
MANUFACTURING, RETAIL TRADE AND SERVICE INDUSTRIES

MANUFACTURING

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

Government Authorities

Industry Commission

The Industry Commission is the Commonwealth Government's major review and inquiry body in industry matters. As part of its 1989-90 Budget initiatives, the Government announced a restructuring of the Industries Assistance Commission (IAC) which had advised on industry assistance and related matters since January 1974. The IAC itself replaced the Tariff Board which had advised governments on assistance for manufacturing industries since 1921.

The Industry Commission also absorbed the functions of two other bodies: the Interstate Commission which had been re-established in 1984 to advise the Commonwealth Government on interstate transport matters; and the Business Regulation Review Unit, an agency of the Department of Industry, Technology and Commerce which reviewed the efficacy of existing regulations and advised on new regulatory proposals.

Like the IAC, the Industry Commission is an advisory body with an economy-wide perspective, a broad industry charter and public inquiry processes. The principal function of the Industry Commission is to hold public inquiries and report on the industry matters referred to it. In order to ensure the widest possible scope for its inquiries, industry matters include legislative or administrative actions of the Commonwealth, States or Territories and industry is defined to cover industry of any kind or grouping.

The Commission is required to report annually on the economic performance of industry, the principal factors affecting that performance, and the effects of assistance and regulation on industry and the economy generally. The Commission also has a role advising on business regulations and preparing occasional research and information papers that enhance community understanding of industry policy issues.

The Commission operates under general policy guidelines which are specified in the Industry Commission Act. These guidelines are cast in terms of encouraging the development of efficient industries, facilitating structural adjustment, reducing unnecessary industry regulation and recognising the interests of other industries and the community generally. In addition, the Commission must report on the social and environmental consequences of any recommendations it makes.

The legislation contains provisions similar to those in the IAC Act which constrain Commonwealth Ministers from changing certain forms of assistance without a prior report from the Commission unless Parliament passes overriding legislation. However, the Government is not obliged to accept the Commission's advice. Final responsibility for determining industry arrangements rests with the Commonwealth Government and the State and Territory Governments.

The Commission's inquiry procedures encourage public participation in policy formulation and maximise public scrutiny of the advice going to government. Wide public notice is given that an inquiry is underway. Typically, a draft report is prepared on the basis of written submissions, the Commission's own investigative work and wide ranging consultations with industry, users, trade unions, government agencies, consumer and environmental groups and others likely to be interested in the inquiry. Draft reports are published and public hearings 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. For the most part, reports arising from the inquiry process have to be tabled in Parliament within 25 sitting days of receipt. Commission reports are available from Commonwealth Government Bookshops in capital cities.

The inquiry program for the Commission demonstrates the wide spectrum of issues on which it is expected to contribute information, analysis and advice. The following inquiries were underway in mid-1990:

- Mining and minerals processing
- Construction costs of major projects
- Product liability
- Recycling of products
- Aids and appliances for the disabled
- Energy generation and distribution
- Rail transport
- Statutory marketing arrangements for primary products
- Commercial Tariff Concession and By-law Systems
- The automotive industry

Other inquiries scheduled on the work program are:

- Exports of health services
- Exports of education services
- Availability of capital
- Dairying
- Raw material pricing for domestic use
- Export franchising and distribution arrangements
- The sugar industry
- Implications for Australia of firms locating offshore.

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:

- increase community and industry understanding of economic developments and industry policy issues in the manufacturing and services sectors by conducting and publishing objective research;

- carry out applied economic research to assist the evaluation and formulation of industry policies and programs; and
- foster basic and applied economic research into industry policy issues at Australian tertiary institutions and research institutes.

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 macro-economic 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 50 officers with backgrounds in business, government and university teaching and research.

Current research projects include:

- factors affecting international productivity differences;
- mergers and acquisitions;
- effect of exchange rate fluctuations;
- directions for CSIRO research for the manufacturing sector;
- efficiency in residential construction;
- industrial development and the environment; and
- international comparisons of the cost of capital.

On-going functions include:

- short term consultancy;
- small businesses;
- corporate taxation;
- economic conditions; and
- program evaluation.

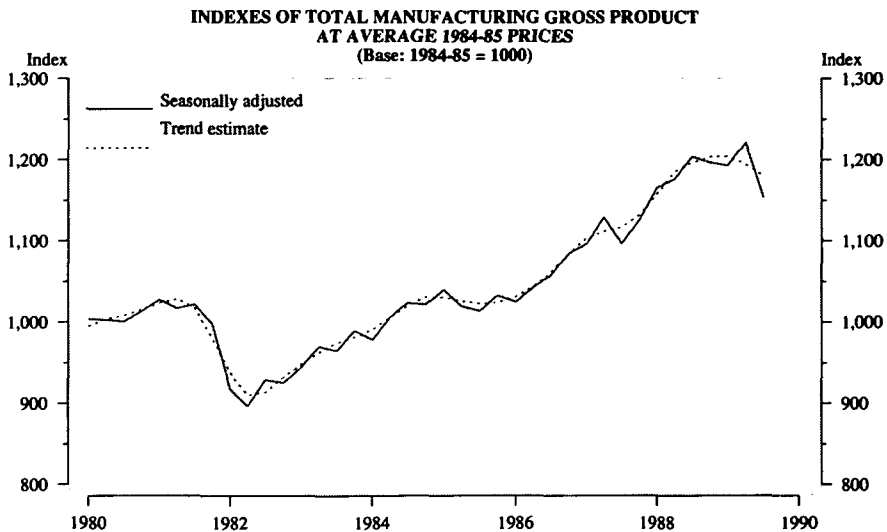
The results of the Bureau's research are published in:

