

MANUFACTURING

NATURAL RESOURCES AND LOCATION

Natural resources

Victoria's natural resources—a temperate climate, adequate rainfall and water supply, and productive soils—have been used to provide both raw materials and power for industry. For example, clay deposits for brick, tile, and pottery making are worked near Melbourne, Ballarat, Bendigo, Colac, Shepparton, Wangaratta, and in other areas of Victoria. Sand, used in foundries, and concrete and glass works, is obtained in the Port Phillip and west Gippsland districts. Stone and gravel are quarried in many parts of Victoria, but, since large loads are expensive to transport, sites are concentrated within 80 kilometres of the principal market, metropolitan Melbourne. Inside a similar radius, the availability of limestone has attracted the establishment of cement works at Geelong and Traralgon, while the Lilydale deposits are extracted to produce agricultural lime.

Although Victoria's historic gold rush has long since passed, gold is still mined in the Castlemaine, Gaffneys Creek, and Harrietville areas. Victoria's other mineral resources include salt collected from solar evaporation on the western shores of Port Phillip and from the Wimmera and Mallee lakes; gypsum is also found in the north-western Mallee. More detailed information on mining activity can be found on pages 299–302.

Victorian forests provide approximately one-quarter of Australia's timber output. The fine vegetation of the Central Highlands forms the basis of important felling activities. The industry is also significant in Gippsland, where paper is manufactured at Maryvale. Other paper mills are situated in Melbourne, which is a major market for all wood and timber products.

Water, needed in large quantities for industry, is available throughout much of Victoria from dams in the catchment areas of the chief rivers (see map on page 478 of the *Victorian Year Book* 1966). In most years, Melbourne is well supplied from the storages to its north and north-east in the Plenty, Upper Yarra, Maroondah, and O'Shannassy watersheds. However, severe restrictions were imposed during the 1967–68 and 1972–73 summers because of widespread drought conditions. To meet future demands, construction works are being extended. (See pages 306–8.)

Power supplies and the fuels from which they are derived are basic for industrial development. Victoria's range of carboniferous fuels is not great and, in the past, it was necessary to import significant amounts of black coal from New South Wales. Subsequently, the State Electricity Commission developed the brown coal resources of the La Trobe Valley. The open-cut mines of the Yallourn–Morwell region presently produce about 29.4 megatonnes per year for use in the steam-generation of electricity and briquette making. The Commission now delivers the bulk of Victoria's public electricity requirements; the balance is purchased interstate.

The discovery, in February 1965, and subsequent development of sizeable offshore reserves of oil and natural gas in the Gippsland basin have augmented Victoria's power and chemical resources. In March 1969, natural gas for commercial use flowed from the Barracouta field and, a month later, the first domestic customers were connected. The Marlin field began to operate in January 1970. Natural gas is now piped from Longford to Melbourne and then to Geelong, Ballarat, and Bendigo. Oil in commercial quantities

has been produced from the Barracouta field since October 1969, from Halibut since March 1970, and from Kingfish since April 1971. Petroleum refining is carried out at Altona, Geelong, and Crib Point, and petrochemical manufacturing at Altona, Geelong, Dandenong, and Footscray.

Location

Victoria's earliest industries were located in Melbourne, the entry port for most of the people and their supplies. As Victoria developed, Melbourne became its most populous centre, the major port, the hub of the railway and road network, and major manufacturing centre. At 30 June 1978, 81.1 per cent of Victoria's 8,571 manufacturing establishments owned by multi-establishment enterprises and all single establishment manufacturing enterprises employing four or more persons (see pages 390-1 for further details), and 83.1 per cent of its work force engaged in manufacturing, were located in the Melbourne Statistical Division. There are basic reasons for this: Melbourne's function as port and transport focus makes the collection of raw materials and the distribution of manufactured goods relatively easy; the concentration of Victoria's population in the city means a concentration of potential purchasers and potential workers; and by locating their operations in Melbourne, manufacturers can enjoy easy interchange of materials, parts, and services with other manufacturers.

Melbourne's early industrial suburbs grew on the fringes of the city centre in Port Melbourne, South Melbourne, Richmond, Collingwood, Spotswood, Fitzroy, and Footscray. In these suburbs a wide range of manufacturing industry is to be found. The more recent new industrial municipalities are Altona, Broadmeadows, Moorabbin, Oakleigh, and Dandenong, where extensive areas are available for the establishment of new industries.

Apart from smelting and large-scale steel making, most types of secondary industry are to be found in Melbourne. In terms of employment, engineering and metal processing constitute Melbourne's major industries, but a high proportion of Victoria's chemical, textile, paper, furniture, food, and building materials industries are also concentrated there.

Outside the Melbourne metropolitan area, Geelong is the most important industrial centre, with port facilities, close proximity to the Melbourne market, and rich surrounding rural areas. Industries established in the area include petroleum refining, and the manufacture of agricultural machinery, motor vehicles, aluminium ingots and extruded products, textiles, chemical fertilisers, glass, clothing, carpets, foodstuffs, cement, fertilisers, and sporting ammunition.

The other country areas in which more than 1,000 persons are employed in manufacturing establishments (ranked in order of the number of persons employed in factories) are the Ballarat Statistical District, Bendigo Statistical District, Shepparton-Mooroopna Statistical District, Morwell Shire, Wodonga Rural City, Warrnambool City, Wangaratta City, Portland Town, Maryborough City, and Castlemaine City. The factory population in country areas is engaged in the production of food and textiles from locally produced raw materials, in clothing, and in engineering plants, some of which had their origin in the gold mining era of the nineteenth century, and more recently in decentralised plants with defence significance.

MANUFACTURING ACTIVITY

Manufacturing developments during 1978

During 1978, activity in the Victorian manufacturing sector generally remained depressed with under-utilisation of capacity and sluggish demand. Signs were evident of a slow, uneven but sustained growth towards the end of the year and this was expected to continue into 1979.

Generally, demand for engineering products came from major sectors; public, rural, industrial, and mining was rather subdued. However, there was a noticeable improvement in demand from the agricultural sector because of favourable crop conditions.

In the heavy engineering sector there were two major investments of note. Site preparation commenced at the Point Henry aluminium smelter for the installation of a

third smelting pot line which will raise annual production capacity from 104,000 tonnes per year to 161,000 tonnes per year. Construction work was expected to commence early in 1979 and was planned for completion by 1981. The project will cost \$85m. At its Geelong plant, a truck and agricultural equipment manufacturer has undertaken foundry modernisation, retooling of equipment, and machinery modernisation costing \$11m. The project was expected to be completed in 1979.

In the motor vehicle industry, the first Australian designed four cylinder engine was produced at Fishermens Bend. One of the Japanese car manufacturers also commenced production of four cylinder engines at Clayton.

In food and allied products, work commenced on a new \$13m confectionery plant at Ballarat which would employ approximately 200 persons. A major extension and modernisation programme costing over \$1m was planned for a meat cannery and smallgoods plant at Castlemaine.

The textile, clothing, and footwear industries have entered a period of relative stability. This follows the three year programme of assistance offered by the Commonwealth Government until mid-1980, and the market sharing arrangements between imports and locally manufactured goods administered by the Review Committee appointed to monitor import quotas.

In the paper industry, excess production capacity was highlighted by the start-up of a new machine at Maryvale producing corrugating medium and light-weight linerboard and this could lead to greater efforts to secure export orders.

In the timber industry, a new \$12m particleboard plant was opened at Portland in April 1978. Initial output was less than anticipated due to the depressed state of the industry.

In the chemicals sector, activity levels were below expectations. Import competition remained strong in most areas, and rationalisation was widespread. Two major new investments commenced production in February 1978 — a styrene monomer plant and a polyvinyl facility. A \$500m proposal for a new 648 hectare petrochemical complex at Point Wilson was announced which would complement a new \$3.6m PVC plant currently under construction at Laverton.

Further oil exploration was undertaken with success in the Fortescue field (estimated reserves 280 million barrels). It was planned to spend a total of \$400m to develop the West Kingfish and Cobia fields.

Government activities

Industrial legislation

The *Labour and Industry Act 1958* represents the development and consolidation of industrial legislation which had its beginnings in 1873. Among other matters, the Act deals with the registration and inspection of factories, guarding of machinery, and conditions of employment. The Act also provides for the appointment of Wages Boards and the Industrial Appeals Court. Further information on these matters may be found on pages 212-3.

Department of State Development, Decentralization and Tourism

Introduction

The Department of State Development, Decentralization and Tourism was established by an Act of the Victorian Parliament on 23 May 1978. The Department is responsible for encouraging and promoting industry and commerce throughout the State, with particular regard to activities outside the Melbourne metropolitan area.

The Department's objectives include: sponsoring and promoting the full and balanced development of the State; promoting the development of secondary and tertiary industries throughout the State, with particular regard to industries outside the Melbourne metropolitan area; establishing liaison with statutory authorities to provide the utility services necessary to meet the requirements of industry and commerce outside the Melbourne metropolitan area; developing and promoting the tourism industry in Victoria; assisting and co-ordinating the activities of persons and organisations interested in the development of the tourism industry in Victoria; and promoting publicity and research necessary for the carrying out of any of the previously mentioned objectives.

The Department has established Regional Development Committees at Ballarat, Bendigo, and Portland, in order to foster, encourage, promote, and implement programmes directed towards the optimum level of development of the area of Committee activity, and to assist and advise the Minister in relation to legislation or matters charged to his administration, while regional offices are located at Wodonga, Ballarat, Geelong, Shepparton, Mildura, Portland, Warrnambool, Traralgon, Wangaratta, and Bendigo. The Department also provides funding for various regional tourist authorities established in each of the twelve regions in the State — Melbourne, Central Highlands, East Gippsland, Goulburn, Westernport-Healesville, North Central, Otway-Geelong, South-West, Wimmera, North-West, North-East, and Gippsland — for the purpose of promoting tourism on a regional basis.

Decentralisation

Under the Victorian Government's decentralisation programme, the Department offers manufacturing and processing secondary industries in country areas of Victoria a range of financial incentives, including pay-roll tax and land tax rebates, road and rail transport concessions, transport of plant and machinery subsidies, and employment incentives. Other incentives cover electricity power connection costs, housing assistance, and a government contract preference scheme.

