
MANUFACTURING AND RETAIL TRADE

MANUFACTURING

An historical summary of the development of the Manufacturing industry in Australia since 1788 was contained in *Year Book* No. 71.

Government Authorities

Industries Assistance Commission—IAC

The IAC is a statutory authority which came into existence on 1 January 1974 as a result of the passing of the *Industries Assistance Commission Act 1973* by the Commonwealth Parliament. The Commission replaced the Tariff Board which, since 1921, had been responsible for advising the government on assistance for industries mainly in the manufacturing sector of the economy.

The Commission is an advisory authority. The government is required to seek the Commission's advice before it makes changes in the assistance afforded industries, but the government is not obliged to accept the Commission's advice.

In August 1983, the Government initiated a review of the functions and operations of the Commission. Decisions taken on the recommendations of that review, and reflected in the *Industries Assistance Commission Amendment Act 1984*, were designed to improve the Commission's operations and procedures so that it could more effectively assist the government to meet its industry policy objectives.

The Commission's basic functions remain unchanged. These are to hold inquiries, conduct public hearings and to make reports to the government on assistance, and matters associated with assistance, to industries in the rural, mining, manufacturing and services sectors of the economy. Inquiries are initiated by references from the Minister administering the *Industries Assistance Commission Act 1973*. The Commission is also required to report annually to the government on its operations and on the general structure of industry assistance within Australia and its effects on the economy.

The Commission operates under general policy guidelines which are cast in terms of encouraging the growth of efficient and internationally competitive industries, facilitating structural adjustment and recognising the interests of other industries and consumers.

The Commission is required to give wide public notice that it is conducting an inquiry. Typically, the Commission prepares a draft report on the basis of consultation with interested parties, written submissions and the Commission's own investigatory work. Draft reports are published and public hearings are held to give interested parties an opportunity to examine and comment before Commission reports are finally settled. Public hearings are conducted in an informal manner and may be held in Canberra or other cities throughout Australia.

It is the government's intention that, in most cases, final Commission reports will be published prior to a government decision being taken. When released for publication, these Commission reports are sold by Commonwealth Government Bookshops.

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

Bureau of Industry Economics

The Australian Government established the Bureau of Industry Economics in 1977 as a major centre for research into the manufacturing and commerce sectors. In recent years this role has been expanded to include science and technology and building issues. Formally attached to the Department of Industry, Technology and Commerce, the Bureau has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- conduct research, including the evaluation of existing programs, needed to assist the government in the formulation of industrial policy;
- improve public information on, and understanding of, economic developments and policy issues in the manufacturing and commerce sectors;
- assist other bodies dealing with industry and technology issues by making submissions on the results of its research;

The recent expansion in the Bureau's responsibilities means that its research now encompasses the full range of factors affecting the performance of the industry and commerce sectors from infrastructural constraints and research and development, through to the final marketing and distribution of products.

In order to ensure the continuing relevance of its research, the Bureau seeks suggestions from interested parties in the private and public sectors on the most pressing economic issues requiring analysis. In formulating the final research program, the Bureau has regard to the priorities of the Minister and Department, and the view of its own Council of Advice.

The members of the Council are drawn from a wide range of backgrounds, including the universities, industries and the trade union movement. In this way the Council of Advice provides a major link between the Bureau and the community. The Council assists with the development of the work of the Bureau and the effective dissemination of the results of the Bureau's work.

In addition to its research work the Bureau provides specialist economic advice to the Department of Industry, Technology and Commerce on matters of immediate importance. The Bureau is also responsible for providing specialist macroeconomic and statistical advice to the Minister and the Department.

The Government has identified small business as an area of major importance, and has established a small business research unit within the Bureau of Industry Economics to investigate issues of concern to that sector.

The need to raise the community's awareness of the economic issues affecting Australian industry has been identified by the Government as a matter of importance. The Bureau is contributing to the community's knowledge of these issues both by means of its publications and by convening conferences such as the Manufacturing Industry Outlook Conference.

The Bureau has a staff of approximately 60 officers with backgrounds in business, government and university teaching and research.

Current research projects include:

- technology transfer;
- investment;
- globalisation (international industrial interdependence);
- global distribution of Australian software;
- structure and performance of the cement industry;
- technical change and economies of scale;
- trade in services;
- closer economic relations with New Zealand;
- evaluation of government programs.

On-going research areas include:

- small business;
- corporate taxation;
- economic conditions.

The results of the Bureau's research are published in:

- working papers—technical issues or preliminary results;
- information bulletins—statistics and other information;
- research reports—comprehensive results of major projects.

Standardisation

The Commonwealth Scientific and Industrial Research Organization—CSIRO

CSIRO is obliged by two Acts of Parliament to be associated with national standards. The functions of CSIRO as laid down by these Acts involve establishing, developing and maintaining standards of measurement of physical quantities and promotion of the use of these standards.

CSIRO first undertook this role in 1938 after government acceptance of a recommendation by a Secondary Industries Testing and Research Committee that these functions were essential for the successful development of manufacturing industry in Australia. Since that time, standards and calibrations have been established for a very wide range of physical quantities, extending considerably beyond the minimum required by law. From 1978, CSIRO has been responsible for first level calibrations in the defence area.

In certain specialist areas, CSIRO has authorised other bodies to carry out functions related to standards. CSIRO has authorised the Australian Nuclear Science and Technology Organisation (Department of Industry, Technology and Commerce) and the Australian Radiation Laboratory (Department of Community Services and Health) to maintain standards for quantities relating to ionising radiations, such as radioactivity, exposure, and absorbed dose. It has also authorised the Australian Surveying and Land Information Group (Department of Administrative Services) to maintain working standards and coordinated universal time and the Australian Telecommunications Commission (Department of Transport and Communications) to maintain working standards of frequency.

At the international level, a treaty now widely known as the Metric Treaty has been signed by 47 member nations, including Australia. The International Bureau of Weights and Measures (BIPM) coordinates activities under the Treaty by providing a mechanism for making international agreements in scientific metrology and for coordinating research on basic scientific problems in measurement. CSIRO has representatives on five of the BIPM's consultative committees, while the Australian Radiation Laboratory and the Australian Nuclear Science and Technology Organisation (as CSIRO agents) are represented

on another consultative committee. Statements recognising the equivalence of many of the Australian primary standards with those of the United States, the United Kingdom and Canada have been exchanged.

The Standards Association of Australia

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 one-third of its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from the sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

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

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

The Association is the owner of a registered certification trademark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the StandardsMark, under conditions established by the Association. It also operates a Supplier Assessment Scheme which attests to the adequacy of manufacturers quality systems to national and international standards.

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 information centres, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These centres provide a necessary information service to those concerned with standards development and for researchers from all sectors of the community.

The headquarters of the Association is in Sydney, and there is a major office in Melbourne. Offices are also located in other capital cities and Newcastle.