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

Manufacturing Industry Statistics

Manufacturing trends

Quarterly indexes of manufacturing production are shown in the ABS publication *Quarterly Indexes of Industrial Production, Australia* (8125.0). That publication includes, in index number form, quarterly constant price estimates of manufacturing gross product in total and for each manufacturing subdivision of ASIC. The estimates are derived using the gross output method, i.e. base year estimates of gross product are extrapolated by constant price estimates of gross output. Quarterly constant price estimates of gross output are derived mainly from quarterly survey data relating to manufacturers' sales and increase in stocks (of finished goods and work in progress). The quarterly estimates of gross product so derived are benchmarked to annual estimates of gross product which have been derived from annual output data from manufacturing censuses.



**INDEXES OF MANUFACTURING INDUSTRY GROSS PRODUCT AT AVERAGE
1984-85 PRICES—ORIGINAL**

Index numbers (Base: 1984-85 = 1000)

<i>Description</i>	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	-81	-82	-83	-84	-85	-86	-87	-88	-89	-90
Food, beverages and tobacco	992	996	992	989	1,000	1,012	1,042	1,104	1,141	1,178
Textiles	923	942	869	907	1,000	1,017	1,085	1,097	1,103	1,159
Clothing and footwear	963	960	897	966	1,000	1,117	1,041	1,062	1,102	950
Wood, wood products and furniture	1,012	1,028	908	953	1,000	1,137	1,031	1,157	1,200	1,188
Paper, paper products, printing and publishing	907	930	881	919	1,000	1,018	1,086	1,176	1,252	1,279
Chemical, petroleum and coal products	936	969	941	975	1,000	990	1,030	1,105	1,129	1,135
Non-metallic mineral products	1,045	1,069	920	926	1,000	1,136	1,033	1,090	1,233	1,224
Basic metal products	956	955	826	916	1,000	994	1,016	1,010	1,070	1,101
Fabricated metal products	1,158	1,201	1,026	998	1,000	1,083	1,086	1,226	1,342	1,406
Transport equipment	924	981	932	916	1,000	993	933	956	1,039	1,078
Other machinery and equipment	1,147	1,197	1,002	949	1,000	1,011	1,079	1,143	1,251	1,283
Miscellaneous manufacturing	969	1,011	921	944	1,000	911	1,052	1,130	1,185	1,219
Total manufacturing	997	1,021	937	951	1,000	1,025	1,040	1,102	1,169	1,192

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, Transport, Selected Services Industries 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.

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

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).

Up to and including 1986-87, manufacturing censuses have been conducted for each year, with the exception of 1970-71 and 1985-86. Current ABS collection strategy is to conduct a full scale census triennially with a small-scale census in each of the intervening years. In the small-scale censuses all businesses are asked for information on employment, turnover and wages and salaries paid during the year.

MANUFACTURING ESTABLISHMENTS: SUMMARY OF OPERATIONS, AUSTRALIA

Census year	Establish- ments at 30 June	Employ- ment at end of June (a)	Wages and salaries (b)	Turn- over (c)	Stocks		Purchases, transfers in and selected expenses (d)	Value added (d)	Fixed capital expendi- ture less disposals (d)
					Opening (d)	Closing (d)			
	No.	'000	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1971-72	36,206	1,304	5,250.0	23,620.4	3,920.1	4,182.5	14,374.8	9,508.1	1,297.8
1972-73	36,437	1,326	5,820.0	26,352.4	4,187.2	4,306.3	15,963.0	10,508.5	1,244.4
1973-74	37,143	1,362	7,176.4	31,246.7	4,299.1	5,268.5	19,329.8	12,886.3	1,215.5
1974-75	36,836	1,239	8,588.0	35,468.0	5,267.2	6,572.2	21,712.3	15,060.7	1,456.4
1975-76	37,814	1,230	9,524.9	39,485.3	6,581.1	7,023.3	23,371.7	16,555.8	1,451.7
1976-77(e)	37,879	1,195	10,597.5	44,814.3	6,985.1	7,996.8	27,010.0	18,816.1	1,548.0
1977-78(f)	37,889	1,157	11,210.7	48,112.6	7,863.5	8,498.1	28,992.7	19,754.4	1,877.3
1978-79	38,231	1,168	12,045.5	55,211.3	8,515.4	9,299.6	33,765.4	22,230.1	2,262.8
1979-80	40,150	1,174	13,449.5	65,354.8	9,287.6	11,126.4	41,579.5	25,614.0	2,186.7
1980-81	39,956	1,180	15,011.3	73,723.0	11,047.1	12,366.9	46,448.7	28,594.1	2,882.7
1981-82	42,730	1,169	17,140.1	81,869.3	12,377.4	13,297.3	51,240.4	31,548.7	4,084.2
1982-83	42,283	1,042	17,562.2	82,320.6	13,094.4	13,035.1	51,225.8	31,035.5	3,678.4
1983-84(g)	41,581	1,047	17,626.6	88,639.3	12,918.1	13,181.5	54,681.4	34,221.3	2,778.4
1984-85	41,854	1,052	18,975.7	98,208.7	13,088.8	14,473.8	61,206.6	38,387.1	3,133.7
1985-86			No manufacturing census was conducted in respect of this year.						
1986-87	42,179	1,052	21,728.2	117,898.3	15,653.0	16,673.6	72,066.7	45,529.2	n.a.
1987-88	45,476	1,093	24,200.0	135,441.3	n.a.	n.a.	n.a.	n.a.	n.a.
1988-89	42,274	1,097	25,859.2	153,198.3	n.a.	n.a.	n.a.	n.a.	n.a.