Departmental officers assist companies with investigations regarding the establishment or expansion of operations in provincial centres, negotiate with councils and industries, monitor country industry conditions, and promote the benefits of decentralisation to metropolitan and overseas industries. Liaison is also maintained with other government departments and organisations with a view to facilitating the establishment or expansion of Victorian country industries.

During 1978-79, the Department spent \$24.7m on incentives to approved industries under its decentralisation programme. In addition, grants to development committees in country centres to assist with the promotion and attraction of industry amounted to \$69,583. A further \$39,106 in loans was provided to assist local municipalities with the development of industrial estates.

Research, policy, and development

The research, policy, and development function of the Department has two principal objectives: the provision of policy advice on appropriate measures to develop the State's economy, and servicing the requirements of the Victorian Government on matters relating to the State's development.

In fulfilling the former function, studies are undertaken on such matters as the condition of the world economy, the international energy situation, the changing competitiveness of Victoria's main industries, changes in relevant Commonwealth Government policies, the labour market, and the impact of technological change. As part of this responsibility the Division reviews existing policies, and provides advice on specific initiatives and on matters of relevance to the Department's overall functions.

As part of its servicing function the Department conducts employment and industrial surveys, investigates industry suitable for country location, services overseas inquiries, provides details of development opportunities throughout the State, and gives advice and assistance to industry in developing or expanding its operations.

The Department also undertakes research studies on regions within the State in order to assess their problems, their opportunities, and their resource potential. Departmental submissions are prepared to such bodies as the Industries Assistance Commission and the Temporary Assistance Authority.

Victorian Development Corporation

The Victorian Development Corporation is a statutory authority established by the *Victorian Development Corporations Act 1973*. Its members are nominated by the Minister for State Development, Decentralization and Tourism and its resources are provided mainly by loans from State Treasury and by limited issues of Inscribed Stock. The Corporation is responsible to the Minister for State Development, Decentralization and Tourism.

The role of the Corporation is to encourage, promote, and assist:

- (1) In the establishment and development of country industries;
- (2) the provision of tourist accommodation and facilities throughout Victoria;
- (3) investment opportunities in Victoria from overseas and interstate; and
- (4) export marketing of Victoria's primary resources, manufactured goods, and tertiary services.

The Corporation provides medium and long-term finance on concessional terms; offers guarantees of repayment to other traditional lenders; and enters into lease-purchase arrangements with suitable tenants for the purchase or construction of factories.

In 1978-79, the Victorian Government announced that the operations of the Investment and Export Promotion Division of the Department of State Development, Decentralization and Tourism will be transferred to the Corporation in order to eliminate the overlapping of responsibilities.

**VICTORIA—VICTORIAN DEVELOPMENT CORPORATION:
APPROVAL OF LOANS, 1977-78 AND 1978-79**

Sector	1977-78			1978-79		
	Number	Amount	Per cent	Number	Amount	Per cent
INDUSTRY		\$			\$	
Electrical machinery, cables, and appliances	1	40,000	0.4	1	30,000	0.3
Building materials and fittings	12	640,000	6.1	11	586,000	5.0
Furniture and joinery	5	384,000	3.6	3	105,000	0.9
Motor vehicles, parts, and motor engineering	2	109,000	1.0	1	10,000	0.1
Machinery, equipment, and general engineering	13	941,500	8.9	19	755,000	6.4
Leather and leather goods	1	75,000	0.7	2	55,000	0.5
Textiles and clothing	17	2,896,650	27.4	11	2,033,000	17.2
Printing of newspapers and other publications	5	214,000	2.0	3	545,000	4.6
Paper and cardboard products and printing	4	1,030,000	9.7	2	40,000	0.3
Sawmilling	4	225,000	2.1	3	460,000	3.9
Food processing, drink, confectionery, and tobacco	8	465,000	4.4	15	4,480,000	38.0
Other manufacturing	21	1,687,100	16.0	13	857,000	7.2
Sundry	3	77,500	0.7	3	81,000	0.7
Total industry	96	8,784,750	83.0	87	10,037,000	85.1
TOURISM						
Hotels, motels, and guest houses	20	1,099,000	10.4	24	1,129,500	9.6
Caravan parks	12	454,600	4.3	9	273,000	2.3
Other	6	245,000	2.3	10	357,000	3.0
Total tourism	38	1,798,600	17.0	43	1,759,500	14.9
Grand total	134	10,583,350	100.0	130	11,796,500	100.0

Small Business Development Corporation

The Small Business Development Corporation was established by the Victorian Government in June 1976 for the purpose of "doing all things possible to help small business". The Corporation is administered and staffed by persons with practical experience in small business. As a statutory authority, the Corporation can recruit the assistance and involvement of the resources of the public and private sectors, while small business can consult the Corporation in confidence. The counsellors of the Corporation can advise the small business on procedures of management skills and specific information relating to finance, marketing, production, organising, and all general areas of small business management.

The services of the Small Business Development Corporation are available to all branches of business activity and the Corporation carries out its operations in both city and country areas throughout Victoria. All services are provided free of charge.

Commonwealth Department of Industry and Commerce

The Department makes policy directed towards the economic development of secondary and tertiary industry (including small business and tourism). It advises the Commonwealth Government on industry and commerce, including the monitoring of trends and the analysis of economic information.

Commonwealth Department of Productivity

The major functions of the Department are productivity improvement in industry and commerce, defence production, and registration of patents, trade marks, and designs. The Regional Office (Victoria) participates in planning and operating departmental projects, provides policy advice to Central Office, and develops relations with industry and other State organisations. It also encourages government-industry initiatives and provides an information and referral service on all government programmes and services to industry and commerce through its Business Information Centre.

Commonwealth Department of Trade and Resources

The Department is responsible for developing and maintaining Australia's position as a major world trading nation, through international trade and commodity commitments and agreements, development of export markets, and formulation of policy proposals for the Commonwealth Government's international trade policy and trading objectives. It is also responsible for matters related to the commercial development, marketing, and export of minerals, including uranium, and hydrocarbon fuels.

Prices Justification Tribunal

The Prices Justification Tribunal was established in August 1973 pursuant to the *Prices Justification Act 1973*. Amendments to the Act occurred in 1974, 1976, and 1979. The functions of the Tribunal are to conduct inquiries in relation to prices for the supply of goods or services, and to report to the Minister for Business and Consumer Affairs the results of every such inquiry. Further information on the Tribunal can be found on page 376 of the *Victorian Year Book 1979*.

Scientific research and standardisation

Commonwealth Scientific and Industrial Research Organization

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is a statutory body established by the *Science and Industry Research Act 1949*. Under the Act, the CSIRO replaced the former Council for Scientific and Industrial Research which was established in 1926. Its principal functions under the Act are the carrying out of scientific research in connection with Australian primary and secondary industries or any other matter referred to it by the Minister for Science; encouraging the utilisation of the results of such research; the training of scientific research workers and the awarding of studentships; the making of grants in aid of scientific research; the recognition and support of research associations; the maintenance of the national standards of measurement; the dissemination of scientific and technical information; the publication of scientific and technical reports; and acting as a means of liaison between Australia and other countries in matters of scientific research.

Standards Association of Australia

This Association is the officially endorsed national organisation for the promotion of standardisation in Australia. It is an independent body incorporated by Royal Charter, having the full recognition and support of the Commonwealth and State Governments and industry. Formed as the Australian Commonwealth Engineering Standards Association in 1922 it was reconstituted as the Standards Association of Australia in 1929. Approximately 45 per cent of its funds are provided by Commonwealth Government grants, the remainder coming from membership subscriptions and the sale of publications.

A Council composed of representatives of Commonwealth and State Government departments, associations of manufacturing and commercial interests, and professional institutions controls the Association's activities. The technical work of the Association is carried out on a voluntary basis by committees composed of experts in the particular subjects for which standards have been requested.

Australian standards are developed by co-operative effort and negotiation on the part of those most concerned, whether as producers or as users. They are based on what is best in present practice. They do not attempt to attain an ideal which might be too costly to adopt under industrial and commercial conditions. They are constantly revised to take account of new developments and to eliminate outmoded practices.

Industrial associations, firms, or government departments may request standards relating to such things 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 intrinsic merit. It is only in special cases where safety of life and property is involved, that they may have compulsory application. The Association owns a registered certification trade mark which manufacturers may obtain a licence to use.

The Association has international affiliations, being the Australian member body on the International Standards Organization (ISO) and the International Electrotechnical Commission (IEC); it also maintains close links with overseas standards organisations. It acts as Australian agent for the procurement of overseas publications and the standards of other countries. The headquarters office of the Association is in Sydney, and there is a major office in Melbourne. Branch offices are located in other capital cities and at Newcastle, New South Wales.

National Association of Testing Authorities

This is the Australian organisation for accreditation of testing and measuring facilities. It registers testing and measuring laboratories which can demonstrate their technical and managerial competence. Registration of laboratories is voluntary. Registered laboratories are operated by industrial, governmental, educational, and commercial testing authorities. The Association is recognised by all State Governments, the Commonwealth Government, and industry associations. Registered laboratories have the right to endorse their test documents in the name of the Association.

Industrial Design Council of Australia

The Industrial Design Council of Australia has established its Victorian headquarters at the Australian Design Centre, 37 Little Collins Street, Melbourne. At the Australian Design Centre there is a small changing exhibition of products which have received the Australian Design Award. The Australian Design Award has been created to give proper recognition to Australian products of high quality and to direct consumer attention to the many Australian products which can compete with products from overseas.

At the Victorian headquarters of the Council, field officers are available to assist manufacturers with new product development. Throughout the year, the Council runs workshops and seminars on developing new products and ideas to encourage manufacturers to develop and produce their own designs and products, rather than import or manufacture under licence. The Council's education officers work with teachers and curriculum planners in schools and State Colleges, assisting them to develop programmes which will create an awareness and appreciation of design in primary and secondary students. School groups are welcome to visit the Design Centre.