The National Standards Commission

The Commission was established in 1948 and is presently located at North Ryde, Sydney. The Commission operates under the National Measurement Act and is responsible for the coordination of the Australian National Measurement System with specific responsibility for legal metrology and the completion of metrication. The Commission also examines and approves the patterns of measuring instruments used for trade, in order to control design and quality.

The Commission has close contact with all State and Territorial Weights and Measures Authorities and provides assistance in the accreditation and training of weights and measures inspectors. The Commission is currently chairing a working party developing Uniform Trade Measurement Legislation for Australia.

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

The Commission has regular contacts overseas, provides the Australian member accredited to the International Organisation of Legal Metrology and provides training courses for countries in the Asia-Pacific region. The Commission is directed by a board of seven part-time Commissioners.

The National Association of Testing Authorities—NATA

NATA organises testing facilities throughout Australia to serve private and governmental needs. Membership is open to authorities whose testing laboratories conform to the standards of staffing and operations defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA-endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

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

The Industrial Design Council of Australia—IDCA

IDCA is a non-profit making design information body, offering assistance to manufacturers developing and launching new products in Australia.

The Council is representative of industry and commerce, together with designers and educationalists. In 1987–88 about 9 per cent of its funds will come from State government grants and the balance will be from fees for services to industry (75 per cent) and Federal Government contracts (6 per cent).

The Council's services include the Product Assessment Scheme (PASS scheme), technical and market feasibility evaluation of new products, design counselling, product development management and training programs for manufacturing management (Star Product Programs). The Council also administers the Australian Design Awards program for high quality products of Australian design and manufacture.

The Council has a membership scheme for information exchange and specialist referral services that include senior level manufacturers' designers, marketing and advertising executives, material suppliers and design students.

The Council's programs and activities are designed to promote easy access to, and collaboration between, Australia's service and manufacturing communities to help achieve international competitiveness through improvement of price and non-price factors in locally developed products. The Council has a professional staff comprising engineers, ergonomists and marketing consultants located in offices in Perth, Adelaide, Sydney and Brisbane. Its national office is located in Melbourne.

The Australian Standard Commodity Classification—ASCC

ASCC has been developed by the ABS to enable users to compare statistics of commodities produced in Australia with statistics of commodities imported and exported.

The ASCC manual (1207.0 and 1208.0) links production, import and export items at their most detailed level of comparability in the form of standard (ASCC) commodity items.

In a number of cases, however, due to the differences between production, import and export items, comparability is only achieved at fairly broad aggregate levels. In the ASCC, commodities are grouped under industries (as defined in the Australian Standard Industrial Classification) in which they are typically produced.

The latest edition published is in respect of the year 1984–85. The classification will continue to be developed over the coming years to improve the alignment between production, imports and exports and to incorporate commodities originating in the construction and service industries.

The next edition of the ASCC will relate to the year 1989–90, i.e. the year for which the next full Census of Manufacturing Establishments is planned. In this edition the standard, production and trade commodities will have been re-based on the most up-to-date international standards, i.e. the Harmonized Commodity Description and Coding System (HCDCS) and the Standard International Trade Classification (SITC), Revision 3.

The Australian Standard Industrial Classification—ASIC

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

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

The fundamental concept of this classification system is that an industry (i.e. an individual class, group, etc.) in ASIC is composed of establishments that have been classified to it. Each industry class is defined by a set of *primary activities* which have been assigned to it. These industry definitions are revised only at relatively infrequent intervals to minimise the disruption to time series data assembled on an ASIC basis.

To date, ASIC has been revised twice. ASIC editions published hitherto are: 1969 (original), 1978 (first revision) and 1983 (second revision)—the latter (the 1983 edition) is the one currently in use. A review of this edition is proceeding.

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. Detailed manufacturing statistics in respect of this period are included in *Year Book* No. 57, pages 721–9, and in earlier issues.

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, Wholesale Trade, Construction and Electricity and Gas industries. As a result, manufacturing industry statistics for 1968–69 and subsequent years are not directly comparable with previous years.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, 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 cover (with a few exceptions) all activities at the location. The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the

establishment and forming part of the business (enterprise) which owns and operates the establishment.

Census units are classified to industry as described in the ABS publication *Australian Standard Industrial Classification* (1201.0 and 1202.0). ASIC defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968-69 and the individual economic censuses conducted in previous years.

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

MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA

Census year	Establish- ments at 30 June	Average employment over year (a)	Wages and salaries (b)	Turn- over	Stocks		Purchases, transfers in and selected expenses	Fixed capital expend- iture less added disposals
	No.	No. persons	\$m	\$m	Opening	Closing	\$m	\$m
1968-69	35,939	1,261,277	3,908.1	18,646.5	3,102.5	3,319.6	11,514.9	7,348.8
1969-70	35,674	1,295,633	4,328.7	20,687.6	3,322.8	3,634.7	12,862.3	8,137.1
1970-71	No manufacturing census was conducted in respect of this year.							
1971-72	36,206	1,301,639	5,250.0	23,620.4	3,920.1	4,182.5	14,374.8	9,508.1
1972-73	36,437	1,297,095	5,820.0	26,352.4	4,187.2	4,306.3	15,963.0	10,508.5
1973-74	37,143	1,338,379	7,176.4	31,246.7	4,299.1	5,268.5	19,329.8	12,886.3
1974-75(c)	36,836	1,264,807	8,588.0	35,468.0	5,267.2	6,572.2	21,712.3	15,060.7
1974-75(d)	26,973	1,245,237	8,533.5	35,133.7	5,241.0	6,542.7	21,522.3	14,913.1
1975-76	27,507	1,200,440	9,472.4	39,485.3	6,581.1	7,023.3	23,371.7	16,555.8
1976-77	26,780	1,175,831	10,535.8	44,814.3	6,985.1	7,996.8	27,010.0	18,816.1
1977-78(e)	25,998	1,145,685	11,151.4	48,210.8	7,880.2	8,510.8	29,087.8	19,753.6
1977-78(f)	26,065	1,144,199	11,135.8	48,112.6	7,863.5	8,498.1	28,992.7	19,754.4
1978-79	26,312	1,143,891	11,966.4	55,211.3	8,515.4	9,299.6	33,765.4	22,230.1
1979-80	27,430	1,154,184	13,357.5	65,354.8	9,287.6	11,126.4	41,579.5	25,614.0
1980-81	27,681	1,149,963	14,912.7	73,723.0	11,047.1	12,366.9	46,448.7	28,594.1
1981-82	28,706	1,154,808	17,002.8	81,869.3	12,377.4	13,297.3	51,240.4	31,548.7
1982-83	27,696	1,052,905	17,402.7	82,320.6	13,094.4	13,035.1	51,225.8	31,035.5
1983-84(g)	27,472	1,099,818	17,467.4	88,639.3	12,918.1	13,181.5	54,681.4	34,221.3
1984-85	27,611	1,018,448	18,780.3	98,208.7	13,088.8	14,473.8	61,206.6	38,387.1
1985-86	No manufacturing census was conducted in respect of this year.							
1986-87	28,842	1,013.0	21,469.1	116,482.2	15,597.9	16,594.4	71,917.7	45,561.0

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors. (c) These data and that of previous years include the data of all manufacturing establishments. (d) These data and those of following years exclude single establishment manufacturing enterprises with fewer than four persons employed. (e) These data and those of previous years are classified to the 1969 (preliminary) edition of ASIC. (f) These data and those up to and including 1982-83 are classified to the 1978 edition of ASIC. (g) These data and those of following years are classified to the 1983 edition of ASIC.