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors. (c) The data from 1975-76 to 1984-85 exclude single establishment manufacturing enterprises with fewer than four persons employed. (d) The data from 1975-76 exclude single establishment manufacturing enterprises with fewer than four persons employed. (e) These data and those of previous years are classified according to the 1969 (preliminary) edition of ASIC. (f) These data and those up to and including 1982-83 are classified according to the 1978 edition of ASIC. (g) These data and those of following years are classified according to the 1983 edition of ASIC.

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

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

Description	Estab- lishments operating at 30 June (No.)	Employment at 30 June(a)			Wages and salaries (b) (\$m)	Turnover (\$m)	Persons employ- ed per estab- lishment (No.)	Turnover per person employed (\$'000)
		Males ('000)	Females ('000)	Persons ('000)				
1987-88								
Food, beverages and tobacco	3,938	120.6	55.0	175.5	3,866.0	27,764.7	45	158.2
Textiles	731	21.3	14.1	35.4	754.7	3,891.0	48	109.9
Clothing and footwear	2,332	18.6	56.6	75.2	1,217.2	4,672.1	32	62.1
Wood, wood products and furniture	4,688	68.6	13.4	82.0	1,503.3	7,006.5	17	85.5
Paper, paper products, printing and publishing	3,356	73.2	36.3	109.5	2,680.2	12,018.3	33	109.7
Chemical, petroleum and coal products	960	39.6	14.7	54.3	1,566.2	12,877.3	57	237.1
Non-metallic mineral products	1,863	36.0	45	40.5	1,006.2	6,020.8	22	148.8
Basic metal products	582	68.5	6.2	74.7	2,150.3	16,358.2	128	219.0
Fabricated metal products	4,848	86.5	18.3	104.8	2,197.6	10,113.0	22	96.5
Transport equipment	1,494	95.4	15.9	111.3	2,561.9	12,864.7	75	115.5
Other machinery and equipment	4,221	102.3	32.8	135.1	3,037.1	13,114.8	32	97.5
Miscellaneous manufacturing	2,594	44.7	20.8	65.5	1,410.4	7,245.5	25	110.7
Total manufacturing	31,607	775.3	288.6	1,063.8	23,951.1	133,947.0	34	125.9
1988-89								
Food, beverages and tobacco	3,735	121.6	54.8	176.4	4,001.3	30,757.3	47	174.4
Textiles	717	19.0	13.1	32.1	713.8	4,086.4	45	127.2
Clothing and footwear	2,312	18.4	55.1	73.5	1,305.7	5,180.2	32	70.5
Wood, wood products and furniture	4,849	70.2	14.2	84.4	1,658.2	7,897.8	17	93.5
Paper, paper products, printing and publishing	3,398	74.1	38.0	112.1	2,863.7	13,367.3	33	119.2
Chemical, petroleum and coal products	949	38.5	14.9	53.4	1,590.5	13,848.8	56	259.5
Non-metallic mineral products	1,501	37.7	4.6	42.3	1,136.1	7,268.5	28	171.7
Basic metal products	595	65.4	5.3	70.7	2,221.1	19,408.4	119	274.3
Fabricated metal products	4,827	88.8	19.2	108.0	2,434.7	11,989.0	22	111.0
Transport equipment	1,599	98.5	17.8	116.3	2,828.8	14,771.2	73	127.0
Other machinery equipment	4,142	104.1	33.3	137.4	3,343.8	15,191.5	33	110.5
Miscellaneous manufacturing	2,626	45.1	20.9	66.1	1,504.3	8,141.2	25	123.2
Total manufacturing	31,250	781.4	291.4	1,072.8	25,601.8	151,907.8	34	141.6

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors. (b) Excludes the drawings of working proprietors.

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.

It should be noted that the standard units definitions employed in the system of integrated economic statistics have been revised, with the establishment now being generally delimited on the basis of availability of accounting data rather than in terms of a location.