MANUFACTURING INDUSTRY STATISTICS

Basis of collection

A series of substantially uniform statistics exists from 1901 to 1967-68 when the framework within which manufacturing statistics were collected was changed. The table on page 392 contains a summary of statistics on manufacturing activities in Victoria over that period. More detailed manufacturing statistics in respect of this period have been included in previous editions of the *Victorian Year Book*.

As from the year ended June 1969, the Census of Manufacturing, Electricity, and Gas have been conducted within the framework of the integrated economic censuses, which include the Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. As a result, manufacturing industry statistics for 1968-69 and subsequent years are not directly comparable with previous years. The electricity and gas industries, which were previously included in the annual Manufacturing Census, were the subject of separate censuses. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Australian Bureau of Statistics and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

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

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in coverage, and in such a way that aggregates for certain important economic data such as value added, employment, wages and salaries, fixed capital expenditure, and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses. From the 1975-76 Census of Manufacturing Establishments onwards, only a limited range of data—employment and wages and salaries—is collected from single establishment manufacturing enterprises with less than four persons employed. This procedure has significantly reduced the statistical reporting obligations of small businesses, while at the same time only marginally affecting statistical aggregates other than the number of establishments. Data in respect of establishments from which the full range of data is collected under the new collection criteria (i.e., all manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed) is considered to provide reliable information for the evaluation of trends in the manufacturing sector of the economy. All tables in this and subsequent *Victorian Year Books* will show details collected from all manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises employing four or more persons, while for 1974-75 some tables also show data collected from single establishment manufacturing enterprises employing less than four persons.

From the 1977-78 Manufacturing Census, the classification of census units to industry is based on the 1978 edition of the *Australian Standard Industrial Classification (ASIC)*. The 1978 edition of the classification replaces the 1969 preliminary edition which had been in use since the 1968-69 Census.

The 1977-78 data used in the following tables is classified according to the 1978 edition of ASIC. In general, the impact of the change in industrial classification is minimal at the ASIC division and sub-division levels, leaving their basic character and structure unchanged. The ASIC division and sub-division levels are the levels used in this chapter.

For a more detailed description of the integrated economic censuses, reference should be made to pages 368-89 of the *Victorian Year Book* 1971.

Summary of manufacturing statistics

Manufacturing statistics compiled for 1967-68 were the last of the old series, and definitions used in the 1967-68 and previous manufacturing censuses were published in the *Victorian Year Book* 1971, pages 394-7. The first publication of statistics from the 1968-69 economic censuses, *Manufacturing establishments and electricity and gas establishments: preliminary statement*, was issued in January 1971 and contained information in respect of twelve industry sub-divisions permitting comparisons to be made between States, but did not permit comparisons to be made between 1968-69 and previous years because of the changes in the definition of the establishment, bases of classification, and forms.

In respect of 1977-78, the four metal products sub-divisions, namely, Basic metal products (sub-division 29), Fabricated metal products (sub-division 31), Transport equipment (sub-division 32), and Other machinery and equipment (sub-division 33), with 161,896 persons or 40.8 per cent of the total employment in manufacturing establishments in 1977-78, employed considerably more persons than any other part of manufacturing industry. Next in order of employment was Food, beverages, and tobacco (sub-division 21), with 58,234 or 14.7 per cent, followed by Clothing and footwear (sub-division 24), and Paper, paper products, printing, and publishing (sub-division 26) with 45,012 and 31,654, respectively, or 11.3 per cent and 8.0 per cent of the total.

VICTORIA—DEVELOPMENT OF MANUFACTURING ACTIVITY

Year	Manufacturing establishments	Employment (a)	Wages and salaries paid (b)	Value of—			
				Materials and fuel used	Value added	Output	Land, buildings, plant, and machinery
	number	number	\$m	\$m	\$m	\$m	\$m
1901	3,249	66,529	n.a.	n.a.	n.a.	n.a.	25
1911	5,126	111,948	18	51	32	84	28
1920-21	6,532	140,743	43	135	77	212	71
1932-33	8,612	144,428	42	122	82	204	136
1946-47	10,949	265,757	156	368	263	631	244
1953-54	15,533	331,277	472	1,154	817	1,971	679
1960-61	17,173	388,050	776	1,914	1,418	3,332	1,642
1965-66	17,980	439,149	1,077	2,597	2,028	4,625	2,386
1967-68	18,030	449,945	1,244	2,957	2,395	5,351	2,685
1968-69	(c) 11,563	431,651	1,342	(d) 3,861	2,542	(e) 6,336	(f) 278
1969-70	(c) 11,393	445,663	1,497	(d) 4,307	2,799	(e) 6,998	(f) 300
1971-72	(c) 11,408	450,026	1,800	(d) 4,812	3,328	(e) 8,055	(f) 374
1972-73	(c) 11,735	455,029	2,045	(d) 5,392	3,738	(e) 9,078	(f) 438
1973-74	(c) 12,070	469,838	2,524	(d) 6,486	4,546	(e) 10,669	(f) 418
1974-75	{ (g) (c) 8,924	432,851	2,961	(d) 7,024	5,131	(e) 11,730	(f) 455
	{ (h) (c) 2,834	5,727	17	(d) 53	48	(e) 100	(f) 2
1975-76	(g) (c) r8,873	r417,107	3,287	(d) 7,564	5,765	(e) r13,220	(f) 462
1976-77	(g) (c) 8,735	409,196	3,650	(d) 8,696	6,629	(e) 15,040	(f) 495
1977-78	(g) (c) 8,571	396,722	3,831	(d) 9,472	6,905	(e) 16,175	(f) 653

(a) Average over whole year, including working proprietors.

(b) Excludes drawings of working proprietors.

(c) Number of establishments operating at 30 June.

(d) Purchases, transfers in, and selected expenses.

(e) Turnover.

(f) Fixed capital expenditure.

(g) All manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed.

(h) Single establishment manufacturing enterprises with less than four persons employed.

NOTE. A line drawn across a column between the figures indicates a break in continuity in the series. No census of manufacturing establishments was conducted for the year ending 30 June 1971.

A comparison between manufacturing activity in Victoria and the other States is shown in the following table:

AUSTRALIA—MANUFACTURING ESTABLISHMENTS (g), 1977-78

State or Territory	Establishments (c)	Employment (a)	Wages and salaries paid (b)	Purchases, transfers in, and selected expenses	Value added	Turnover	Fixed capital expenditure
	number	number	\$m	\$m	\$m	\$m	\$m
New South Wales	9,696	428,994	4,321	10,322	7,751	17,906	610
Victoria	8,571	396,722	3,831	9,472	6,905	16,175	653
Queensland	2,838	111,711	1,035	3,505	2,090	5,525	216
South Australia	2,170	110,026	1,015	2,373	1,672	3,967	172
Western Australia	2,037	65,740	629	1,945	1,209	3,032	174
Tasmania	599	26,966	258	742	498	1,246	47
Northern Territory	64	1,498	18	91	56	145	4
Australian Capital Territory	90	2,892	30	47	54	101	3
Total	26,065	1,144,549	11,138	28,497	20,236	48,097	1,879

For footnotes see table above.

The total value added in 1977-78 was \$6,905m. Of this amount, the Metal products sub-divisions contributed \$2,715m which represented 39.3 per cent of the total. The Food sub-division followed with \$1,195m or 17.3 per cent, and the next in order were the Paper, paper products, printing, and publishing sub-division with \$576m, 8.3 per cent, and the Clothing and footwear sub-division with \$540m, 7.8 per cent.

The following table contains a summary of manufacturing establishments by sub-division of industry in Victoria during the year 1977-78:

VICTORIA—MANUFACTURING ESTABLISHMENTS (*g*) BY SUB-DIVISION OF INDUSTRY, 1977-78

ASIC code	Industry sub-division	Establishments (<i>c</i>)	Employment (<i>a</i>)	Wages and salaries paid (<i>b</i>)	Purchases, transfers in, and selected expenses	Value added	Turnover	Fixed capital expenditure
		number	number	\$m	\$m	\$m	\$m	\$m
21	Food, beverages, and tobacco	984	58,234	571	2,339	1,195	3,477	91
23	Textiles	301	19,460	176	420	293	710	12
24	Clothing and footwear	1,079	45,012	343	551	540	1,073	11
25	Wood, wood products, and furniture	1,078	19,089	157	335	285	618	9
26	Paper, paper products, printing, and publishing	848	31,654	336	604	576	1,165	60
27	Chemical, petroleum, and coal products	276	21,174	249	723	523	1,216	161
28	Non-metallic mineral products	380	12,950	145	299	305	586	27
29	Basic metal products	166	12,475	149	486	275	773	56
31	Fabricated metal products	1,097	35,267	333	640	568	1,196	28
32	Transport equipment	409	58,752	590	1,510	950	2,444	121
33	Other machinery and equipment	1,228	55,402	533	1,005	922	1,886	45
34	Miscellaneous manufacturing	725	27,253	249	561	474	1,032	32
	Total	8,571	396,722	3,831	9,473	6,905	16,175	653

For footnotes see page 392.

The next table summarises, by sub-division of industry, the percentage contribution of Victorian manufacturing establishments to the total Australian figures for the year 1977-78:

VICTORIA—MANUFACTURING ESTABLISHMENTS (*g*)
BY SUB-DIVISION OF INDUSTRY, 1977-78:
PERCENTAGE OF AUSTRALIAN TOTALS
(per cent)

ASIC code	Industry sub-division	Establishments (<i>c</i>)	Employment (<i>a</i>)	Wages and salaries paid (<i>b</i>)	Purchases, transfers in, and selected expenses	Value added	Turnover	Fixed capital expenditure
21	Food, beverages, and tobacco	29	30	30	33	32	32	22
23	Textiles	47	52	52	49	50	49	44
24	Clothing and footwear	51	55	56	53	56	54	55
25	Wood, wood products, and furniture	29	25	25	25	25	25	17
26	Paper, paper products, printing, and publishing	33	33	33	35	33	33	45
27	Chemical, petroleum, and coal products	32	34	35	28	31	29	46
28	Non-metallic mineral products	24	28	28	26	29	27	21
29	Basic metal products	33	14	14	13	14	14	21
31	Fabricated metal products	29	34	35	32	34	33	38
32	Transport equipment	33	44	44	53	47	50	64
33	Other machinery and equipment	35	35	35	36	36	36	33
34	Miscellaneous manufacturing	36	43	44	44	44	44	39
	Total	33	35	34	33	34	34	35

For footnotes see page 392.