The items of data on the census forms were standardised for all census sectors, which has meant changes in the content of the statistics. For example, the 'value of turnover' is now collected instead of the 'value of output' at the factory, and purchases and selected

expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added' is similar to the former concept 'value of production', even though its method of derivation is different.

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

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

Since the introduction of the system of Integrated Economic Censuses the comparability of Manufacturing Census data has been affected by three additional changes to collection practices:

- (i) Commencing with the 1975-76 Manufacturing Census, only a limited range of data (i.e. employment and wages and salaries) are collected from single establishment manufacturing enterprises with fewer than four persons employed. This procedure significantly reduces both the statistical reporting obligations of small businesses and the collecting and processing costs of the Australian Bureau of Statistics without affecting the reliability of information for the evaluation of trends in the manufacturing sector of the economy (as these small enterprises contribute only marginally to statistical aggregates). In order to provide a link with past and future years, 1974-75 data were processed on both bases.
- (ii) Commencing with the 1977-78 Census the classification of census units to industry is based on the 1978 edition of ASIC which replaces the 1969 preliminary edition in use since the 1968-69 Census. In general the impact of the change in industrial classification is minimal at ASIC Division and Subdivision levels.
- (iii) From 1983-84, the classification of census units to industry is based on the 1983 edition of ASIC. The only changes to manufacturing resulting from use of the revised version of ASIC relate to establishments mainly engaged in minor repairs to aircraft or railway or tramway rolling stock. Previously, these establishments were excluded from manufacturing but are now included in industry subdivision 32—Transport Equipment.

Multi-establishment Enterprises and Single Establishment Manufacturing Enterprises with Four or More Persons Employed

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

Employment

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

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

MANUFACTURING ESTABLISHMENTS—AVERAGE EMPLOYMENT OVER YEAR BY INDUSTRY SUBDIVISION, 1986-87 (No. persons)

<i>Industry subdivision</i>										
<i>ASIC</i>										
<i>code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>	
21 Food, beverages and tobacco	51,229	48,997	33,043	15,712	12,586	5,547	562	591	168,267	
23 Textiles	9,322	18,660	880	2,396	1,214	n.p.	n.p.	—	33,858	
24 Clothing and footwear	20,868	41,171	4,464	4,227	1,790	657	n.p.	n.p.	73,245	
25 Wood, wood products and furniture	22,559	20,519	11,726	6,820	8,369	3,502	151	502	74,148	
26 Paper, paper products, printing and publishing	37,165	34,638	11,149	7,759	7,761	5,152	387	1,867	105,878	
27 Chemical, petroleum and coal products	25,107	19,419	3,342	2,162	2,936	n.p.	—	n.p.	53,791	
28 Non-metallic mineral products	13,005	10,510	5,925	3,497	4,947	858	261	213	39,216	
29 Basic metal products	37,570	13,179	6,700	5,761	6,416	n.p.	n.p.	n.p.	73,307	
31 Fabricated metal products	34,443	29,573	12,969	7,010	8,543	1,574	n.p.	n.p.	94,889	
32 Transport equipment	30,567	48,956	10,751	15,593	4,605	1,186	83	59	111,800	
33 Other machinery and equipment	54,313	42,763	9,243	12,080	7,123	816	47	277	126,662	
34 Miscellaneous manufacturing	21,359	22,942	5,217	6,795	3,037	442	84	52	59,928	
Total manufacturing										
1986-87	357,507	351,327	115,409	89,812	69,327	24,805	2,782	4,020	1,014,989	
1984-85	364,805	356,687	109,940	92,205	64,242	24,494	2,645	3,430	1,018,448	
1983-84	363,300	353,248	110,438	90,658	61,997	24,498	2,432	3,247	1,009,818	

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
SUBDIVISION, 1986-87**
(\$ million)

<i>Industry subdivision</i>									
<i>ASIC code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
21 Food, beverages and tobacco	1,111	1,022	645	289	236	105	11	12	3,432
23 Textiles	196	375	17	44	21	n.p.	n.p.	n.p.	676
24 Clothing and footwear	314	655	63	63	24	9	n.p.	1	1,129
25 Wood, wood products and furniture	411	362	187	115	128	68	3	10	1,284
26 Paper, paper products, printing and publishing	880	784	217	166	145	128	8	42	2,370
27 Chemical, petroleum and coal products	662	496	93	59	79	n.p.	—	n.p.	1,414
28 Non-metallic mineral products	314	255	129	82	107	18	6	6	917
29 Basic metal products	1,027	361	178	153	190	n.p.	27	n.p.	2,019
31 Fabricated metal products	725	621	246	127	174	29	8	9	1,937
32 Transport equipment	678	1,073	213	345	99	24	2	1	2,434
33 Other machinery and equipment	1,159	906	186	232	152	15	1	7	2,658
34 Miscellaneous manufacturing	435	480	91	129	53	8	1	1	1,198
Total manufacturing									
1986-87	7,912	7,390	2,263	1,805	1,408	536	67	88	21,469
1984-85	6,988	6,551	1,934	1,604	1,138	443	58	64	18,780
1983-84	6,556	6,059	1,813	1,472	1,047	413	49	59	17,468

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 rent, leasing and hiring revenue), plus capital work for own use, or for rental or lease. Receipts from interest, royalties, dividends, and sales of fixed tangible assets are excluded.

**MANUFACTURING ESTABLISHMENTS—TURNOVER BY INDUSTRY
SUBDIVISION, 1986-87**
(\$ million)

<i>Industry subdivision</i>									
<i>ASIC code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
21 Food, beverages and tobacco	7,277	7,734	5,023	1,896	1,785	825	61	48	24,648
23 Textiles	981	1,750	125	347	105	n.p.	n.p.	—	3,412
24 Clothing and footwear	1,368	2,392	194	217	66	30	n.p.	n.p.	4,269
25 Wood, wood products and furniture	1,887	1,587	771	507	630	399	12	43	5,836
26 Paper, paper products, printing and publishing	5,841	3,612	927	653	540	685	25	100	10,382
27 Chemical, petroleum and coal products	4,908	3,400	1,841	384	591	n.p.	—	1	11,278
28 Non-metallic mineral products	1,835	1,393	844	454	604	117	51	58	5,357
29 Basic metal products	5,870	3,082	1,782	931	1,891	n.p.	n.p.	n.p.	14,230
31 Fabricated metal products	3,181	2,548	1,188	579	769	123	n.p.	n.p.	8,464
32 Transport equipment	2,208	5,624	907	1,760	327	87	7	4	10,923
33 Other machinery and equipment	4,917	4,253	769	953	594	53	3	26	11,566
34 Miscellaneous manufacturing	2,225	2,457	477	612	298	41	5	2	6,116
Total manufacturing									
1986-87	40,497	39,829	14,848	9,293	8,199	3,087	402	327	116,482
1984-85	34,087	33,436	12,921	7,847	6,789	2,423	407	299	98,209
1983-84	30,950	30,081	11,707	7,137	5,923	2,221	359	263	88,641

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, fuels, power, containers, etc. and goods for resale, 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, sales commission payments and rent, leasing and hiring expenses.

MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES BY INDUSTRY SUBDIVISION, 1986-87 (\$ million)

<i>Industry subdivision</i>									
<i>ASIC code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
21 Food, beverages and tobacco	4,584	5,112	3,499	1,314	1,272	546	38	30	16,394
23 Textiles	562	1,040	84	247	55	n.p.	n.p.	—	2,044
24 Clothing and footwear	806	1,294	98	110	30	17	n.p.	n.p.	2,358
25 Wood, wood products and furniture	1,141	942	440	306	348	241	7	27	3,452
26 Paper, paper products, printing and publishing	1,982	1,841	447	340	266	371	9	41	5,298
27 Chemical, petroleum and coal products	2,922	2,061	1,568	222	375	n.p.	—	n.p.	7,219
28 Non-metallic mineral products	1,131	797	519	245	347	73	35	41	3,188
29 Basic metal products	4,002	2,339	1,202	566	1,362	n.p.	n.p.	n.p.	9,946
31 Fabricated metal products	1,861	1,444	752	348	481	73	n.p.	n.p.	5,004
32 Transport equipment	1,122	3,828	579	1,124	169	34	4	2	6,860
33 Other machinery and equipment	2,667	2,408	447	522	342	23	2	14	6,423
34 Miscellaneous manufacturing	1,368	1,487	288	368	193	24	3	1	3,733
Total manufacturing									
1986-87	24,148	24,591	9,923	5,710	5,241	1,853	269	183	71,918
1984-85	20,566	20,782	8,623	4,894	4,343	1,549	279	182	61,218
1983-84	18,336	18,405	8,002	4,292	3,828	1,389	249	181	54,682

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 BY INDUSTRY
SUBDIVISION, 1986-87**
(\$ million)

Industry subdivision

<i>ASIC code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
OPPENNING STOCKS AT 30 JUNE									
21 Food, beverages and tobacco	824	657	288	335	143	78	3	1	2,328
23 Textiles	137	270	17	58	14	n.p.	n.p.	—	536
24 Clothing and footwear	185	374	21	29	7	3	n.p.	n.p.	619
25 Wood, wood products and furniture	259	201	85	57	76	60	1	6	745
26 Paper, paper products, printing and publishing	318	358	72	55	44	58	1	6	913
27 Chemical, petroleum and coal products	840	610	165	69	97	n.p.	—	n.p.	1,807
28 Non-metallic mineral products	227	144	109	39	71	15	4	3	613
29 Basic metal products	981	307	274	191	257	n.p.	n.p.	n.p.	2,145
31 Fabricated metal products	387	343	138	61	74	13	n.p.	n.p.	1,071
32 Transport equipment	378	885	115	278	87	18	1	—	1,763
33 Other machinery and equipment	937	979	102	153	108	8	—	3	2,289
34 Miscellaneous manufacturing	311	290	48	82	32	4	1	—	768
Total manufacturing 1986-87	5,784	5,418	1,436	1,407	1,006	443	34	71	15,598
1984-85	4,802	4,486	1,411	1,127	781	321	77	83	13,089
1983-84	4,735	4,444	1,401	1,130	747	324	77	62	12,918
CLOSING STOCKS AT 30 JUNE									
21 Food, beverages and tobacco	830	690	337	362	158	88	4	1	2,470
23 Textiles	135	310	11	75	20	n.p.	n.p.	—	579
24 Clothing and footwear	208	422	27	32	12	4	n.p.	n.p.	706
25 Wood, wood products and furniture	287	231	97	70	83	65	1	7	843
26 Paper, paper, printing and publishing	339	380	71	60	48	72	2	6	978
27 Chemical, petroleum and coal products	876	652	196	61	87	n.p.	—	n.p.	1,901
28 Non-metallic mineral products	242	148	112	47	78	19	4	3	652
29 Basic metal products	1,033	334	264	238	231	n.p.	n.p.	n.p.	2,241
31 Fabricated metal products	411	378	148	66	84	14	n.p.	n.p.	1,150
32 Transport equipment	424	960	142	268	86	14	1	—	1,896
33 Other machinery and equipment	982	944	108	162	106	8	—	6	2,317
34 Miscellaneous manufacturing	349	328	49	89	41	5	1	—	862
Total manufacturing 1986-87	6,117	5,777	1,562	1,531	1,034	469	33	72	16,594
1984-85	5,330	4,986	1,499	1,269	849	385	78	78	14,474
1983-84	4,835	4,546	1,397	1,127	788	330	77	82	13,182

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.

**MANUFACTURING ESTABLISHMENTS—VALUE ADDED BY INDUSTRY SUBDIVISION
1986-87
(\$ million)**

<i>Industry subdivision</i>									
<i>ASIC code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
21 Food, beverages and tobacco	2,698	2,654	1,574	610	528	289	24	18	8,396
23 Textiles	417	749	34	117	55	n.p.	n.p.	—	1,411
24 Clothing and footwear	586	1,146	102	110	40	14	n.p.	n.p.	1,999
25 Wood, wood products and furniture	774	675	342	215	289	164	5	18	2,481
26 Paper, paper products, printing and publishing	1,880	1,792	479	318	279	327	17	59	5,149
27 Chemical, petroleum and coal products	2,022	1,380	305	155	206	n.p.	—	n.p.	4,152
28 Non-metallic mineral products	719	600	327	217	264	48	15	17	2,208
29 Basic metal products	1,920	769	570	412	509	n.p.	n.p.	n.p.	4,381
31 Fabricated metal products	1,345	1,139	446	235	297	52	n.p.	n.p.	3,540
32 Transport equipment	1,132	1,871	355	626	157	50	3	2	4,196
33 Other machinery and equipment	2,295	1,811	328	440	249	31	1	15	5,171
34 Miscellaneous manufacturing	895	1,008	190	252	113	17	2	1	2,478
Total manufacturing 1986-87	16,682	15,596	5,052	3,707	2,987	1,261	132	145	45,561
1984-85	14,060	13,154	4,386	3,095	2,513	938	129	113	38,387
1983-84	12,713	11,779	3,701	2,842	2,137	838	110	102	34,221