The new units definitions are being progressively implemented on the ABS central business register as reporting arrangements with individual businesses are finalised. At the time that the 1988-89 census was conducted, only a small number of large businesses were reporting according to the new units rules. Therefore, for that census, the establishment continued in most cases to cover the operations carried on under one enterprise at a single physical location.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS IN OPERATION
AT 30 JUNE 1989 BY INDUSTRY**

<i>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>
Food, beverages and tobacco	979	1,136	708	381	364	125	27	15	3,735
Textiles	239	302	70	48	41	12	5	—	717
Clothing and footwear	848	1,059	214	107	69	11	2	2	2,312
Wood, wood products and furniture	1,452	1,385	944	394	451	173	18	32	4,849
Paper, paper products, printing and publishing	1,296	1,071	425	239	255	58	17	37	3,398
Chemical, petroleum and coal products	386	309	111	50	75	17	1	—	949
Non-metallic mineral products	478	378	313	126	144	38	12	12	1,501
Basic metal products	198	214	73	48	43	11	6	2	595
Fabricated metal products	1,696	1,305	797	419	466	104	31	9	4,827
Transport equipment	454	451	322	148	179	30	9	6	1,599
Other machinery and equipment	1,547	1,271	482	372	378	57	15	20	4,142
Miscellaneous manufacturing	896	890	382	211	186	40	15	6	2,626
Total manufacturing—									
1988-89	10,469	9,771	4,841	2,543	2,651	676	158	141	31,250
1987-88	10,919	9,858	4,624	2,505	2,675	686	172	168	31,607
1986-87	9,811	9,109	4,090	2,267	2,660	634	145	131	28,847

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

Employment

The statistics on the number of persons employed shown in the following table relate to end of June 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—EMPLOYMENT AT END OF JUNE BY
INDUSTRY, 1988-89
(No. persons)**

<i>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>
Food, beverages and tobacco	52,052	52,389	35,601	16,307	12,135	6,489	722	669	176,364
Textiles	8,300	17,417	1,151	2,493	1,277	1,427	70	—	32,135
Clothing and footwear	22,235	38,251	5,956	4,293	1,850	686	n.p.	n.p.	73,488
Wood, wood products and furniture	25,185	22,037	15,525	7,977	8,998	3,887	202	626	84,437
Paper, paper products, printing and publishing	40,037	37,453	11,934	7,841	7,932	5,024	366	1,550	112,137
Chemical, petroleum and coal products	24,091	19,021	3,897	2,333	3,168	n.p.	n.p.	—	53,373
Non-metallic mineral products	13,533	11,491	7,107	3,890	5,070	911	150	180	42,332
Basic metal products	33,370	12,984	7,074	7,675	5,688	n.p.	934	n.p.	70,745
Fabricated metal products	37,034	32,787	16,726	8,883	9,888	1,916	387	411	108,032
Transport equipment	27,661	52,292	11,180	18,752	5,001	1,212	119	68	116,285
Other machinery and equipment	56,041	45,253	10,950	15,344	8,473	909	71	341	137,382
Miscellaneous manufacturing	22,097	26,001	6,642	7,308	3,242	613	102	60	66,065
Total manufacturing—									
1988-89	361,636	367,376	133,743	103,096	72,722	26,933	3,280	3,989	1,072,775
1987-88	369,253	367,603	127,544	95,168	72,069	24,828	3,207	4,170	1,063,842
1986-87	358,844	356,992	117,935	90,258	69,452	24,371	2,864	4,132	1,024,848

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons

The quarterly Survey of Employment and Earnings is the ABS' major source of industry statistics on employed wage and salary earners. Further information on this survey is available in Chapter 7.

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 excluded.

MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY INDUSTRY
1988-89
(\$ million)

<i>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>
Food, beverages and tobacco	1,254.6	1,192.9	761.4	348.2	273.9	139.5	16.5	14.2	4,001.3
Textiles	186.1	399.8	22.0	55.0	23.4	26.3	1.3	—	713.8
Clothing and footwear	387.4	711.9	88.9	76.0	29.5	9.8	n.p.	n.p.	1,305.7
Wood, wood products and furniture	514.6	445.5	266.9	152.2	182.2	80.9	2.7	13.0	1,658.2
Paper, paper products, printing and publishing	1,051.0	986.4	270.4	197.3	161.2	146.8	8.4	42.3	2,863.7
Chemical, petroleum and coal products	711.2	586.3	109.9	62.4	94.1	n.p.	n.p.	—	1,590.5
Non-metallic mineral products	377.1	326.2	174.8	95.7	130.1	22.9	4.2	5.0	1,136.1
Basic metal products	1,073.1	389.3	208.2	218.3	193.1	n.p.	} 46.1	n.p.	2,221.1
Fabricated metal products	853.4	776.9	333.8	180.6	230.4	39.4		n.p.	2,434.7
Transport equipment	689.2	1,310.5	241.1	443.6	116.0	24.3	2.7	1.3	2,828.8
Other machinery and equipment	1,390.7	1,140.3	244.7	331.4	206.2	19.3	1.5	9.6	3,343.8
Miscellaneous manufacturing	519.4	619.3	126.5	154.4	70.4	11.5	1.8	1.1	1,504.3
Total manufacturing—									
1988-89	9,007.7	8,885.4	2,848.6	2,315.1	1,710.5	648.2	86.3	99.9	25,601.8
1987-88	8,759.8	8,302.0	2,545.4	2,003.4	1,604.8	562.6	81.5	91.4	23,951.1
1986-87	7,911.6	7,443.2	2,263.3	1,809.1	1,407.0	526.4	67.5	89.6	21,517.6

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

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
1988–89
(\$ million)