The following table shows the number of manufacturing establishments operating in Victoria at 30 June 1974, 1975, 1976, 1977, and 1978, classified according to sub-division of industry:

**VICTORIA—NUMBER OF MANUFACTURING ESTABLISHMENTS BY
SUB-DIVISION OF INDUSTRY AT 30 JUNE**

ASIC code	Industry sub-division	1974	1975		1976 (g)	1977 (g)	1978 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	1,205	1,014	165	992	963	984
23	Textiles	420	322	58	332	319	301
24	Clothing and footwear	1,613	1,283	189	1,219	1,141	1,079
25	Wood, wood products, and furniture	1,569	1,044	516	1,083	1,088	1,078
26	Paper, paper products, printing and publishing	1,238	880	324	r874	866	848
27	Chemical, petroleum, and coal products	373	275	73	280	283	276
28	Non-metallic mineral products	472	353	100	367	373	380
29	Basic metal products	219	181	30	176	173	166
31	Fabricated metal products	1,553	1,124	420	1,087	1,118	1,097
32	Transport equipment	507	402	122	427	425	409
33	Other machinery and equipment	1,740	1,299	442	1,299	1,281	1,228
34	Miscellaneous manufacturing	1,161	747	395	737	705	725
Total		12,070	8,924	2,834	r8,873	8,735	8,571

For footnotes see page 392.

The size classification of manufacturing establishments is based on the number of persons employed at 30 June 1978 (including working proprietors). The following table shows the number of manufacturing establishments classified according to the number of persons employed:

**VICTORIA—MANUFACTURING
ESTABLISHMENTS (a) CLASSIFIED
ACCORDING TO NUMBER OF
PERSONS EMPLOYED (INCLUDING
WORKING PROPRIETORS)
AT 30 JUNE 1978**

Manufacturing establishments employing persons numbering	Number of establishments	Number of persons employed (b)
Less than 10	3,592	21,384
10 to 19	1,922	26,240
20 to 49	1,541	46,736
50 to 99	709	49,722
100 to 199	436	60,582
200 to 499	277	78,858
500 to 999	62	38,695
1,000 and over	32	56,948
Total	8,571	379,165

(a) All manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed. In addition, there were 3,205 single establishment enterprises employing 6,574 persons in the one to three persons employed group.

(b) Excludes persons employed in separately located administrative offices and ancillary units serving more than one establishment.

The relative importance of large and small manufacturing establishments is illustrated in the preceding table. At 30 June 1978, 3,592 establishments employing less than ten employees had a total employment of 21,384 persons. A total of 49.9 per cent of manufacturing establishments—those employing less than ten persons—employed 5.6 per cent of the persons engaged. The most numerous of the establishments with less than ten persons were printing, stationery, and bookbinding, furniture (excluding sheetmetal), joinery and wooden structural fittings, and industrial machinery and equipment not elsewhere classified.

A general indication of the geographical distribution of manufacturing establishments in Victoria at 30 June 1978 is shown in the following table where they are classified according to statistical divisions:

**VICTORIA—MANUFACTURING ESTABLISHMENTS (g)
IN STATISTICAL DIVISIONS, 1977-78**

Statistical division	Establishments (c)	Employment (a)	Wages and salaries paid (b)	Purchases, transfers in, and selected expenses	Value added	Turnover	Fixed capital expenditure
	number	number	\$m	\$m	\$m	\$m	\$m
Melbourne	6,953	329,696	3,204	7,607	5,735	13,202	520
Barwon	281	20,500	224	563	389	929	73
South Western	107	4,926	40	226	89	300	6
Central Highlands	200	8,410	72	149	127	272	6
Wimmera	70	1,318	10	20	16	35	1
Northern Mallee	85	1,217	9	28	22	46	3
Loddon-Campaspe	207	9,581	79	213	129	340	9
Goulburn	198	6,383	57	215	112	327	12
North Eastern	126	4,906	46	146	118	260	8
East Gippsland	103	2,274	18	67	40	106	2
Central Gippsland	182	6,015	58	195	104	292	12
East Central	59	1,496	13	44	23	66	2
Total	8,571	396,722	3,831	9,473	6,905	16,175	653

For footnotes see page 392.

Manufacturing establishments in the Melbourne Statistical Division constituted 81.1 per cent of the total number in Victoria at 30 June 1978, 83.1 per cent of the persons employed, and 83.1 per cent of the value added.

The number of manufacturing establishments and persons employed therein, classified according to statistical division, is shown in the tables on page 396.

It should be noted that Geelong is located in the Barwon Statistical Division, Bendigo, Castlemaine, and Maryborough in the Loddon-Campaspe Statistical Division, Ballarat in the Central Highlands Statistical Division, Warrnambool in the South Western Statistical Division, Shepparton in the Goulburn Statistical Division, Wangaratta in the North Eastern Statistical Division, and Morwell and Yallourn in the Central Gippsland Statistical Division.

Employment, wages, and salaries

Employment

From 1968-69, all persons employed in a manufacturing establishment and separately located administrative offices and ancillary units serving the establishment (including proprietors working in their own businesses) are included as persons employed. The grouping of occupations comprises (1) working proprietors; (2) administrative, office, sales, and distribution employees; and (3) production and all other employees.

The figures showing employment in manufacturing establishments represent either the average number of persons employed, including working proprietors, over a full year, or the number of persons employed at June each year.

**VICTORIA—PERSONS EMPLOYED IN MANUFACTURING
ESTABLISHMENTS, 1973-74 TO 1977-78**

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	63,668	60,848	362	59,172	58,380	58,234
23	Textiles	29,337	22,933	127	23,811	21,075	19,460
24	Clothing and footwear	60,096	49,195	403	49,441	46,822	45,012
25	Wood, wood products, and furniture	20,921	19,231	999	19,301	19,640	19,089
26	Paper, paper products, printing, and publishing	35,470	34,187	670	r32,503	32,656	31,654
27	Chemical, petroleum, and coal products	23,175	21,749	151	20,239	20,462	21,174
28	Non-metallic mineral products	15,659	14,027	202	13,524	13,580	12,950
29	Basic metal products	13,181	12,983	71	12,709	13,197	12,475
31	Fabricated metal products	39,061	37,796	860	35,989	35,830	35,267
32	Transport equipment	64,982	61,663	239	60,391	62,171	58,752
33	Other machinery and equipment	71,297	68,851	876	62,384	58,116	55,402
34	Miscellaneous manufacturing	32,991	29,388	767	27,643	27,267	27,253
Total		469,838	432,851	5,727	r417,107	409,196	396,722

For footnotes see page 392.

The dominance of the metal fabricating sub-divisions (29-33) (including transport equipment, machinery, and other equipment), Food, beverages, and tobacco sub-division (21), and Clothing and footwear sub-division (24) should be noted.

VICTORIA—NUMBER OF MANUFACTURING ESTABLISHMENTS (*g*) AND PERSONS EMPLOYED (*a*) IN EACH STATISTICAL DIVISION, CLASSIFIED ACCORDING TO STATISTICAL DIVISION AND INDUSTRY SUB-DIVISION, 1977-78

ASIC code	Industry sub-division	Statistical division												Total
		Mel-bourne	Barwon	South Western	Central Highlands	Wimmera	North-ern Mallee	Loddon-Campaspe	Goul-burn	North Eastern	East Gipps-land	Central Gipps-land	East Central	
NUMBER OF MANUFACTURING ESTABLISHMENTS (<i>g</i>)														
21	Food, beverages, and tobacco	547	42	34	34	27	42	57	64	43	20	56	18	984
23	Textiles	247	21	1	7	2	—	4	7	3	2	5	2	301
24	Clothing and footwear	994	13	6	11	1	—	18	14	4	1	14	3	1,079
25	Wood, wood products, and furniture	755	45	16	40	10	7	27	37	28	52	40	21	1,078
26	Paper, paper products, printing, and publishing	715	20	13	16	8	10	18	15	8	8	11	6	848
27	Chemical, petroleum, and coal products	256	10	2	2	—	—	2	1	1	—	2	—	276
28	Non-metallic mineral products	219	20	11	20	7	14	28	23	14	7	15	2	380
29	Basic metal products	139	12	1	6	—	—	3	2	1	—	1	1	166
31	Fabricated metal products	956	36	6	22	5	5	23	13	6	3	19	3	1,097
32	Transport equipment	345	14	5	16	—	2	11	6	2	3	5	—	409
33	Other machinery and equipment	1,093	36	9	20	7	5	14	11	15	5	10	3	1,228
34	Miscellaneous manufacturing	687	12	3	6	3	—	2	5	1	2	4	—	725
	Total	6,953	281	107	200	70	85	207	198	126	103	182	59	8,571
NUMBER OF PERSONS EMPLOYED (<i>a</i>)														
21	Food, beverages, and tobacco	40,415	1,789	2,586	1,265	523	739	2,519	3,914	1,669	687	1,516	612	58,234
23	Textiles	14,496	1,692	n.p.	429	n.p.	n.p.	652	357	n.p.	n.p.	n.p.	n.p.	19,460
24	Clothing and footwear	38,405	1,446	n.p.	658	n.p.	n.p.	1,521	426	n.p.	n.p.	n.p.	121	45,012
25	Wood, wood products, and furniture	13,589	668	372	728	126	81	400	607	671	1,078	542	227	19,089
26	Paper, paper products, printing, and publishing	27,836	401	184	460	n.p.	142	344	302	277	94	n.p.	164	31,654
27	Chemical, petroleum, and coal products	19,259	1,539	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	21,174
28	Non-metallic mineral products	10,032	1,228	43	543	64	93	286	222	156	n.p.	228	n.p.	12,950
29	Basic metal products	8,838	2,600	n.p.	731	n.p.	n.p.	121	n.p.	n.p.	n.p.	n.p.	n.p.	12,475
31	Fabricated metal products	31,782	854	37	709	27	n.p.	885	228	117	n.p.	390	n.p.	35,267
32	Transport equipment	50,003	5,586	50	1,805	n.p.	n.p.	1,004	74	11	n.p.	38	n.p.	58,752
33	Other machinery and equipment	48,668	2,468	221	931	168	110	1,622	182	399	101	514	18	55,402
34	Miscellaneous manufacturing	26,373	229	n.p.	n.p.	n.p.	n.p.	n.p.	58	n.p.	n.p.	69	n.p.	27,253
	Total	329,696	20,500	4,926	8,410	1,318	1,217	9,581	6,383	4,906	2,274	6,015	1,496	396,722

For footnotes see page 392.

