, electric	No.	53,701	49,720	35,998	28,925
	Flour—					
068.01	Self-raising	'000 kg	42,020	n.a.	42,451	38,496
062.01, 10, 32	Wheaten(c)	'000 tonnes	1,279	1,313	1,204	1,146
	Fruit juices, natural—					
074.61-69, 79	Single strength	'000 litres	92,758	n.a.	91,547	n.a.
074.76, 89	Concentrated(d)	"	8,787	n.a.	12,808	13,939
434.09	Gas (produced by gas establishments)	'000 therms	410,713	n.a.	616,392	751,739
781.06-31	Gloves, work(e)	'000 doz pairs	2,188	2,445	3,168	3,425
127.21	Glucose	'000 kg	33,936	44,030	52,632	57,546
832.58, 59	Golf clubs	doz	42,178	46,067	50,131	61,928
	Handkerchiefs					
786.01	Men's	'000 doz	1,800	n.a.	1,672	1,215
786.11	Women's	"	1,275	n.a.	1,249	1,212
	Heaters, room—					
651.01, 03	Solid fuel	No.	16,153	9,648	9,767	6,912
651.11-17	Electric radiators and fires	'000	713	659	813	810
651.04, 05, 21, 22, 26, 27	Gas fires and space heaters	No.	52,206	55,988	58,421	67,591
775	Hosiery—					
	Women's (including panty hose)	'000 doz pairs	6,121	7,313	7,518	8,881
	Men's	"	1,953	1,859	1,831	1,972
	Childrens' and infants'	"	1,140	1,054	1,147	1,250
281.04	Ice, made	'000 tonnes	122	n.a.	116	113
051.61	Ice cream(f)	'000 litres	191,124	190,779	196,522	209,268
051.87, 89, 90	Infants' invalids' and health beverages from cows milk(g)	'000 kg	24,872	23,977	26,999	26,707
	Ink, printing—					
419.31	News	"	10,869	n.a.	11,243	10,940
419.43-59	Other	"	8,184	n.a.	11,716	13,880
	Iron and steel—					
442.04, 08	Pig iron	'000 tonnes	5,956	6,240	6,006	7,182
442.80-83	Steel ingots	"	6,625	6,800	6,480	7,235
442.28	Blooms and slabs (h)	"	5,884	5,765	5,569	6,164
693.51, 61, 63	Irons, electric (hand, domestic)	'000	592	556	593	646
076.60	Jams (including conserves, jellies, etc.)	'000 kg	37,364	38,659	34,927	33,166
391.04	Lard	"	2,815	n.a.	2,385	2,736
	Lawn mowers—					
699.52, 53	Petrol, rotary	No.	270,293	290,224	293,350	340,877
699.41, 45, 55, 61	Other types(i)	"	20,489	17,579	19,219	15,900
453.04	Lead refined(j)	'000 tonnes	172	155	191	174