<i>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>
Food, beverages and tobacco	9,009.7	9,767.0	6,130.5	2,471.2	2,216.9	1,002.9	102.7	56.5	30,757.3
Textiles	1,174.3	2,109.9	184.4	377.6	116.7	119.8	3.6	—	4,086.4
Clothing and footwear	1,742.7	2,741.9	297.3	282.0	80.5	28.6	n.p.	n.p.	5,180.2
Wood, wood products and furniture	2,517.7	1,995.4	1,218.6	725.5	847.0	522.7	15.6	55.5	7,897.8
Paper, paper products, printing and publishing	4,982.7	4,743.1	1,201.7	830.9	684.1	796.1	30.0	98.7	13,367.3
Chemical, petroleum and coal products	5,757.2	4,387.3	2,175.8	514.4	826.4	n.p.	n.p.	—	13,848.8
Non-metallic mineral products	2,420.7	1,955.7	1,298.1	548.6	804.3	158.0	34.5	48.7	7,268.5
Basic metal products	8,173.1	3,921.7	2,736.1	1,439.7	2,193.6	n.p.	} 330.8	n.p.	19,408.4
Fabricated metal products	4,195.8	3,699.7	1,768.6	852.6	1,138.4	185.4		n.p.	11,989.0
Transport equipment	2,622.6	7,513.7	1,279.8	2,883.9	402.7	56.2	7.7	4.6	14,771.2
Other machinery and equipment	6,224.2	5,542.5	1,051.5	1,409.2	834.9	79.1	6.3	43.9	15,191.5
Miscellaneous manufacturing	2,859.1	3,296.7	748.5	740.4	434.2	51.2	7.7	3.5	8,141.2
Total manufacturing—									
1988–89	51,679.6	51,674.6	20,090.9	13,076.0	10,579.5	3,834.7	542.3	430.1	151,907.8
1987–88	46,544.3	45,576.8	17,254.7	11,085.5	9,416.9	3,242.6	450.7	375.4	133,947.0
1986–87	40,540.9	39,969.8	14,848.5	9,352.7	8,038.0	3,050.2	404.7	370.4	116,575.3

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

Purchases, transfers in and selected expenses

Stocks

Value added

The above three structural aggregates are now collected triennially. These items will again be collected in the next full scale census covering the period 1989–90.

Additional statistics on the Manufacturing Industry

The ABS conducts a number of sample surveys of businesses on a quarterly basis. The resultant statistics are released in the following publications:

- *Private New Capital Expenditure, Australia, Actual and Expected Expenditure* (5626.0)
- *Stocks, Manufacturers' Sales and Expected Sales, Australia* (5629.0)
- *State Estimates of Private New Capital Expenditure* (5646.0)
- *Company Profits, Australia* (5651.0)

Principal Manufacturing Commodities

The factory production of certain commodities is shown in the monthly publications of the ABS, and in the triennial publication, *Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary)* (8365.0). A more comprehensive list of articles produced is collected triennially and is available on request.

The table following shows the total recorded production of some selected articles manufactured in Australia. (*Source*: monthly publications 8357.0 to 8363.0, 8367.0 and 8368.0).

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

<i>Article</i>	<i>Unit of quantity</i>	<i>1987-88</i>	<i>1988-89</i>	<i>1989-90</i>
Basic iron, spiegeleisen and sponge iron	'000 tonnes	5,544	5,875	6,188
Iron and steel ingots or other primary forms(a)	"	6,093	6,651	6,674
Blooms and slabs(b)	"	2,661	2,578	2,440
Gas(c)	terajoules	502,176	513,624	536,872
Electricity	mil.kWh	136,867	144,854	152,970
Bricks, clay	million	1,867	2,142	2,060
Cement, portland	'000 tonnes	6,158	6,901	7,075
Particle boards and similar boards(d)	'000 cu m	n.a.	n.a.	774
Plastics in primary forms(e)	'000 tonnes	990	986	977
Sulphuric acid, oleum	"	1,818	1,904	1,464
Refrigerators, domestic	'000	386	380	346
Clothes washing machines, domestic	"	394	397	330
Colour television sets(f)	"	177	162	158
Electric motors	"	2,844	3,076	2,553
Lawn mowers, rotary petrol type	"	279	298	247
Motor vehicles—				
Cars and station wagons	"	315	333	384
Vehicles for goods and materials(g)	"	23	31	27
Yarn(h)—				
Cotton	tonnes	20,667	20,504	21,044
Wool	"	23,076	21,458	19,723
Woven fabric(h)—				
Cotton (incl. towelling)	'000 sq. m	39,415	36,307	40,157
Wool (incl. blanketing)	"	10,623	9,796	8,397
Man-made fibre	"	166,696	190,445	173,259
Textile floor coverings	"	41,651	44,888	44,271
Confectionery—				
Chocolate base	tonnes	85,981	92,597	92,783
Other	"	66,770	64,655	64,107
Beer(i)	ML	1,891	1,951	1,944
Tobacco and cigarettes(j)	tonnes	27,382	27,158	24,899

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.

(a) Includes ingots, puddled bars, pilings, blocks or lumps and steel in the molten state. (b) From rolling and forging of iron and steel (primary mills output). Excludes from continuous casting. (c) Available for issue through mains. Includes natural gas. (d) Not laminated. (e) Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms. (f) Excludes combination with radio etc. (g) Includes utilities, panel vans and prime movers for semi-trailers. (h) Includes mixtures predominantly of the fibre named. (i) Includes ale and stout. (j) Source: Australian Customs Service.

Concentration in the Manufacturing Industry

Concentration statistics provide information on the extent to which a few enterprise groups predominate in individual industries. They are a useful aid in assessing the degree of competition existing among enterprise groups engaged in an industry.