In the following table the number of persons employed in manufacturing establishments in Victoria is classified according to the nature of their employment at the end of June 1974, 1975, 1976, 1977, and 1978:

VICTORIA—MANUFACTURING ESTABLISHMENTS:
TYPE OF EMPLOYMENT

At 30 June—	Working proprietors	Administrative, office, sales, and distribution employees	Production and all other employees	Total
1974	7,459	109,870	359,479	476,808
1975 { (g)	4,358	103,382	313,911	421,651
(h)	3,130	922	2,260	6,312
1976 (g)	4,287	102,632	311,731	418,650
1977 (g)	4,318	102,699	297,946	404,963
1978 (g)	4,007	99,170	288,021	391,198

For footnotes see page 392.

The following table shows the nature of employment in manufacturing establishments at 30 June 1978 classified according to industry sub-division:

VICTORIA—MANUFACTURING ESTABLISHMENTS (g) : TYPE OF
EMPLOYMENT BY INDUSTRY SUB-DIVISION AT 30 JUNE 1978

ASIC code	Industry sub-division	Working proprietors	Administrative, office, sales, and distribution employees	Production and all other employees	Total
21	Food, beverages, and tobacco	624	15,064	39,224	54,912
23	Textiles	65	3,774	15,467	19,306
24	Clothing and footwear	650	5,997	38,332	44,979
25	Wood, wood products, and furniture	762	3,461	14,708	18,931
26	Paper, paper products, printing, and publishing	345	9,647	21,805	31,797
27	Chemical, petroleum, and coal products	37	9,215	12,029	21,281
28	Non-metallic mineral products	145	3,045	9,557	12,747
29	Basic metal products	35	4,358	7,887	12,280
31	Fabricated metal products	507	8,781	25,653	34,941
32	Transport equipment	153	14,093	44,302	58,548
33	Other machinery and equipment	404	15,411	38,803	54,618
34	Miscellaneous manufacturing	280	6,324	20,254	26,858
	Total	4,007	99,170	288,021	391,198

For footnotes see page 392.

Although "production and all other employees" constitute 73.6 per cent of the total number employed in manufacturing establishments, the percentage varies from 85.2 per cent in sub-division 24 to 56.5 per cent in sub-division 27. Sub-division 27 also has the highest percentage of "administrative, office, sales, and distribution employees", 43.3 per cent, compared with the Victorian average of 25.4 per cent.

Where small establishments predominate there is usually a higher proportion of working proprietors than on the average and a smaller than average managerial and clerical staff. This is particularly evident in sub-division 25 where working proprietors comprise 4.0 per cent of the total number employed.

The numbers of males and females employed in manufacturing establishments, and the proportions of the average male and female population working in these establishments in 1977-78 and earlier years are shown in the following table:

**VICTORIA—MANUFACTURING ESTABLISHMENTS:
EMPLOYMENT (a) OF MALES AND FEMALES, 1901 TO 1977-1978**

Year	Males		Females		Total	
	Number	Average per 10,000 of male population	Number	Average per 10,000 of female population	Number	Average per 10,000 of total population
1901	47,059	778	19,470	325	66,529	553
1911	73,573	1,118	38,375	579	111,948	847
1920-21	96,379	1,283	44,364	574	140,743	923
1932-33	91,899	1,020	52,529	575	144,428	796
1946-47	188,758	1,876	76,999	745	265,757	1,303
1953-54	240,698	1,979	90,579	751	331,277	1,367
1960-61	280,207	1,925	107,843	750	388,050	1,341
1965-66	310,303	1,937	128,846	809	439,149	1,375
1967-68	316,108	1,912	133,837	812	449,945	1,362
1968-69	297,411	1,771	134,240	800	431,651	1,286
1969-70	306,917	1,794	138,746	812	445,663	1,303
1971-72	310,750	1,751	139,276	785	450,026	1,268
1972-73	314,259	1,744	140,770	782	455,029	1,263
1973-74	320,921	1,758	148,917	816	469,838	1,287
1974-75 { (g)	302,234	1,634	130,617	706	432,851	1,170
(h)	4,275	23	1,452	8	5,727	15
1975-76 (g)	r291,736	1,565	r125,374	671	r417,107	1,118
1976-77 (g)	288,743	1,537	120,453	639	409,196	1,087
1977-78 (g)	280,708	1,461	116,014	601	396,722	1,030

For footnotes see page 392.

Female workers in manufacturing establishments at 30 June 1978 were 29.2 per cent of the total number employed. Females exceeded males in the Clothing and footwear sub-division (24) where they accounted for 75.1 per cent of the sub-division total.

In sub-division 29, Basic metal products, the proportion of females to total persons employed is at its lowest, 10.2 per cent.

**VICTORIA—MANUFACTURING ESTABLISHMENTS:
EMPLOYMENT AT 30 JUNE**

ASIC code	Industry sub-division	Number at 30 June—					
		1974	1975		1976 (g)	1977 (g)	1978 (g)
			(g)	(h)			
MALES							
21	Food, beverages, and tobacco	43,383	41,834	280	42,256	42,149	39,929
23	Textiles	15,874	13,625	82	13,337	11,625	11,083
24	Clothing and footwear	14,437	12,194	204	11,800	11,389	11,221
25	Wood, wood products, and furniture	18,159	16,460	884	16,503	16,645	16,023
26	Paper, paper products, printing, and publishing	26,480	24,543	517	24,119	24,172	23,418
27	Chemical, petroleum, and coal products	17,273	15,599	114	15,160	15,487	15,959
28	Non-metallic mineral products	13,881	11,969	188	12,059	11,854	10,959
29	Basic metal products	12,372	11,166	58	11,616	11,774	11,027
31	Fabricated metal products	31,741	29,250	777	28,853	28,509	27,981
32	Transport equipment	55,405	50,711	224	51,915	50,728	49,565
33	Other machinery and equipment	53,986	49,642	756	46,442	43,571	41,103
34	Miscellaneous manufacturing	22,041	18,969	599	19,067	18,595	18,544
Total		325,032	295,962	4,683	293,127	286,498	276,812
FEMALES							
21	Food, beverages, and tobacco	18,697	16,520	125	15,826	15,451	14,983
23	Textiles	11,970	9,769	54	9,933	8,425	8,223
24	Clothing and footwear	44,712	36,348	231	37,156	34,522	33,758
25	Wood, wood products, and furniture	3,337	3,015	216	3,049	3,213	2,908
26	Paper, paper products, printing, and publishing	10,004	8,899	254	8,714	8,781	8,379
27	Chemical, petroleum, and coal products	6,256	5,617	49	5,188	5,151	5,322
28	Non-metallic mineral products	2,273	1,812	43	1,800	1,760	1,788
29	Basic metal products	1,585	1,400	16	1,417	1,363	1,253
31	Fabricated metal products	8,812	7,353	149	7,639	7,316	6,960
32	Transport equipment	11,788	8,852	45	10,124	9,344	8,983
33	Other machinery and equipment	20,203	16,619	197	15,574	14,540	13,515
34	Miscellaneous manufacturing	12,139	9,485	250	9,103	8,599	8,314
Total		151,776	125,689	1,629	125,523	118,465	114,386

For footnotes see page 392.

Wages and salaries

The next table gives details of wages paid in the various classes of industry in Victoria in 1977-78. Amounts paid to "administrative, office, sales, and distribution employees" are shown separately from those paid to "production and all other workers". It should be noted that in all tables of salaries and wages paid the amounts drawn by working proprietors are excluded.

VICTORIA—MANUFACTURING ESTABLISHMENTS (g):
WAGES AND SALARIES PAID, 1977-78
(\$m)

ASIC code	Industry sub-division	Paid to—		
		Administrative, office, sales, and distribution employees	Production and all other workers	All employees
21	Food, beverages, and tobacco	170	401	571
23	Textiles	44	133	176
24	Clothing and footwear	62	281	343
25	Wood, wood products, and furniture	36	121	157
26	Paper, paper products, printing, and publishing	107	229	336
27	Chemical, petroleum, and coal products	120	129	249
28	Non-metallic mineral products	42	104	145
29	Basic metal products	64	85	149
31	Fabricated metal products	98	235	333
32	Transport equipment	181	409	590
33	Other machinery and equipment	173	360	533
34	Miscellaneous manufacturing	71	178	249
	Total	1,167	2,664	3,831

For footnotes see page 392.

Of the total amount of wages and salaries paid in Victoria in 1977-78—\$3,831m—the metal fabricating sub-divisions (29-33) (including transport equipment, machinery, and other equipment), were responsible for \$1,605m or 41.9 per cent; Food, beverages, and tobacco, \$571m or 14.9 per cent; Clothing and footwear, \$343m or 9.0 per cent; and Paper, paper products, printing, and publishing, \$336m or 8.8 per cent.

Turnover

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

VICTORIA—MANUFACTURING ESTABLISHMENTS:
TURNOVER BY INDUSTRY SUB-DIVISION
(\$m)

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	2,391	2,548	8	2,767	3,104	3,477
23	Textiles	621	534	2	674	699	710
24	Clothing and footwear	800	799	7	942	1,002	1,073
25	Wood, wood products, and furniture	393	438	14	521	606	618
26	Paper, paper products, printing, and publishing	725	833	11	939	1,047	1,165
27	Chemical, petroleum, and coal products	751	803	3	904	1,076	1,216
28	Non-metallic mineral products	369	403	6	487	579	586
29	Basic metal products	467	548	2	577	744	773
31	Fabricated metal products	758	845	15	959	1,104	1,196
32	Transport equipment	1,387	1,648	5	1,909	2,311	2,444
33	Other machinery and equipment	1,315	1,566	16	1,696	1,811	1,886
34	Miscellaneous manufacturing	693	766	12	845	957	1,032
	Total	10,669	11,730	100	13,220	15,040	16,175

For footnotes see page 392.