Number of establishments

The following figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION
AT 30 JUNE 1987 BY INDUSTRY**

<i>Industry subdivision</i>									
<i>ASIC code Description</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
21 Food, beverages and tobacco	940	1,102	642	367	356	115	23	14	3,559
23 Textiles	227	300	48	40	38	8	2	—	663
24 Clothing and footwear	717	1,030	159	83	77	12	1	2	2,081
25 Wood, wood products and furniture	1,284	1,261	764	332	459	155	17	27	4,299
26 Paper, paper products, printing and publishing	1,186	947	349	217	267	62	18	30	3,076
27 Chemical, petroleum and coal products	375	284	92	40	66	13	—	1	871
28 Non-metallic mineral products	589	421	373	140	203	49	22	14	1,811
29 Basic metal products	179	203	72	41	56	12	2	2	567
31 Fabricated metal products	1,599	1,139	656	365	447	100	32	11	4,349
32 Transport equipment	410	403	259	129	146	24	7	6	1,384
33 Other machinery and equipment	1,492	1,189	394	315	348	50	10	16	3,814
34 Miscellaneous manufacturing	813	828	282	197	197	34	10	7	2,368
Total manufacturing 30 June 1987	9,811	9,107	4,090	2,266	2,660	634	144	130	28,842
30 June 1985	10,218	8,499	3,392	2,196	2,451	575	137	143	27,611
30 June 1984	10,278	8,404	3,451	2,110	2,408	558	115	148	27,472

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS BY INDUSTRY
SUBDIVISION: AUSTRALIA**

ASIC Description	Estab- lishments operating at 30 June No.	Average employment over year (a) Persons	Wages and salaries (b) \$m	Turn- over \$m	Stocks at 30 June		Pur- chases, transfers in and selected expenses \$m	Value added \$m	Fixed capital expend- iture less dis- posals \$m
					Opening \$m	Closing \$m			
1984-85									
Food, beverages and tobacco	3,387	166,954	3,012	21,008	2,163	2,326	14,336	6,835	544
Textiles	656	33,521	586	2,689	407	473	1,729	1,026	106
Clothing and footwear	2,011	74,500	1,005	3,551	512	574	1,954	1,659	59
Wood, wood products and furniture	4,023	72,691	1,102	4,969	591	659	2,847	2,190	116
Paper, paper products, printing and publishing	2,972	102,095	1,969	8,145	733	882	4,249	4,044	311
Chemical, petroleum and coal products	887	55,090	1,269	9,811	1,438	1,570	6,402	3,542	293
Non-metallic mineral products	1,711	38,582	802	4,656	529	561	2,717	1,971	168
Basic metal products	529	76,668	1,782	12,439	2,018	2,236	8,661	3,996	672
Fabricated metal products	4,137	93,222	1,604	6,948	979	1,037	4,094	2,912	152
Transport equipment	1,308	119,648	2,326	9,790	1,277	1,438	6,142	3,809	346
Other machinery and equipment	3,778	126,746	2,304	9,268	1,809	1,999	5,092	4,366	219
Miscellaneous manufacturing	2,212	58,731	1,021	4,935	634	718	2,982	2,037	149
Total manufacturing	27,611	1,018,448	18,780	98,209	13,089	14,474	61,207	38,387	3,134
1986-87									
Food, beverages and tobacco	3,559	168,198	3,432	24,648	2,328	2,470	16,394	8,396	n.a.
Textiles	663	33,858	676	3,412	536	579	2,044	1,411	n.a.
Clothing and footwear	2,081	73,245	1,129	4,269	619	706	2,358	1,999	n.a.
Wood, wood products and furniture	4,299	73,990	1,284	5,836	745	843	3,452	2,481	n.a.
Paper, paper products, printing and publishing	3,076	105,878	2,370	10,382	913	978	5,298	5,149	n.a.
Chemical, petroleum and coal products	871	53,791	1,414	11,278	1,807	1,901	7,219	4,152	n.a.
Non-metallic mineral products	1,811	39,216	917	5,357	613	652	3,188	2,208	n.a.
Basic metal products	567	73,307	2,019	14,230	2,145	2,241	9,946	4,381	n.a.
Fabricated metal products	4,349	94,889	1,937	8,464	1,071	1,150	5,004	3,540	n.a.
Transport equipment	1,384	110,038	2,434	10,923	1,763	1,896	6,860	4,196	n.a.
Other machinery and equipment	3,814	126,662	2,658	11,566	2,289	2,317	6,423	5,171	n.a.
Miscellaneous manufacturing	2,368	59,928	1,198	6,116	768	862	3,733	2,478	n.a.
Total manufacturing	28,842	1,013,000	21,469	116,482	15,598	16,594	71,918	45,561	n.a.

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors.

Single Establishment Manufacturing Enterprises with Fewer than Four Persons Employed

SINGLE ESTABLISHMENT MANUFACTURING ENTERPRISES WITH FEWER THAN FOUR PERSONS EMPLOYED: SUMMARY OF OPERATIONS BY INDUSTRY SUBDIVISION, AUSTRALIA, 1986-87

<i>Industry subdivision</i>		<i>Estab- lishments operating at 30 June</i>	<i>Employment at 30 June (a)</i>			<i>Wages and salaries (b)</i>	<i>Turnover</i>
<i>ASIC code</i>	<i>Description</i>		<i>Males</i>	<i>Females</i>	<i>Persons</i>		
						\$m	\$m
21	Food, beverages and tobacco	717	1,036	561	1,597	11.7	103.1
23	Textiles	260	329	204	533	3.9	24.3
24	Clothing and footwear	634	549	744	1,293	9.7	57.5
25	Wood, wood products and furniture	3,206	4,971	1,390	6,361	39.0	257.7
26	Paper, paper products, printing and publishing	1,320	1,686	1,092	2,778	26.3	150.8
27	Chemical, petroleum and coal products	223	330	141	471	4.8	33.1
28	Non-metallic mineral products	532	784	288	1,072	7.3	54.0
29	Basic metal products	149	234	64	298	2.8	14.1
31	Fabricated metal products	2,192	3,430	1,081	4,511	38.5	231.8
32	Transport equipment	721	1,142	306	1,448	11.2	72.2
33	Other machinery and equipment	1,672	2,371	1,032	3,403	32.5	183.6
34	Miscellaneous manufacturing	1,706	2,303	1,031	3,334	22.7	140.7
Total manufacturing							
	1986-87	13,332	19,165	7,934	27,099	210.6	1323.1
	1984-85	14,243	21,351	8,148	29,499	195.4	n.a.
	1983-84	14,109	21,061	7,695	28,756	159.2	n.a.

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors.

Principal Manufacturing Commodities

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

The table following shows the total recorded production of some selected articles manufactured in Australia. A more complete list is published in the ABS publication 8303.0 mentioned above.

**QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING
ESTABLISHMENTS: AUSTRALIA**

<i>Commodity code</i>	<i>Article</i>	<i>Unit of quantity</i>	<i>1985-86</i>	<i>1986-87</i>	<i>1987-88</i>
	Acid (in terms of 100%)—				
401.29	Hydrochloric	tonnes	54,248	62,318	68,463
401.37	Nitric	"	192,514	203,484	203,547
401.57	Sulphuric	'000 tonnes	1,788	1,678	1,816
171.03,07, 08	Aerated and carbonated waters	kL	1,155,435	1,200,676	1,340,406
	Animal feeds—				
	From wheat—				
152.06	Pollard	'000 tonnes	232	241	241
159.11	Poultry pellets and crumbles	"	1,577	1,637	1,625
159.15	Poultry mash	"	135	146	119
647.98	Audio cassettes, pre-recorded	'000	20,623	21,245	26,843
	Batteries, wet cell type—				
685.13	Auto (SLI) 6 volts	"	147	108	95
685.17	Auto (SLI) 12 volts	"	2,608	2,352	2,252
172.02,04,06	Beer (a)	ML	1,863	1,861	1,893
064.21	Biscuits (excluding dog biscuits)	tonnes	131,459	133,846	138,069
152.02	Bran (wheaten)	'000 tonnes	90	95	104
172.21	Brandy	kL	1,255	1,453	n.y.a.
791.11-15	Brassieres	'000	7,595	10,149	9,479
066.01,05	Breakfast food, cereal (ready to eat)	tonnes	91,402	93,203	94,887
471.91,93,98	Bricks, clay	million	2,098	2,001	2,032
261.41	Briquettes, brown coal	'000 tonnes	852	811	809
	Broadwoven fabric (b)—				
384.91,93,98; 385.21,23	Cotton (including towelling)	'000 m ²	38,508	38,237	39,453
384.31-87;385.18	Man-made fibres	"	160,482	170,311	167,509
385.01-14,25-31	Wool	"	11,142	11,242	10,633
	Butter (plus direct butter oil) (c)	tonnes	104,900	103,855	94,244
789.71-83	Cardigans, jumpers, etc.	'000	12,658	10,714	8,858
474.02	Cement, Portland	'000 tonnes	6,106	5,920	6,150
	Cheese (c)—				
	Cheddar	tonnes	123,512	123,284	122,687
	Non-cheddar	"	46,748	54,185	53,630
435.22	Coke—metallurgical	'000 tonnes	3,534	3,253	3,727
475.90	Concrete, ready mixed	'000 m ³	14,162	13,810	15,096
	Confectionery—				
104.06-18	Chocolate	tonnes	75,956	82,667	86,458
104.21-29	Other	"	62,665	63,288	65,415
452.04	Copper, refined (d)	'000 tonnes	163	171	186
6.10	Cordials and syrups	kL	120,103	123,575	130,783
499.42	Electricity	mil. KWh	124,381	130,214	136,912
523.76-78	Electrodes for manual welding	'000 kg	15,905	13,966	13,601
696.01,03,05	Fans, electric (propeller type)	No.	679,074	642,239	723,822
	Floor coverings—(e)				
	Tufted carpets, floor rugs, mats and matting of or predominantly of—				
386.63	Man-made fibres	'000 m ²	24,120	23,705	23,675
386.71	Wool or fine animal hair	"	12,720	12,458	12,995
	Flour—				
062.01,32	Wheaten (f)	'000 tonnes	1,173	1,217	1,265
	Fruit juices, natural—				
074.61,65	Single strength	kL	238,323	225,651	235,792
127.21	Glucose	tonnes	73,295	71,004	84,592
	Heaters, room—				
651.11-20	Electric radiators, fires and room heaters	'000	n.a.	602,468	575,592
651.15	Gas fires and space heaters	No.	69,361	59,226	69,514

For footnotes, see end of table.

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

<i>Commodity code</i>	<i>Article</i>	<i>Unit of quantity</i>	<i>1985-86</i>	<i>1986-87</i>	<i>1987-88</i>
	Hosiery—				
789.53,54,55,57, 59	Men's	'000 pairs	31,211	30,555	26,611
789.63,65	Children's and infants' (excl. panty hose)	"	17,947	17,223	16,988
051.56,58,59	Ice cream (g)	kL	201,726	207,676	212,758
051.87,89,90	Infants', invalids' and health beverages from cows milk (h)	tonnes	29,342	29,469	28,256
	Iron and steel—				
442.04,08	Iron	'000 tonnes	5,925	5,783	5,455
442.71-73	Steel ingots (including continuous cast billets)	"	6,826	6,387	6,093
442.28	Blooms and slabs (i)	"	4,446	3,670	2,660
076.60	Jams (including conserves, jellies, etc.)	tonnes	29,436	30,402	31,890
	Lawn mowers—				
699.51	Petrol, rotary	No.	290,239	276,357	279,071
453.04	Lead, refined (j)	'000 tonnes	206	142	182
063.15	Malt (excluding extract)	'000 tonnes	476	542	560
	Margarine—				
121.01	Table	tonnes	110,494	111,267	113,066
121.06,08	Other	"	38,547	40,219	43,603
844.22,25,27	Mattresses, inner spring	'000	738	785	846
027.02-75	Meat, canned (k)	tonnes	23,496	24,748	17,845
482.78	Meters, water consumption	'000	187	204	244
	Milk, condensed, concentrated and evaporated—				
051.28	Skim	tonnes	18,997	20,402	24,022
	Milk in powdered form (c)—				
	Wholemilk	"	52,086	65,308	63,744
	Skim or mixed skim and buttermilk	"	124,823	128,472	120,010
	Buttermilk	"	7,860	8,435	7,837
503.13-32	Motors, electric	'000	2,273	2,430	2,734
	Motor vehicles, assembled—				
551.03	Cars	No.	307,790	249,428	253,768
551.06	Station wagons	"	56,974	52,629	61,107
551.21,29	Utilities and panel vans (l)	"	25,912	20,462	22,107
	Oatmeal and rolled oats—				
062.62	For porridge, etc.	tonnes	25,141	27,593	n.p.
	Paint, etc.—				
	Architectural and decorative (m)—				
	Solvent thinned—				
410.01	Primers and undercoats	kL	6,909	6,614	6,282
410.03,05,07	Finishing coats	"	20,050	19,265	20,017
	Water thinned—				
410.11,13,15	Plastic latex	"	58,242	57,948	64,469
410.17	Other water based	"	2,916	4,130	4,858
	Paper—				
351.11	Newsprint	'000 tonnes	363	386	401
351.18-65	Other	"	760	823	848
352.01	Paperboard (n)	"	473	460	471
336.12	Particle board (resin bonded)	'000 m ²	731	705	728
	Preserves—				
	Fruit—				
076.04-40	Packaged (o)	tonnes	179,179	186,414	186,821
	Vegetables—				
094.04-48	Packaged (o)	"	124,300	123,895	128,062
	Pyjamas—				
791.75,80	Men's and boys', woven (suits only)	'000	2,667	2,724	2,353
	Records (phonograph) (q)				
647.93,94	45 r.p.m.	"	8,015	7,391	8,104
647.95	33 r.p.m.	"	14,422	14,335	14,910

For footnotes, see end of table.