Concentration statistics for the manufacturing sector were first produced in respect of 1968-69. Similar statistics have subsequently been produced for 1972-73, 1977-78, 1982-83 and 1987-88. These statistics relate to Australia only and similar information is not available for States or other regional areas.

MANUFACTURING ESTABLISHMENTS—SUMMARY STATISTICS AND CONCENTRATION RATIOS FOR THE MANUFACTURING SECTOR, AUSTRALIA

Enterprise groups ranked by turnover	1968-69		1972-73		1977-78		1982-83		1987-88	
	'000	Ratio	'000	Ratio	'000	Ratio	'000	Ratio	'000	Ratio
EMPLOYMENT AT END OF JUNE(a)										
4 largest	90.5	.07	89.4	.07	88.1	.08	82.4	.08	64.7	.06
8 largest	127.8	.10	135.9	.11	117.0	.11	103.9	.10	93.6	.09
12 largest	160.7	.12	161.0	.12	147.7	.13	137.3	.14	120.6	.11
16 largest	178.9	.14	185.1	.14	163.9	.14	158.5	.15	139.5	.13
20 largest	193.8	.15	204.6	.15	183.0	.16	166.7	.16	154.7	.15
25 largest	212.6	.16	229.9	.17	201.2	.18	194.2	.19	181.5	.17
50 largest	300.7	.23	326.8	.25	283.3	.25	281.7	.28	250.2	.24
100 largest	407.8	.32	442.3	.33	395.8	.35	374.0	.37	339.4	.32
200 largest	538.0	.42	581.4	.44	520.4	.46	475.3	.47	431.9	.41
All enterprise groups	1,289.6	1.00	1,325.6	1.00	1,132.7	1.00	1,011.6	1.00	1,063.8	1.00
TURNOVER										
	\$m	Ratio	\$m	Ratio	\$m	Ratio	\$m	Ratio	\$m	Ratio
4 largest	1,911.4	.10	2,462.4	.09	4,552.4	.09	8,229.9	.10	12,476.4	.09
8 largest	2,753.3	.15	3,620.9	.13	6,642.0	.13	12,198.6	.15	18,468.8	.14
12 largest	3,349.0	.18	4,446.1	.17	8,125.1	.17	15,161.0	.18	22,993.0	.17
16 largest	3,818.3	.21	5,099.0	.19	9,280.3	.19	17,535.5	.22	26,938.3	.20
20 largest	4,191.2	.22	5,656.5	.21	10,207.1	.21	19,436.2	.24	30,293.5	.23
25 largest	4,564.0	.24	6,245.3	.24	11,248.6	.23	21,446.3	.26	34,184.4	.26
50 largest	5,935.0	.32	8,431.9	.32	15,439.0	.32	29,342.8	.36	47,195.6	.35
100 largest	7,665.0	.41	11,262.4	.43	20,702.2	.43	38,839.0	.47	61,337.1	.46
200 largest	9,712.0	.52	14,299.0	.54	26,279.7	.55	47,400.7	.58	74,799.1	.56
All enterprise groups	18,646.7	1.00	26,372.7	1.00	48,097.4	1.00	82,320.6	1.00	133,819.8	1.00

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors.

Further information on concentration in the manufacturing industry is contained in the publication *Manufacturing Industry, Concentration Statistics, Australia* (8207.0).

Foreign Ownership and Control in the Manufacturing Industry

Foreign participation statistics include statistics on both foreign ownership and control of enterprises in Australia. Foreign ownership statistics provide a measure of the beneficial equity interest held by foreign residents (individuals and companies) in enterprises in Australia. Foreign control statistics provide a measure of the potential control through ownership of voting shares that foreign residents may have over the key policy decisions of enterprises in Australia.

MANUFACTURING INDUSTRY—OWNERSHIP BY COUNTRY 1986–87

	Employment at end of June(a)		Wages and salaries(b)		Turnover		Value added	
	No.	%	\$m	%	\$m	%	\$m	%
Foreign ownership								
USA	75,742	7.4	1,856.5	8.6	12,013.4	10.3	4,658.3	10.2
UK	83,526	8.2	2,015.0	9.4	12,212.7	10.5	4,763.3	10.5
Other EEC(c)	18,227	1.8	428.0	2.0	2,661.7	2.3	1,027.2	2.3
Canada	15,325	1.5	374.1	1.7	2,801.9	2.4	882.4	1.9
Switzerland	8,423	0.8	195.8	0.9	1,183.6	1.0	373.1	0.8
New Zealand	15,690	1.5	356.1	1.7	2,187.6	1.9	784.8	1.7
Japan	14,950	1.5	333.2	1.5	2,497.7	2.1	919.0	2.0
Other	12,033	1.2	296.6	1.4	1,678.6	1.4	667.6	1.5
Total	243,916	23.8	5,855.3	27.2	37,237.3	32.0	14,075.7	30.9
Australian ownership	780,871	76.2	15,661.1	72.8	79,294.5	68.0	31,433.1	69.1
Total manufacturing	1,024,787	100.0	21,516.3	100.0	116,531.8	100.0	45,508.8	100.0

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors. (b) Excludes the drawings of working proprietors. (c) Includes Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