Purchases, transfers in, and selected items of expense

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

**VICTORIA—MANUFACTURING ESTABLISHMENTS: PURCHASES,
TRANSFERS IN, AND SELECTED ITEMS OF EXPENSE
BY INDUSTRY SUB-DIVISION
(\$m)**

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	1,695	1,763	5	1,808	1,998	2,339
23	Textiles	402	300	1	391	407	420
24	Clothing and footwear	451	405	3	495	512	551
25	Wood, wood products, and furniture	221	238	7	286	330	335
26	Paper, paper products, printing, and publishing	371	438	5	467	535	604
27	Chemical, petroleum, and coal products	422	486	2	514	670	723
28	Non-metallic mineral products	188	197	3	239	285	299
29	Basic metal products	332	389	1	378	499	486
31	Fabricated metal products	423	448	7	497	576	640
32	Transport equipment	848	1,038	2	1,093	1,355	1,510
33	Other machinery and equipment	737	891	8	938	1,001	1,005
34	Miscellaneous manufacturing	395	430	7	460	528	561
	Total	6,486	7,024	53	7,564	8,696	9,473

For footnotes see page 392.

Stocks

The figures in the following tables include all stocks of materials, fuels, etc., finished goods and work-in-progress whether located at the establishment or elsewhere. It should be noted that due to reporting differences on individual returns and variations in the number of establishments from year to year, the closing stocks in one year may differ from the opening stocks in the following year.

**VICTORIA—MANUFACTURING ESTABLISHMENTS:
STOCKS BY INDUSTRY SUB-DIVISION
(\$m)**

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
OPENING							
21	Food, beverages, and tobacco	266	295	1	382	383	407
23	Textiles	105	149	—	126	140	141
24	Clothing and footwear	113	144	1	130	159	169
25	Wood, wood products, and furniture	41	54	1	64	73	82
26	Paper, paper products, printing, and publishing	81	104	1	138	133	145
27	Chemical, petroleum, and coal products	119	131	—	189	175	202
28	Non-metallic mineral products	35	41	—	52	57	73
29	Basic metal products	64	79	—	105	131	152
31	Fabricated metal products	118	149	1	180	194	215
32	Transport equipment	220	282	—	379	382	462
33	Other machinery and equipment	295	370	1	475	473	473
34	Miscellaneous manufacturing	95	121	1	144	151	176
	Total	1,553	1,919	7	2,364	2,451	2,696
CLOSING							
21	Food, beverages, and tobacco	296	376	—	396	409	464
23	Textiles	149	124	—	139	143	144
24	Clothing and footwear	141	129	1	154	167	187
25	Wood, wood products, and furniture	55	62	1	72	83	85
26	Paper, paper products, printing, and publishing	100	138	1	134	152	160
27	Chemical, petroleum, and coal products	135	181	—	176	200	232
28	Non-metallic mineral products	44	52	—	57	75	91
29	Basic metal products	81	104	—	130	161	139
31	Fabricated metal products	148	173	1	197	213	226

VICTORIA—MANUFACTURING ESTABLISHMENTS:
STOCKS BY INDUSTRY SUB-DIVISION—*continued*
(\$m)

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
32	Transport equipment	277	380	—	377	471	478
33	Other machinery and equipment	368	475	1	491	504	515
34	Miscellaneous manufacturing	122	150	1	149	168	178
Total		1,915	2,344	6	2,473	2,746	2,899

For footnotes see page 392.

Value added

Statistics on value added in the following table have been calculated by adding to turnover the increase (or deducting the decrease) in value of stocks and deducting the value of purchases and selected items of expense:

VICTORIA—MANUFACTURING ESTABLISHMENTS:
VALUE ADDED BY INDUSTRY SUB-DIVISION
(\$m)

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	727	866	3	973	1,132	1,195
23	Textiles	263	209	1	296	295	293
24	Clothing and footwear	377	379	3	471	498	540
25	Wood, wood products, and furniture	186	208	7	244	285	285
26	Paper, paper products, printing, and publishing	372	428	6	468	530	576
27	Chemical, petroleum, and coal products	345	368	1	377	432	523
28	Non-metallic mineral products	189	216	2	254	312	305
29	Basic metal products	155	183	1	225	276	275
31	Fabricated metal products	361	421	8	479	547	567
32	Transport equipment	596	709	2	814	1,044	950
33	Other machinery and equipment	651	780	8	775	841	922
34	Miscellaneous manufacturing	325	365	6	390	445	474
Total		4,546	5,131	48	5,765	6,637	6,905

For footnotes see page 392.

Relation of costs to turnover

Certain costs of production, the value of turnover, movement in stocks, and the balance available for profit, interest, rent, taxation, depreciation, etc., in each sub-division of manufacturing industry during 1977-78 are given in the following tables:

VICTORIA—MANUFACTURING ESTABLISHMENTS (g):
COSTS AND TURNOVER, 1977-78
(\$m)

ASIC code	Industry sub-division	Cost of—			Balance between turnover, stocks, and costs (a)	Turnover
		Purchases and selected items of expense	Wages and salaries	Movement in stocks		
21	Food, beverages, and tobacco	2,339	571	+ 57	624	3,477
23	Textiles	420	176	+ 3	117	710
24	Clothing and footwear	551	343	+ 18	197	1,073
25	Wood, wood products, and furniture	335	157	+ 3	129	618
26	Paper, paper products, printing, and publishing	604	336	+ 15	240	1,165
27	Chemical, petroleum, and coal products	723	249	+ 30	274	1,216
28	Non-metallic mineral products	299	145	+ 18	160	586
29	Basic metal products	486	149	- 13	125	773
31	Fabricated metal products	640	333	+ 11	234	1,196
32	Transport equipment	1,510	590	+ 16	360	2,444
33	Other machinery and equipment	1,005	533	+ 42	390	1,886
34	Miscellaneous manufacturing	561	249	+ 2	224	1,032
Total		9,473	3,831	+ 203	3,074	16,175

(a) Balance available to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit.

For footnotes see page 392.

**VICTORIA—MANUFACTURING ESTABLISHMENTS (g) : PERCENTAGE OF
SPECIFIED COSTS TO TURNOVER, 1977-78
(per cent)**

ASIC code	Industry sub-division	Cost of—		Movement in stocks	Balance between turnover, stocks, and costs (a)	Turnover
		Purchases and selected items of expense	Wages and salaries			
21	Food, beverages, and tobacco	67.3	16.4	+1.6	17.9	100.0
23	Textiles	59.2	24.8	+0.4	16.5	100.0
24	Clothing and footwear	51.4	32.0	+1.7	18.4	100.0
25	Wood, wood products, and furniture	54.2	25.4	+0.5	20.9	100.0
26	Paper, paper products, printing, and publishing	51.8	28.8	+1.3	20.6	100.0
27	Chemical, petroleum, and coal products	59.5	20.5	+2.5	22.5	100.0
28	Non-metallic mineral products	51.0	24.7	+3.1	27.3	100.0
29	Basic metal products	62.9	19.3	-1.7	16.2	100.0
31	Fabricated metal products	53.5	27.8	+0.9	19.6	100.0
32	Transport equipment	61.8	24.1	+0.7	14.7	100.0
33	Other machinery and equipment	53.3	28.3	+2.2	20.7	100.0
34	Miscellaneous manufacturing	54.4	24.1	+0.2	21.7	100.0
	Total	58.6	23.7	+1.3	19.0	100.0

(a) Balance available to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit.

For footnotes see page 392.

There are considerable variations in the proportions which purchases and selected items of expenditure, and wages and salaries, bear to the turnover in the different sub-divisions. These are, of course, due to the difference in the treatment required to convert materials to their final form. Thus in sub-division 24 the sum paid in wages represents 32.0 per cent and the purchases and selected items of expense 51.4 per cent of the values of the finished articles, while in sub-division 21 the expenditure on wages amounts to 16.4 per cent and that on purchases, etc., to 67.3 per cent of the value of turnover.

In the following table specified costs of production, the value of turnover of manufacturing establishments, and the balance available for profit and miscellaneous expenses are compared for each of the years 1973-74 to 1977-78.

**VICTORIA—MANUFACTURING ESTABLISHMENTS: SPECIFIED COSTS OF
PRODUCTION, ETC., AND TURNOVER
(\$m)**

Year	Cost of—		Movement in stocks	Balance between turnover, stocks, and costs (a)	Turnover	
	Purchases and selected items of expense	Wages and salaries				
1973-74	6,486	2,524	+362	2,021	10,669	
1974-75	{ (g) (h)	7,024	2,961	+425	2,170	11,730
		53	17	30	100	
1975-76	(g)	7,564	3,287	+108	2,476	13,220
1976-77	(g)	8,696	3,656	+293	2,981	15,040
1977-78	(g)	9,473	3,831	+203	3,074	16,175

(a) Balance available to provide for all other costs, such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit.

For footnotes see page 392.

In the following table the components of cost are converted to their respective percentages of the value of turnover:

VICTORIA—MANUFACTURING ESTABLISHMENTS: PERCENTAGE OF SPECIFIED COSTS OF PRODUCTION, ETC., TO TURNOVER
(per cent)

Year	Cost of—		Movement in stocks	Balance between turnover, stocks, and costs (a)	Turnover
	Purchases and selected items of expense	Wages and salaries			
1973-74	60.8	23.7	+ 3.4	18.9	100.0
1974-75 { (g)	60.0	25.2	+ 3.7	18.5	100.0
{ (h)	53.0	17.0	—	30.0	100.0
1975-76 (g)	57.2	24.7	+ 0.8	18.7	100.0
1976-77 (g)	57.8	24.3	+ 1.9	19.8	100.0
1977-78 (g)	58.6	23.7	+ 1.3	19.0	100.0

(a) Balance available to provide for all other costs, such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit.

For footnotes see page 392.