(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		1969-70	1970-71	1971-72	1972-73
	Leather—					
	Dressed or finished—					
301.43-65	Chrome tanned (including retanned)	'000 m ²	6,167	n.a.	6,123	5,489
301.31-37, 83-89	Vegetable tanned, by weight	'000 kg	4,535	n.a.	3,684	3,873
301.67, 69	Vegetable tanned, by measurement	'000 m ²	316	n.a.	233	191
	Lime—					
275.43, 45	Crushed	tonnes	211,550	n.a.	206,327	222,598
479.18	Hydrated	"	164,740	n.a.	139,181	147,131
479.12	Quick	"	434,362	n.a.	423,196	447,782
802.21	Lipstick	kg	47,560	n.a.	45,422	41,925
063.11-21, 31	Malt (excluding extract)	'000 kg	264,767	315,777	372,536	339,243
	Margarine—					
121.01	Table	"	15,710	16,240	17,599	23,058
121.06, 08	Other	"	47,764	50,306	54,426	54,429
	Mattresses—					
844.22, 25, 27	Inner spring	'000	720	721	696	738
844.42, 45, 47	Rubber	"	48	45	45	30
844.52-67	Other	"	310	308	332	463
027.02-76	Meat, canned(a)	'000 kg	46,737	54,388	59,032	48,520
	Meters (domestic)—					
702.01	Electricity consumption	'000	269	313	215	298
703.01	Gas consumption	"	63	66	68	65
703.11	Water consumption	"	174	185	158	169
	Milk, condensed, concentrated and evaporated—					
051.21, 22	Full cream, coffee and milk, sweetened	'000 kg	16,125	16,696	16,705	14,301
051.26, 27, 052.42	Full cream, unsweetened	"	57,128	61,797	47,832	46,288
051.28	Skim	"	21,189	14,997	11,489	10,986
	Milk powder in powered form—					
051.72, 73	Full cream	"	22,979	25,634	28,763	36,329
051.76-79	Skim	"	94,007	91,507	92,680	117,603
051.81, 82	Buttermilk or mixed skim and buttermilk	"	18,366	17,175	14,528	15,677
503.17-32	Motors, electric	'000	4,056	3,249	3,466	3,796
	Motor vehicles, finished—					
581.02-08	Cars	No.	334,802	320,510	340,122	319,616
581.10-16	Station wagons	"	55,734	54,023	51,931	49,952
582.04	Utilities	"	37,753	33,156	34,105	36,138
582.06	Panel vans	"	18,013	18,059	20,330	25,561
582.08-24	Truck and truck-type vehicles	"	1,052	799	3,357	5,892
	Motor vehicles, partly finished—					
581.22-28	Cars, station wagons, utilities, vans	"	2,183	1,509	2,244	1,687
582.31, 32	Trucks and truck-type vehicles	"	26,678	22,985	18,982	14,104
582.33-46	Motor vehicle safety belts	'000	1,142	n.a.	3,727	3,139
465.16, 17	Nails	tonnes	24,574	24,304	24,392	25,081
782.03, 04	Neckties	'000 doz	464	n.a.	620	616
062.61, 63	Oatmeal and rolled oats—	tonnes	15,301	14,647	17,247	14,014
393	For porridge, etc.	"				
394	Oils and fats, crude—Vegetable	000 kg	48,412	n.a.	66,533	75,390
	Paints, etc.—					
	Architectural and decorative(b)—					
	Solvent thinned—					
410.01	Primers and undercoats	'000 litres	13,310	12,696	13,334	13,119
410.03, 05, 07	Finishing coats	"	26,273	29,395	29,654	31,600
	Water thinned—					
410.11, 13, 15	Plastic latex	"	21,831	22,931	24,567	26,768
410.17	Other water based	"	361	441	441	325
410.25	Tinting colours (all types) packed for sale or transfer out	"	445	313	327	369
	Paper—					
351.11	Newsprint	'000 tonnes	173	179	181	199
351.18-79	Other	"	494	506	526	546
352.11-33	Paperboard	"	377	385	382	408
975.04, 09, 11	Perambulators, pushers and strollers	'000	158	172	177	195
479.22	Plaster of paris	tonnes	302,728	308,993	314,748	344,388
479.32, 33	Plaster sheets—Non-acoustic	'000 m ²	29,889	32,105	34,314	39,796
334.32, 34, 36, 38	Plywood, $\frac{1}{8}$ inch basis	"	24,128	n.a.	21,655	23,360
152.06	Pollard from flour	'000 tonnes	283	284	256	240

(a) Excludes poultry and baby food.

(b) Excludes heavy duty coatings.