MANUFACTURING INDUSTRY—CONTROL BY COUNTRY 1986–87

	Establishments at 30 June		Employment at end of June(a)		Wages and salaries(b)		Turnover		Value added	
	No.	%	No.	%	\$m	%	\$m	%	\$m	%
Foreign control										
USA	468	1.6	81,607	8.0	1,999.7	9.3	12,167.8	10.4	4,909.7	10.8
UK	718	2.5	86,374	8.4	2,079.4	9.7	12,971.0	11.1	5,171.3	11.4
Other EEC(c)	183	0.6	18,727	1.8	440.0	2.0	2,737.4	2.3	1,099.0	2.4
Canada	43	0.1	15,070	1.5	371.2	1.7	2,812.4	2.4	868.0	1.9
Switzerland	53	0.2	7,779	0.8	173.9	0.8	1,078.6	0.9	342.3	0.8
New Zealand	122	0.4	7,334	0.7	153.0	0.7	1,068.9	0.9	334.5	0.7
Japan	36	0.1	13,993	1.4	307.7	1.4	2,423.4	2.1	843.3	1.8
Other	69	0.2	7,085	0.7	176.0	0.8	1,014.3	0.9	430.0	0.9
Total	1,692	5.9	237,969	23.2	5,700.9	26.5	36,273.8	31.1	13,998.2	30.8
Joint foreign and Australian control	85	0.3	9,907	1.0	226.1	1.1	1,528.5	1.3	619.5	1.4
Naturalised or naturalising	27	0.1	8,067	0.8	218.6	1.0	1,850.5	1.6	527.0	1.2
Australian control	27,042	93.7	768,844	75.0	15,370.8	71.4	76,879.0	66.0	30,364.0	66.7
Total manufacturing	28,846	100.0	1,024,787	100.0	21,516.3	100.0	116,531.8	100.0	45,508.8	100.0

NOTE: Data in this table exclude operations by single establishment enterprises employing fewer than four persons.
(a) Includes working proprietors. (b) Excludes the drawings of working proprietors. (c) Includes Belgium, Denmark, France, Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg and Netherlands.

Summary information on foreign ownership and control in other industries is given in Chapter 26. More details on foreign ownership and control in the manufacturing industry are contained in *Foreign Ownership and Control of the Manufacturing Industry, Australia* (5322.0).

Research and Experimental Development

Details of expenditure and human resources devoted to research and experimental development (R&D) carried out by manufacturing enterprises in Australia are included in *Research and Experimental Development, Business Enterprises, Australia* (8104.0). R&D activity in the business context is systematic investigation or experimentation involving innovation or technical risk, the outcome of which is *new knowledge*, with or without a specific practical application or *new or improved* products, processes, materials, devices or services. R&D activity extends to modifications to existing products/processes. R&D activity ceases and pre-production begins when work is no longer experimental. A summary of results from the 1984-85, 1986-87 and 1988-89 Surveys of Research and Experimental Development is presented in Chapter 22.

RETAIL TRADE

Estimates of the value of retail turnover (excluding motor vehicles, parts, petrol, etc.) by industry are obtained by means of sample surveys. Prior to June 1988, these series reflect retail sales adjusted to turnover basis, and exclude the Northern Territory.

TURNOVER OF RETAIL ESTABLISHMENTS (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) AT CURRENT PRICES: INDUSTRIES (\$ million)

Description	1987-88	1988-89	1989-90
Grocers, confectioners, tobacconists	19,350.5	21,178.3	23,178.2
Butchers	1,696.0	1,963.0	2,131.5
Other food stores	4,471.1	4,774.6	5,421.6
Hotels, liquor stores, licensed clubs	9,838.5	10,168.1	11,076.0
Cafes and restaurants	n.a.	3,288.3	3,956.9
Clothing and fabric stores	6,019.4	6,338.8	6,144.3
Department and general stores	8,748.8	9,226.0	9,666.1
Footwear stores	979.6	1,007.7	1,123.6
Domestic hardware stores, jewellers	2,317.5	2,659.1	2,582.2
Electrical goods stores	4,111.5	4,456.2	5,095.7
Furniture stores	1,618.7	1,664.3	1,758.2
Floor coverings stores	667.7	718.8	713.3
Pharmacies	2,477.6	2,876.9	3,298.5
Newsagents	2,563.4	2,760.7	3,017.7
Other stores	n.a.	3,762.2	4,106.8
Total	70,880.7	76,842.2	83,269.6

Service Industries

The 1986-87 Service Industries Survey covered ten personal and travel related industries. Most of these were also part of the 1979-80 Census of Retail and Selected Services Industries, therefore allowing some comparisons between the two periods. Data for motor vehicle hire, travel agency services and photography services have been collected for the first time.

Also collected as part of the 1986-87 Service Industries Survey were data on selected tourist attractions. A brief summary of details of this survey is available in Chapter 12, *Culture, Recreation, Environment and Tourism*. Further details by type of attraction are shown in *Tourist Attractions* (8661.0).

The 1987-88 Service Industries Survey covered twelve professional and business related industries. The industries included in the 1987-88 Survey have not previously been surveyed in this detail by ABS so there are no earlier statistics available to which they can be compared.

A brief summary of details of the 1986-87 and 1987-88 Surveys is contained in the table below. A list of available publications containing more detailed statistics is shown in the bibliography at the end of this chapter.