Fixed capital expenditure and rent and leasing

Fixed capital expenditure is the outlay on new and second-hand fixed tangible assets less disposals. Rent and leasing expense is the amount paid for renting and leasing of premises, vehicles, and equipment.

VICTORIA—MANUFACTURING ESTABLISHMENTS (g) : FIXED CAPITAL EXPENDITURE AND RENT AND LEASING EXPENSES, 1977-78
(\$'000)

ASIC code	Industry sub-division	Fixed capital expenditure			Rent and leasing expenses
		Land, buildings, and other structures	Vehicles, plant, machinery, and equipment	Total	
21	Food, beverages, and tobacco	15,355	76,098	91,453	28,178
23	Textiles	1,099	10,477	11,576	8,059
24	Clothing and footwear	1,975	9,173	11,148	14,004
25	Wood, wood products, and furniture	-19	9,189	9,169	11,893
26	Paper, paper products, printing, and publishing	12,656	47,451	60,106	13,278
27	Chemical, petroleum, and coal products	34,457	126,807	161,264	8,111
28	Non-metallic mineral products	1,781	24,944	26,724	3,793
29	Basic metal products	4,935	51,035	55,970	5,021
31	Fabricated metal products	5,587	22,099	27,685	17,721
32	Transport equipment	21,277	99,412	120,689	14,511
33	Other machinery and equipment	6,571	38,913	45,484	24,997
34	Miscellaneous manufacturing	4,152	27,823	31,974	15,462
Total		109,825	543,418	653,243	165,028

For footnotes see page 392.

VICTORIA—MANUFACTURING ESTABLISHMENTS:
FIXED CAPITAL EXPENDITURE
(\$'000)

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	76,211	70,690	165	50,694	63,982	91,453
23	Textiles	29,981	19,088	19	14,522	14,674	11,576
24	Clothing and footwear	11,333	7,727	121	8,152	7,154	11,148
25	Wood, wood products, and furniture	15,431	11,860	313	16,072	21,656	9,169
26	Paper, paper products, printing, and publishing	33,284	49,453	243	37,093	57,021	60,106
27	Chemical, petroleum, and coal products	32,606	34,598	20	61,343	57,444	161,264
28	Non-metallic mineral products	42,488	30,030	56	42,350	18,370	26,724
29	Basic metal products	21,442	27,750	21	59,370	72,762	55,970

VICTORIA—MANUFACTURING ESTABLISHMENTS:
FIXED CAPITAL EXPENDITURE—*continued*
(\$'000)

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
31	Fabricated metal products	20,642	36,387	267	31,782	33,277	27,685
32	Transport equipment	61,758	91,590	89	61,902	77,323	120,689
33	Other machinery and equipment	42,900	45,456	321	45,102	36,414	45,484
34	Miscellaneous manufacturing	30,024	30,163	474	33,765	35,050	31,974
	Total	418,099	454,794	2,108	462,149	495,127	653,243

For footnotes see page 392.

Electricity and fuels used

VICTORIA—MANUFACTURING ESTABLISHMENTS: VALUE OF
ELECTRICITY AND FUELS USED BY INDUSTRY SUB-DIVISION
(\$'000)

ASIC code	Industry sub-division	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
21	Food, beverages, and tobacco	24,517	30,930	180	35,682	38,219	44,530
23	Textiles	8,544	8,740	32	10,226	10,930	11,521
24	Clothing and footwear	4,593	4,857	66	5,595	5,530	5,925
25	Wood, wood products, and furniture	3,508	3,868	120	4,618	5,600	6,318
26	Paper, paper products, printing, and publishing	11,827	13,237	104	14,393	13,191	13,754
27	Chemical, petroleum, and coal products	14,863	18,908	30	21,049	25,740	29,822
28	Non-metallic mineral products	15,117	17,066	74	18,232	21,524	23,555
29	Basic metal products	15,715	19,207	28	21,385	24,028	25,816
31	Fabricated metal products	7,842	9,328	200	10,220	11,673	12,667
32	Transport equipment	11,915	14,685	46	14,223	17,342	18,258
33	Other machinery and equipment	10,662	12,698	143	13,509	13,763	15,196
34	Miscellaneous manufacturing	9,584	10,978	132	12,260	13,606	14,594
	Total	138,686	164,502	1,154	181,393	201,146	221,955

For footnotes see page 392.

VICTORIA—MANUFACTURING ESTABLISHMENTS:
VALUE OF ELECTRICITY AND FUELS USED
(\$'000)

Commodity	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
		(g)	(h)			
Electricity	85,853	97,819	931	107,344	117,847	131,909
Coal and coke—						
Black coal	67	27	—	53	65	31
Brown coal	1,610	1,314	—	1,568	1,468	1,382
Brown coal briquettes	3,289	3,522	10	3,626	4,111	3,931
Coke (including coke breeze)	2,685	2,908	9	2,573	3,346	3,137
Petroleum fuels (non-gaseous)—						
Light oils, etc.	2,518	3,031	74	3,391	4,590	5,921
Industrial diesel fuel	3,204	4,280	22	4,835	6,141	6,486
Furnace oil and other fuel oil	18,175	23,948	29	23,759	19,688	17,169
Reticulated gas	15,841	20,791	40	25,431	35,669	42,240
Other fuels	5,444	6,862	38	8,811	8,220	9,748
Total	138,686	164,502	1,154	181,393	201,146	221,955

For footnotes see page 392.

**VICTORIA—MANUFACTURING ESTABLISHMENTS:
QUANTITIES OF FUELS USED**

Fuel	Unit	1973-74	1974-75		1975-76 (g)	1976-77 (g)	1977-78 (g)
			(g)	(h)			
Coal and coke—							
Black coal	tonne	4,068	1,462	8	1,700	1,470	693
Brown coal	"	576,498	427,889	19	386,547	331,417	310,475
Brown coal briquettes	"	410,401	403,979	673	345,222	337,738	279,249
Coke (including coke breeze)	"	59,158	54,161	225	38,376	39,719	35,264
Petroleum fuels (non-gaseous)—							
Light oils, etc.	'000 litres	43,639	32,276	683	29,652	35,103	40,902
Industrial diesel fuel	tonne	94,363	78,557	398	63,760	74,009	71,795
Furnace oil and other fuel oil	"	746,136	573,960	577	442,938	310,055	232,865

For footnotes see page 392.

Some selected factory products of Victoria and Australia

Annual quantity and value

The following table shows quantities of some selected articles manufactured in Victoria, and corresponding figures for Australia during 1977-78 and 1978-79. Owing to the limited number of producers, it is not permissible under statute to publish particulars regarding some articles of manufacture which would otherwise appear.

From February 1976, production statistics have no longer been collected from single establishment manufacturing enterprises employing less than four persons or from establishments predominantly engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing activity. However, except for a few commodities, the effect of this modification on production levels and movements is marginal.

VICTORIA AND AUSTRALIA—SELECTED ARTICLES MANUFACTURED (a)

Commodity code no.	Article	Unit	Victoria		Australia	
			1977-78	1978-79	1977-78	1978-79
027.02-29, 72-77, 023.17	Meat—canned (excluding baby food)	'000 tonnes	28	26	49	45
051.61			Ice cream	mill litres	77	83
051.72-73	Milk—powdered: full cream	'000 tonnes	66	65	78	77
052.20, 24	Butter	"	90	81	112	105
053.45	Cheese	"	64	81	116	142
062.01, 32	Flour, plain-wheaten (including sharps)	"	241	240	1,080	1,070
063.11, 21, 31	Malt	"	217	224	439	476
064.21	Biscuits	"	50	49	122	125
074.61, 65	Natural fruit juices	mill litres	44	40	140	135
076.08, 15, 22	Canned or bottled apricots, peaches and pears	'000 tonnes	72	105	107	133
076.60	Jam, etc.	"	22	25	28	31
094.02-47	Vegetables canned or bottled (including pickled)	"	32	34	127	143
104.06-18	Confectionery—	"	22	25	54	53
104.21-29	Chocolate or containing chocolate					
123.18	Other	"	27	27	58	55
123.18	Sauce—tomato	mill litres	16	18	22	23
159.01	Canned cat and dog food	'000 tonnes	138	164	162	190
171.03, 04, 07, 08	Aerated and carbonated waters, canned or bottled (b)	mill litres	222	259	991	976
242.07-11	Wool-scoured or carbonised	'000 tonnes	25	30	72	80
261.41	Briquettes—brown coal	"	1,064	1,131	1,064	1,131
372.22-50	Cloth piece goods woven—woollen or predominantly woollen	'000 sq m	2,781	3,177	6,733	7,992
372.52-66, 374.51-57	Blankets, bed (c)	'000	1,027	796	1,449	1,164
403.02, 18, 20, 52-96, 404.01-98			Plastics and synthetic resins	'000 tonnes	324	425
472.01, 03	Bricks—clay	mill	451	410	1,908	1,936
472.12, 475.30	Tiles, roofing	"	56	53	205	201
475.90	Ready mixed concrete	'000 cub m	2,868	2,829	10,456	10,838
503.13-32	Electric motors	'000	783	950	2,804	3,190

VICTORIA AND AUSTRALIA—SELECTED ARTICLES MANUFACTURED (a)—continued

Commodity code no.	Article	Unit	Victoria		Australia	
			1977-78	1978-79	1977-78	1978-79
Finished motor vehicles (d)—						
581.02-08, 10-16	Cars and station wagons	'000	191	215	315	375
773.02-35	Shirts (men's and boys')	'000 doz	1,268	1,349	2,710	2,707
775.01-19	Stockings—women's (e)	'000 doz pairs	3,881	4,860	5,299	6,023
775.51-82, 91-98, 776.01-42	Socks and stockings—men's, children's, and infants'	"	2,604	2,766	2,976	3,087
Footwear—boots, shoes, and sandals (f)—						
793.05, 08, 21, 22, 31, 32, 41, 46, 51, 65, 66	Men's and youths'	'000 pairs	6,369	6,870	10,132	10,873
793.06, 09; 24, 33, 34, 42, 47, 52, 68	Women's and maids'	'000 pairs	8,914	9,728	12,013	12,691
793.04, 07, 10, 25, 35, 43, 48, 53, 69	Children's (including infants')	"	4,477	5,190	5,783	6,338

(a) By all manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed.