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

<i>Commodity code</i>	<i>Article</i>	<i>Unit of quantity</i>	1985-86	1986-87	1987-88
657.33,34,35	Refrigerators, domestic, electric	"	328	289	386
403.22-94	Resins, synthetic and plastics, for moulding, extrusion, lamination, calendering, etc	'000 tonnes	663	651	716
123.18	Sauce, tomato (incl. tomato ketchup)	kL	30,849	31,883	32,739
062.04	Semolina	'000 tonnes	43	50	54
	Shirts, (men's and boys')—				
	Men's—				
791.20,21,23	Knitted	'000	17,522	20,229	17,716
791.25,26,30,31	Woven	"	13,399	12,938	12,273
	Boys'—				
791.28,32	Knitted	"	5,810	5,709	4,438
791.34	Woven	"	2,442	1,626	1,129
805.01	Soap, for personal toilet use	tonnes	26,199	27,361	30,388
127.15	Starch (incl. cornflour)	"	172,056	161,940	173,548
	Stoves, ovens and ranges, domestic cooking—				
661.02,11	Electric (s)	No.	206,159	182,689	207,739
662.26,31,34	Gas, upright or elevated (with oven)	"	106,961	92,810	94,806
405.36	Sulphate of ammonia	tonnes	204,909	165,397	179,211
415.07,405.25	Superphosphate (t)	'000 tonnes	2,610	2,769	3,194
792.03-10	Swimwear (u)	'000	n.p.	3,863	3,971
	Tallow (including dripping), rendered—				
391.15	Edible	"	75,379	82,955	86,384
391.24	Inedible	"	257,789	267,569	288,435
647.25-28	Television sets (colour)	No.	237,925	210,590	176,756
	Tiles, roofing—				
475.32	Concrete	'000	18,008	14,388	16,342
472.15	Terracotta	"	3,222	3,285	3,399
661.22	Toasters, electric (domestic)	No.	305,809	358,969	n.p.
683.53-61	Transformers, chokes and ballasts, for distribution of power and light, etc.	kVA	7,032,185	8,374,996	8,588,063
	Wash basins—				
671.37	Earthenware	'000	261	238	n.p.
693.02,04	Washing machines, household, electric	"	282	400	394
152.14	Wheatmeal for stock feed	'000 tonnes	301	354	324
	Wine, beverage—				
172.42	Fortified	kL	41,692	31,766	n.y.a.
172.46	Unfortified	"	294,686	277,422	n.y.a.
341.32-45	Wood pulp (air dried)	'000 tonnes	517	535	580
383.09,11	Wool, scoured or carbonised	tonnes	112,396	130,254	127,624
383.27-31	Wool tops, pure	"	23,598	24,474	25,904
	Yarn (including mixtures)—				
383.79-87	Cotton	"	20,501	21,161	20,667
383.89-95	Worsted	"	5,169	5,597	5,192
383.97, 99, 384.01, 03	Woollen	"	18,631	17,481	17,988
383.46-73	Discontinuous synthetic fibre	"	9,685	10,746	9,458
457.04	Zinc, refined (d)	'000 tonnes	297	300	306

(a) Excludes waste beer and beverages with alcohol content of 1.15 per cent or less. (b) Includes mixture predominantly of the fibre named. (c) Source: Australian Dairy Corporation. (d) Primary origin only. Source: Bureau of Mineral Resources. (e) Includes underfelts and products of coir, sisal or other hard fibres. (f) Includes wheatmeal for baking, includes sharps. (g) Excludes ice cream combined with other confections, including those aerated milk-based confections which contain 10 per cent or more butterfat. (h) Includes malted milk and milk sugar (lactose). (i) Primary mills output. (j) Includes lead content of lead alloys from primary sources but excludes lead-silver bullion. (k) Excludes poultry and baby food. (l) Includes utilities, panel vans, prime movers for semi-trailers and units consisting of chassis, engine and cabs produced for sale and transfer out as such. Excludes off-highway trucks (e.g. dump wagons), materials handling trucks (e.g. forklift trucks) and semi-trailers. (m) Excludes heavy duty coatings. (n) Excludes coated container board. (o) Packaged: canned, bottled or stored in plastic or other containers. (q) Conventional stereophonic discs. (s) Includes wall ovens but excludes cooking tops and portable units. (t) Includes double and triple superphosphate and ammonium phosphate expressed in terms of single superphosphate i.e. 22 per cent P₂O₅ equivalent. (u) Includes swim shorts. Excludes infants' and babies' swimwear.

Enterprise Statistics—Integrated Economic Censuses and Surveys

The Integrated Economic Censuses and Surveys conducted by the Australian Bureau of Statistics have, since 1977–78, included enterprises primarily engaged in Mining and Manufacturing, with Electricity and Gas Production and Distribution collected in 1977–78 and annually from 1979–80, while other economic sectors are approached on a rotating basis. Statistics in respect of enterprises have been published in *Annual Economic Censuses and Surveys: Enterprise Statistics, Australia* (8103.0).

Below is a brief summary of the Censuses' collection units and methodology and a summary table of enterprise statistics. More detailed explanations on the Censuses are shown in the above publication.

The business units, as standardised for purposes of the Economic Censuses and Surveys are at three levels: the establishment (and associated administrative offices and ancillary units); the enterprise; and the enterprise group.

The central unit from which statistical information was collected is the *enterprise*, defined broadly as the unit comprising all operations in Australia of a single operating legal entity. The term legal entity is used to cover a sole proprietor, or partnership, or company, but also includes cooperative societies and some government authorities mainly engaged in the industries included in the Censuses and Surveys.

The group of legal entities owned or controlled by a single company is recognised as a separate type of unit—the *enterprise group*. The basic unit for which most data were collected and tabulated is the *establishment*, defined in general as a unit comprising all the operations carried on by the one enterprise at a single physical location—such as an individual factory, shop or mine.

In the Integrated Economic Censuses and Surveys, information was collected using a common framework of reporting units (enterprises and establishments as defined above) and data concepts, in accordance with a standard industrial classification (the *Australian Standard Industrial Classification*, 1983 Edition). As a result the statistics for the industries covered by the Censuses and Surveys are provided with no overlapping or gaps in scope, so that aggregates for economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks are obtained on a consistent basis for all industries and business units covered by the Censuses and Surveys. A detailed description of the Integration of Economic Censuses is contained in Chapter 31, *Year Book* No. 56, 1970.