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

Commodity code	Article		1969-70	1970-71	1971-72	1972-73
	Preserves—					
	Fruit					
076.01-50	Canned or bottled	'000 kg	307,894	301,361	253,791	273,814
074.01	Pulp and puree—single strength	"	4,503	n.a.	4,464	3,876
	Vegetables—					
094.02-47	Canned or bottled	"	88,992	88,901	113,892	104,503
092.02, 06, 10, 19	Quick frozen	"	79,368	59,712	91,624	90,808
	Pyjamas—					
774.20, 22, 27, 29	Men's, youth's and boy's (suits only)	'000 doz	486	477	468	388
774.50-59	Women's, maid's and girl's (incl. night-dresses)	"	779	812	883	788
832.65, 85	Racquet frames (all types)	"	16,663	16,699	19,019	19,783
643.01, 37	Radio receiving sets (including radiograms)	No.	729,514	745,828	770,343	866,994
	Records (phonograph)—					
646.35, 65	Single play	'000	6,913	6,367	5,965	5,417
646.37, 41, 67, 71	Extended play	"	1,623	1,195	805	954
646.43, 45, 73, 75	Long play	"	11,262	14,207	15,066	17,041
657.32, 41	Refrigerators, domestic, electric and gas	"	241	241	263	248
403.404	Resins, plastics and synthetic, for all purposes	'000 tonnes	224	256	285	341
061.67, 69	Rice, polished, unpolished and broken	'000 kg	175,021	n.a.	202,434	216,187
372, 70, 72						
374, 59	Rugs	'000	215	180	186	112
123, 18-25	Sauce	'000 litres	23,181	n.a.	29,107	27,392
062.04	Semolina	'000 tonnes	22	23	24	24
773.02-09	Shirts (men's, youths' and boys'), collar attached(a)	'000 doz	700	699	650	656
653.01	Sink heaters, electric	No.	8,744	9,594	9,315	9,517
671.11-18	Sinks, steel and other (standard size)	"	256,925	238,000	239,902	252,168
805.01-13	Soap, for personal toilet use (b)	tonnes	27,135	28,352	29,028	28,913
	Soup—					
122.02, 09	Canned	'000 litres	42,289	41,959	41,960	45,243
122.13, 15	Dry-mix	'000 kg	5,041	5,777	5,882	6,693
127.11-19	Starch (incl. cornflour)	"	105,869	127,113	132,666	148,505
401.53	Stearine (stearic acid)	"	6,175	n.a.	6,490	5,620
461.20	Steel, constructional, fabricated	tonnes	682,191	n.a.	696,790	651,204
	Stoves, ovens and ranges, domestic cooking—					
661.01-11	Electric(c)	No.	221,379	219,868	227,314	251,014
662.26-43	Gas(d)	"	82,849	82,486	89,343	91,291
662.01, 03	Solid fuel	"	10,626	8,453	7,612	6,204
	Sugar—					
102.01	Raw	'000 tonnes	2,214	n.a.	2,793	
102.12	Refined	"	682	680	664	696
405.36	Sulphate of ammonia	tonnes	108,046	176,560	111,107	227,864
415.07	Superphosphate(e)	'000 tonnes	3,578	3,115	3,612	4,918
803.61	Talcum powder	'000 kg	4,526	n.a.	4,738	4,804
	Tallow (including dripping), rendered—					
391.14, 16	Edible	"	87,602	n.a.	89,927	94,892
391.24	Inedible	"	242,840	n.a.	294,602	278,485
643.49-65	Television sets	No.	319,657	335,373	361,169	383,663
645.51-58	Television picture tubes incorp. new screens	"	411,436	490,034	432,309	371,937
	Tiles, roofing—					
475.30	Concrete	'000 }	182,190	176,580	196,192	217,884
472.12	Terracotta	"				
	Timber—					
	From native logs—					
331.01-07	Hardwood, etc	'000 m ³	2,672	n.a.	2,582	2,560
331.09-19	Softwood	"	714	n.a.	782	848
331.23, 25	From imported logs	"	23	n.a.	9	5
661.21, 23	Toasters, electric (domestic)	No.	371,333	380,582	373,399	489,481
183.21-28	Tobacco	'000 kg	3,119	n.a.	3,038	2,671
094.51	Tomato juice	'000 litres	8,540	16,127	15,140	9,699
094.53	" paste and puree	"	7,632	n.a.	9,392	9,342
373.58-64	Towels	'000 doz	913	898	936	854
671.51-59	Toilet cisterns	No.	459,920	402,749	430,205	454,188
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc.	"	16,168	14,969	14,946	11,599
863.01	Umbrellas, street and general purpose	No.	602,790	n.a.	731,658	734,814
774	Underwear (men's, women's, children's)	'000 doz	(f)7,073	7,370	6,728	6,933

(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. (f) Excludes men's, youths' and boys' combinations.

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

<i>Commodity code</i>	<i>Article</i>		<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>	<i>1972-73</i>
692.01	Vacuum cleaners (domestic)	'000	156	176	174	203
	Wash basins—					
671.37	Earthenware	"	230	213	233	278
671.33-35	Pressed steel	"	98	104	98	108
693.02-18	Washing machines, household, electric	"	316	305	312	343
	Weatherboards—					
332.12	Australian timber	m ³	34,152	n.a.	33,496	35,083
332.14	Imported timber	"	7,147	n.a.	5,535	5,944
152.14	Wheatmeal for stock feed	'000 tonnes	204	284	313	394
519.01	Wheelbarrows (metal)	No.	121,760	n.a.	144,080	169,400
	Wine, beverage—					
172.42	Fortified	'000 litres	62,640	50,380	59,922	54,328
172.46	Unfortified	"	89,236	83,073	94,387	117,222
341.31-45	Wood pulp (air dried)	'000 tonnes	472	555	506	538
242.07-11	Wool, scoured or carbonised	tonnes	72,576	62,804	68,254	59,992
242.33 35	Wool tops, pure	'000 kg	19,106	18,688	17,493	19,637
	Yarn (including mixtures)—					
364.11-50	Cotton	"	29,268	28,658	27,763	27,483
363.47-75	Woollen	"	18,036	19,123	19,447	18 736
363.17-31	Wool worsted	"	8,439	8,865	8,665	8,590
363.38-65	Rayon and acetate, spun	"	5,509	5,354	5,575	4,768
363.90, 366.03 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun	"	5,339	6,835	7,009	10,638
457.04	Zinc, refined(a)	'000 tonnes	262	254	274	299

(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.