**SELECTED SERVICE INDUSTRIES: SUMMARY OF OPERATIONS
AUSTRALIA, 1986-87 AND 1987-88**

ASIC Class	Enterprises operating at end June	Persons employed at end June	Wages and salaries(a)	Turnover	Gross product	Net operating surplus
	No.	No.	\$'000	\$m	\$m	\$m
<i>1986-87—</i>						
Motor vehicle hire (5711)	281	3,173	54.8	446.8	139.5	58.0
Travel agency services (5741)(b)	1,494	11,632	191.5	428.8	1,207.2	-0.2
Motion picture theatres (9133)	202	4,472	56.6	256.5	96.2	29.2
Cafes and restaurants (9231)	8,489	85,974	646.7	2,583.9	942.2	221.5
Hotels and bars (9232)	4,986	82,644	814.8	4,807.6	1,270.0	370.5
Accommodation (9233)	4,841	56,364	640.3	2,281.5	1,078.8	310.7
Licensed clubs (9241-3)	3,927	52,336	687.8	2,636.1	1,059.4	229.0
Laundries and dry cleaners (9340)(c)	1,581	12,452	142.0	400.1	228.4	56.6
Hairdressers and beauty salons (9351-2)	11,027	39,628	300.0	790.0	433.0	113.1
Photography services (9361)	1,547	4,290	36.5	183.3	67.6	23.3
<i>1987-88—</i>						
Real estate agents (6310)	5,741	42,196	835	2,201	1,262	356
Architectural services (6334)	4,534	17,717	354	1,030	584	185
Surveying services (6335)	1,104	6,872	116	309	178	46
Engineering and technical services (6336)(d)	5,190	28,326	682	1,716	1,000	223
Legal services (6371)	6,459	55,363	500	3,069	1,427	884
Accounting services (6372)	6,048	49,479	503	2,334	1,050	497
Computing services (6381)	3,691	24,067	585	1,628	775	78
Advertising services (6382)	2,390	16,048	423	4,675	619	147
Debt collecting and credit reporting services (6385)	234	2,658	52	142	69	12
Pest control services (6386)	565	2,902	44	135	76	25
Cleaning services (6387)(e)	4,181	44,322	330	622	434	81
Security/protection and business services n.e.c. (6388 and 6389)(f)	1,087	25,483	365	839	515	120

(a) Gross earnings of all employees before taxation and other deductions. Drawings of working proprietors and partners are excluded. (b) Includes Australian branch offices of foreign resident airlines and the travel agency divisions of the major financial institutions (mainly banks). (c) Excludes carpet cleaning services. (d) Includes quantity surveyors. (e) Includes carpet cleaning services. (f) Excludes quantity surveyors.

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- Integration of Economic Statistics: The Conceptual and Operational Framework* (1113.0)
Australian National Accounts: Concepts, Sources and Methods (5216.0)—Chapter 4
 'Estimates at Constant Prices'
Foreign Ownership and Control of the Manufacturing Industry, Australia (5322.0)
Manufacturing Industry: Details of Operations by Industry Class, Australia (8203.0)
Manufacturing Industry, Concentration Statistics, Australia (8207.0)
Quarterly Indexes of Manufacturing Production, Australia (8219.0)
Manufacturing Production bulletins (8357.0–8363.0, 8367.0 and 8368.0)
Retail Trade, Australia (8501.0)
Retail Industry: Details of Operations by Industry Class, Australia (8622.0)
Retailing in Australia (8628.0)
Wholesale Establishments: Details of Operation by Industry Class, Australia (8638.0)
Selected Tourism and Personal Service Industries: Summary of Operations, Australia, 1986–87, Preliminary (8650.0)
1986–87 Motor Vehicle Hire, Australia (8652.0)
1986–87 Travel Agency Services, Australia (8653.0)
1986–87 Motion Picture Theatres, Australia (8654.0)
1986–87 Cafes and Restaurants, Australia (8655.0)
1986–87 Hotels and Accommodation, Australia (8656.0)
1986–87 Licensed Clubs, Australia (8657.0)
1986–87 Laundries and Dry Cleaners, Australia (8658.0)
1986–87 Hairdressers and Beauty Salons, Australia (8659.0)
1986–87 Photography Services, Australia (8660.0)
1986–87 Tourist Attractions, Australia (8661.0)
Professional and Business Services Industries, Summary Operating Statistics, Australia, 1987–88 (8662.0)
1987–88 Real Estate Agents Industry (8663.0)
1987–88 Architectural Services Industry (8664.0)
1987–88 Surveying Services Industry (8665.0)
1987–88 Engineering and Technical Services Industry (8666.0)
1987–88 Legal Services Industry (8667.0)
1987–88 Accounting Services Industry (8668.0)
1987–88 Computing Services Industry (8669.0)
1987–88 Advertising Services Industry (8670.0)
1987–88 Pest Control Services Industry (8671.0)
1987–88 Cleaning Services Industry (8672.0)
1987–88 Security/Protection and Other Business Services Industry (8673.0)

—Detailed statistics for the following industries are available by contacting the ABS:

- Real estate agents
- Architectural services
- Surveying services
- Engineering and technical services
- Legal services
- Accounting services
- Computing services
- Advertising services
- Debt collecting and credit reporting services
- Pest control services
- Cleaning services
- Security/protection and business services n.e.c.