ENTERPRISES—SUMMARY OF OPERATION BY INDUSTRY, AUSTRALIA

Industry and year	Enterprises operating during year (a)	Persons employed at 30 June (b)	Wages and salaries (c)	Turnover (d)	Purchases and selected expenses (e)	Rent leasing and hiring expenses (f)	Stocks (g)		Value added (h)	Fixed capital expenditure less disposals (i)
							Opening	Closing		
	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Mining (excluding services to Mining)—										
1983–84	890	72,743	2,002.5	12,687.7	4,210.1	202.3	1,853.2	1,852.7	8,274.7	2,428.7
1984–85	925	76,696	2,235.1	15,891.3	5,237.3	197.8	1,993.5	1,895.4	10,358.1	1,920.7
Manufacturing—										
1983–84	22,807	1,026,041	17,679.9	88,744.3	51,613.7	1,484.1	14,085.2	14,294.1	35,855.3	2,914.0
1984–85	23,105	1,046,139	19,215.5	99,525.5	58,624.9	1,630.3	14,386.1	16,052.4	40,935.9	3,236.1
Electricity and Gas—										
1983–84	97	94,981	2,119.0	10,383.4	4,762.4	163.9	766.2	785.8	5,476.9	3,684.2
1984–85	97	94,519	2,295.3	11,461.2	5,252.6	266.5	781.6	697.2	5,857.6	3,076.6

(a) The number of enterprises in operation for all or any part of the year which were in the scope of the censuses and surveys. (b) Working proprietors and employees, including part-time and casual employees as at 30 June. (c) Wages and salaries paid during the year to employees of the enterprise. Drawings of working proprietors are excluded. (d) Sales of goods, commission revenue, repair and service revenue, rent, leasing and hiring revenue, government bounties and subsidies and all other operating revenue except interest, royalties and dividends. (e) Purchases by the enterprise of goods for manufacture or resale, containers, stores and supplies (except office supplies) and charges for fuels, electricity and water, freight and cartage, vehicle running expenses, sales commission expenses, repair and maintenance expenses, and commission and subcontract expenses. (f) Amount paid for rent and leasing premises, vehicles and equipment. (g) Stocks of materials, fuels etc. work in progress and finished goods owned by the enterprise. (h) This is derived as turnover plus increase (less decrease) in stocks, less purchases and selected expenses, less rent, leasing and hiring expenses. (i) Outlay on new assets (including progress payments) and land and secondhand fixed tangible assets less disposals.

Foreign Ownership and Control in the Manufacturing Industry

Summary information on foreign ownership and control in the manufacturing industry is given in Chapter 26.

RETAIL TRADE

Estimates of the value of retail sales of goods (excluding motor vehicles, parts, petrol, etc.) by industry, and quarterly estimates by commodity groups, are obtained by means of sample survey for each State and the Australian Capital Territory. Tables showing estimates derived from these surveys are given below.

VALUE OF RETAIL SALES OF GOODS (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) AT CURRENT PRICES: INDUSTRIES (a)
(\$ million)

ASIC Code	Description	1984-85	1985-86	1986-87
4881	Grocers, confectioners, tobacconists	14,852.7	16,585.7	18,034.0
4882	Butchers	1,550.5	1,814.0	1,855.0
4815	General stores	470.9	498.4	510.4
4883,5,6	Other food stores	2,910.1	3,301.7	3,728.0
4884;9232;9241,2,3	Hotels, liquor stores, licensed clubs	5,487.6	6,068.5	6,427.1
4843,4,7	Clothiers	4,363.0	4,864.9	5,005.7
4814	Department stores	5,438.8	5,934.1	6,486.2
4845	Footwear stores	806.2	883.5	975.1
4853,4	Hardware stores	1,188.7	1,367.7	1,499.8
4855,6	Electrical goods stores	2,705.2	2,861.8	2,933.6
4849	Furniture stores	1,215.2	1,460.0	1,426.9
4848	Floor coverings stores	522.4	572.4	612.6
4891	Chemists	1,854.4	2,052.2	2,313.3
4894	Newsagents	1,706.2	1,798.5	2,019.3
4892,3,5,6,7; 9231; 9251,2	Other	1,960.3	2,382.3	2,783.1
	Total (b)	47,032.2	52,444.9	56,610.4

(a) Excludes ASIC groups 486 (Motor vehicle dealers; petrol and tyre retailers) and 934 (Laundries and dry-cleaners) and ASIC classes 4846 (Shoe repairers), 4857 (Electrical appliance repairers), 9133 (Motion picture theatres), 9223 (Accommodation) which were included in the Census of Retail Establishments and Selected Services Establishments for 1979-80. Excludes Northern Territory. (b) A small difference between this figure and that for the total value of retail sales shown in the table below occurs due to some businesses having access to more up-to-date records when supplying the data for commodities.

VALUE OF RETAIL SALES OF GOODS (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) AT CURRENT AND CONSTANT PRICES: COMMODITY GROUPS (a)
(\$ million)

Commodity group	Current prices			Average 1979-80 Prices		
	1984-85	1985-86	1986-87	1984-85	1985-86	1986-87
Groceries (b)	10,544.0	11,912.6	12,981.9	7,004.2	7,336.3	7,564.4
Fresh meat	2,385.9	2,716.1	2,829.4	1,922.0	2,140.2	2,076.8
Other food (c)	4,717.3	5,289.8	5,917.9	2,946.1	3,032.1	3,032.1
Beer, wine and spirits	5,883.0	6,435.0	6,864.7	3,804.8	3,860.9	3,751.5
Clothing and drapery	6,416.4	7,107.8	7,591.6	4,706.9	4,790.2	4,657.6
Footwear	1,121.8	1,244.4	1,366.1	784.0	807.0	805.9
Hardware, china and glassware (d)	2,144.1	2,339.9	2,557.6	1,437.9	1,454.2	1,385.5
Electrical goods (e)	3,452.5	3,659.4	3,801.0	3,214.7	3,289.2	3,191.7
Furniture	1,529.4	1,798.0	1,785.7	988.6	1,064.1	984.7
Floorcoverings	608.9	673.8	703.4	439.0	430.0	420.0
Cosmetics	1,177.4	1,353.3	1,554.0	720.0	764.9	821.9
Medicines etc.	1,107.2	1,201.9	1,375.1	772.3	791.9	841.8
Newspapers, books and stationery	2,037.7	2,233.3	2,488.5	1,182.1	1,168.7	1,151.5
Other goods (f)	3,892.4	4,554.0	4,990.4	2,692.1	2,896.8	2,849.5
Total (excluding motor vehicles, etc.)	47,028.0	52,519.5	56,807.8	32,614.7	33,826.5	33,535.4

(a) Excludes Northern Territory. (b) Includes confectionery, milk (except home deliveries by vendors) and frozen foods. (c) Includes fresh fruit and vegetables, bread (except home deliveries by vendors), cakes and pastries (except frozen), seafoods (fresh and cooked), hamburgers, cooked chicken, sandwiches, pizzas (except frozen), Chinese food, ice cream and soft drink. (d) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., sporting goods, etc., but excludes grain and produce and business machines.

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