(b) Includes bulk aerated and carbonated waters.

(c) Double, three-quarter, single cot, bassinet, pram, etc.; wool mixture, and other fibre. From 1 July 1975, includes tufted blankets.

(d) Excludes vehicles finished by specialist body building works outside the motor vehicle manufacturers' organisation.

(e) Includes panty hose.

(f) Excluding wholly of rubber.

Monthly production statistics

The Australian Bureau of Statistics collects monthly production returns and makes available printed tables of Australian production statistics within a few weeks of the month to which they relate. A list of the subjects included in these production bulletins is given in the following table:

AUSTRALIA—PRODUCTION BULLETINS

No.	Subject	No.	Subject
1	Electricity, Gas, and Electrical Appliances (8357.0)	5	Building Materials and Fittings (8361.0)
2	Clothing and Footwear (8358.0)	6	Chemicals and By-Products (8362.0)
3	Food, Drink, and Tobacco (8359.0)	7	Motor Vehicles, Parts, and Accessories (8363.0)
4	Textiles, Bedding, and Floor Coverings (8360.0)	8	Miscellaneous Products (8364.0)

A preliminary production bulletin showing Australian totals for selected major production indicators is also published. In addition, statistical publications for the meat and dairying industries and mineral and mineral products are issued each month. Selected Victorian production figures are published in the *Monthly Summary of Statistics, Victoria* (1303.2).

MANUFACTURING INDUSTRY IN THE GEELONG AREA

Introduction

The manufacturing sector plays an important role in the economy of Geelong and its surrounding region. Geelong is a major centre for the vehicle industry, the basic metal industry (including aluminium), the textile and clothing industry, and the cement industry. There is also a major oil refinery close to the city.

General background

The Geelong area was first settled by Europeans in 1836. In its early years, the settlement at Geelong sought to rival Melbourne as a port and commercial centre. It

eventually fell behind as Melbourne became the seat of government, and the gold rush, port problems, and the development of the railway system influenced the pattern of early economic development in Victoria.

During the nineteenth century, Geelong developed primarily as a regional centre for the Western District. The major initial industrial development was as a centre for the woollen industry, both as a market and as a textile manufacturing centre. Late in the century, ventures such as a cement works, paper mill, boot factory, salt works, meat preserving works, and a butter and cheese factory were established.

Since 1901, largely because of substantial and often quite rapid development in the manufacturing sector, Geelong has grown to become Victoria's second city and the tenth largest city in Australia. At the Census of 1976, the population of the Geelong Statistical District was 135,560 persons. The population of the nine local government areas (LGA's) which make up the Geelong region was 161,090 persons and that of the fourteen LGA's around Geelong which make up the Barwon Statistical Division (including the area around the town of Colac) was 186,410 persons. This was about 5 per cent of Victoria's population.

A characteristic of manufacturing growth in the region since 1920 has been the regular establishment of manufacturing plants by major international companies, and a subsequent expansion of their local operation to serve the Australian market. These have included Ford (1925), International Harvester (1940), Shell (1951), and Alcoa (1963). I.C.I. is planning to commence operations in the early 1980s.

Major features of the manufacturing sector

At the time of the 1976 Census, 34.3 per cent of employed residents in the Geelong Statistical District and 29 per cent in the Barwon Statistical Division were employed in the manufacturing sector. The percentage for Geelong Statistical District showed a decline from 37.9 per cent at the 1971 Census. Despite this the actual number of persons employed in the manufacturing sector increased during the period.

The following table contains a summary of the operations of manufacturing establishments in the Barwon Statistical Division for 1976-77:

VICTORIA—BARWON STATISTICAL DIVISION:
MANUFACTURING ESTABLISHMENTS (*g*)
BY SUB-DIVISION OF INDUSTRY, 1976-77

ASIC code	Industry sub-division	Establishments operating at 30 June	Employment	Wages and salaries	Value added	Fixed capital expenditure
		number	number	(\$'000)	(\$'000)	(\$'000)
21	Food, beverages, and tobacco	39	2,174	17,835	44,349	2,405
23	Textiles	20	1,668	13,477	26,001	618
24	Clothing and footwear	13	1,754	10,857	16,848	134
25	Wood, wood products, and furniture	45	687	4,841	9,538	800
26	Paper, paper products, printing, and publishing	24	385	3,450	5,879	216
27	Chemical, petroleum, and coal products	10	1,286	14,986	40,793	8,048
28	Non-metallic mineral products	23	1,230	14,703	37,219	2,095
29	Basic metal products	9	2,665	33,520	97,507	5,209
31	Fabricated metal products	32	801	6,413	12,393	314
32	Transport equipment	14	n.p.	n.p.	n.p.	n.p.
33	Other machinery and equipment	35	2,893	30,802	46,874	37
34	Miscellaneous manufacturing	10	n.p.	n.p.	n.p.	n.p.
	Total	274	21,439	208,766	387,173	30,606

For footnotes see page 392.

Although details of the transport equipment industry are not published, it is the major employer in the region, providing more than one-quarter of manufacturing jobs and 10 per cent of all regional employment.

As well as having a relatively larger manufacturing sector, average employment per establishment in the Geelong area is significantly higher than corresponding data for the

Melbourne Statistical Division and Victoria. At the 1976 Census, while manufacturing accounted for 33.9 per cent of employment in the Geelong region, it contributed only 29.3 per cent for Melbourne and 26.0 per cent for Victoria as a whole. As can be seen from the following table, average employment per establishment for the Barwon Statistical Division exceeded that for Melbourne and Victoria in total by more than 50 per cent during 1976-77:

VICTORIA—MELBOURNE STATISTICAL DIVISION AND BARWON STATISTICAL DIVISION: AVERAGE EMPLOYMENT PER ESTABLISHMENT (*g*), 1976-77

ASIC code	Industry sub-division	Barwon Statistical Division	Melbourne Statistical Division	Victoria
21	Food, beverages, and tobacco	55	74	61
23	Textiles	83	61	66
24	Clothing and footwear	135	38	41
25	Wood, wood products, and furniture	15	18	18
26	Paper, paper products, printing, and publishing	16	40	38
27	Chemical, petroleum, and coal products	129	73	72
28	Non-metallic mineral products	53	50	36
29	Basic metal products	296	64	76
31	Fabricated metal products	25	33	32
32	Transport equipment	n.p.	145	146
33	Other machinery and equipment	83	44	45
34	Miscellaneous manufacturing	n.p.	39	39
	Total	78	48	47

For footnotes see page 392.

Recent developments

The Australian National Animal Health Laboratory is presently being constructed in East Geelong at an estimated cost of \$89m. Employing a staff of 160 persons, the Laboratory is expected to provide most of the research input into the protection of Australia's livestock from exotic diseases.

Construction of the temporary Marine Science Laboratories at Queenscliff, estimated to cost \$1.86m, was expected to be completed in early 1980. The complex will house about 75 scientists and support staff, who will be engaged in marine research that will have important implications for future conservation, management, and utilisation of Victoria's marine resources. The C.S.I.R.O. division, established in 1948, continues to provide a significant contribution towards research and development of Australia's textile industry.

Much of Geelong's recent growth, however, has continued to be in the manufacturing section. I.C.I. Australia Ltd, has announced the construction of a \$500m petrochemical chlor-alkali plant at Point Wilson, on the northern shores of Corio Bay. Alcoa of Australia Ltd, is constructing a third potline at its Point Henry smelter, at an estimated cost of \$100m, and the Shell Company of Australia Ltd, has recently completed the construction of a polypropylene plant at its Corio Refinery at a cost of \$50m. Shell has also constructed a new \$25m platformer plant that will upgrade low octane distillate to a higher octane fuel suitable for modern motor vehicles.

These projects provide a significant addition to Geelong's present industrial base, which also includes industries engaged in the production of motor vehicles, cement, glass, wire, phosphate, and others.

Recognising such sustained growth of Geelong's manufacturing industry, the Geelong Harbor Trust has embarked on a major construction programme to modernise and expand the capacity of the existing port facilities. This programme includes the provision of a container terminal, due for completion in May 1981.

Further references: History of manufacturing, *Victorian Year Book* 1961, pp. 531-5; Motor vehicle industry, 1962, pp. 591-4; Chemical industry, 1963, pp. 615-20; Petrochemical industry, 1964, pp. 650-4; Glass industry, 1965, pp. 606-8; Agricultural machinery industry, 1966, pp. 587-9; Aluminium industry, 1967, pp. 415-8; Automation and technical development in industry, 1967, pp. 376-82; Textile industry, 1968, pp. 416-20; Canning of foodstuffs, 1967, pp. 432-5; Butter, cheese and processed milk products, 1970, pp. 431-6; Heavy engineering, 1971, pp. 419-22; Light engineering, 1972, pp. 392-5; Secondary industry and the environment, 1974, pp. 418-21; Concrete pipe industry, 1975, pp. 500-1; Paper industry, 1976, pp. 466-8; Wine industry in Victoria, 1977, pp. 510-11; Timber industry in Victoria, 1978, pp. 434-7

BIBLIOGRAPHY

ABS publications*Victorian Office*

Manufacturing establishments: details of operations (8201.2)

Manufacturing establishments: selected items of data classified by industry and employment size (8202.2)

Manufacturing establishments: small area statistics (8203.2)

Manufacturing establishments: summary of operations (8205.2)

Manufacturing establishments: usage of electricity and fuels (8204.2)

Central Office

Census of manufacturing establishments—summary of operations by industry sub-division (preliminary statement) (8201.0)

Manufacturing establishments—details of operations by industry class (8203.0)

Manufacturing establishments—summary of operations by industry class (8202.0)

Production bulletins Nos 1 to 8 (see page 406 of this *Year Book*) 8357.0–8364.0

Other publications

GEELONG GROWTH CENTRE PLANNING GROUP. *Geelong Strategy: Employment in Geelong*. Geelong Regional Planning Authority, 1975.

GEELONG REGIONAL COMMISSION. *The Geelong Region: Data Book*. 1979.

MAXWELL, P.A.R. and WILSON M.I. *Structural Change in a Regional Labour Market*. Eighth Conference of Economists. 1979.