

# Chapter 18

## MANUFACTURING

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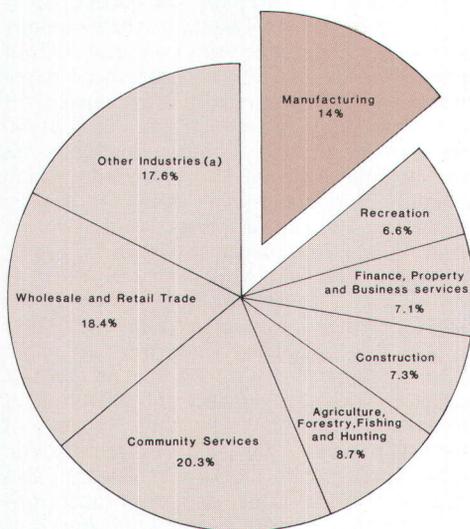
# Chapter 18

## MANUFACTURING

The manufacturing sector is the largest productive contributor to Tasmania's economy. Using 'value added' as the common measure of economic contribution, manufacturing provides more than twice the value produced by the mining and retail sectors and considerably more than the construction and agricultural sectors.

While not the largest employer, manufacturing provides jobs for almost 14 per cent of the State's employed workforce. With 24 800 employed at August 1985, of whom 20 000 were males, only the wholesale and retail trade and community service sectors employ more people.

Industry Employment, 1985



(a) Includes mining, transport and storage, communications, public administration and defence.

With approximately 2.8 per cent of Australia's population, the Tasmanian manufacturing sector employs 2.4 per cent of the total Australian manufacturing workforce.

### 18.1 INDUSTRIES

Six main industry groups make up the bulk of the sector in Tasmania: food and beverages; paper, paper products, printing and publishing; wood, wood products and furniture; basic metal products, textiles, clothing and footwear; and fabricated metal products. In the year ended 30 June 1984 these six groups provided approximately 85 per cent of the total manufacturing employment of 24 056 and 84 per cent of the total value added of \$829 million.

18.1 Manufacturing, Tasmania, 1984

Industry	Employment	Value added \$'000
Food and beverages	5 925	199 781
Paper, paper products	5 015	182 572
Wood, wood products and furniture	3 079	124 196
Basic metal products	3 325	n.p.
Textiles, clothing and footwear	n.p.	n.p.
Fabricated metal products	1 546	36 484
Chemical and petroleum and coal products	n.p.	n.p.
Transport equipment	894	25 754
Non-metallic products	814	39 290
Other machinery and equipment	661	16 438
Miscellaneous manufacturing	378	11 849
<b>Total manufacturing</b>	<b>24 056</b>	<b>828 970</b>

At June 1984 614 establishments out of the total 875 manufacturing establishments comprised these six main groups, some of which are described below.

While six industry groups provide most of the jobs and the economic contribution of manufacturing, three groups, food and beverages, wood, wood products and furniture, and fabricated metal products, account for almost 60 per cent of all manufacturing enterprises in the State.

### 18.1.1 Manufacturing Companies

*Selected descriptions by the Tasmanian Development Authority.*

#### **Food and Beverages**

*Cadbury Schweppes Australia Ltd (Claremont):* In 1921 an association of three British confectioners established their Australian plant at Claremont, near Hobart. Today, the plant is the largest cocoa and confectionery factory in Australia. The factory employs some 700 Tasmanians and specialises in moulded chocolate blocks, fancy boxed assortments, cocoa, drinking chocolate and the well known Flake and Turkish Delight bars. Some 30 million litres of fresh Tasmanian milk are used each year, most of which is collected and processed at a subsidiary dairy factory at Burnie. Large quantities of famous Cadbury Dairy Milk Chocolate are sent each year to the Company's sister factory in Victoria.

*Cascade Group of Companies (Statewide):* The Company is the oldest manufacturing company in Australia and is firmly established in the beverage industry at manufacturing, wholesale and retail levels. The Company manufactures alcoholic beverages through the only two breweries in the State: at Esk Breweries, Launceston (Boags Beer) and Cascade Brewery, Hobart (Cascade Beer). The Cascade Fruit Juices Division manufactures alcoholic cider under the brand names *Mercury* and *Van Diemen*, and also *Apple Isle* non-alcoholic cider, *Ultra-C* blackcurrant vitamin C syrup, soft drinks, pure fruit juices, fruit juice syrups, berry fruit pulps and concentrates for local and export distribution at Cascades, Hobart. The wholesaling of wine and spirits is the largest operation in the State with major outlets in Hobart, Launceston and Ulverstone. The Company owns 44 hotels spread throughout the State, the majority of which are leased to individuals.

Edgell-Birds Eye Division of Petersville Industries Ltd (Devonport, Ulverstone and Scottsdale): This company is Tasmania's leading processor of frozen and canned vegetables. The annual volume of raw materials required by the Devonport, Ulverstone and Scottsdale factories is approximately 207 000 tonnes, the main crops processed being potatoes, green peas, green beans and carrots.

*McCain Foods (Aust) Pty Ltd (Smithton):* McCain purchased the Smithton factory of General Jones in June 1984. The factory produces frozen vegetables, of which the main brands are Copper Kettle, Pict and McCain. Early in 1985 a new corn processing line was installed; a new box packaging line was also introduced.

*United Milk Tasmania Ltd (Smithton, Edith Creek, Wynyard, Devonport, Legerwood):* This is the State's largest manufacturer of dairy products and processes approximately 70 per cent of the milk produced in the State. Annual production has recently reached approximately the following levels: butter (salted and unsalted), 5 500 tonnes; cheese (cheddar), 9 000 tonnes; milk powders (skim, full cream and buttermilk), 8 000 tonnes; whey powder, 500 tonnes; casein (acid), 500 tonnes; whey proteins (35 per cent, 50 per cent and 75 per cent), 750 tonnes. The Company also produces milk concentrates and operates retail produce/hardware stores and a farm machinery business servicing rural areas.

#### **Paper, Paper Products**

*Associated Pulp and Paper Mills (Burnie, Wesley Vale, Long Reach, Triabunna):* This group of companies which is a wholly-owned subsidiary of North Broken Hill Holdings Ltd, is a major Australian integrated forest products complex and Australia's principal producer of fine printing and writing papers, magazine papers and coated papers. In Tasmania, the Company operates major manufacturing complexes at four centres: *Burnie* — where it commenced paper production in 1938; present annual capacity of the Burnie pulp and paper plant is 130 000 tonnes. In addition, the Company presently has three sawmills at Burnie and Wynyard through its wholly owned subsidiary company, Burnie Timber Pty Ltd, but at present, only two are operating. The Company also acquired, in 1979, Tasmanian Plywood Mills Pty Ltd which is based at Somerset. *Wesley Vale* — In 1970 the first stage of an integrated pulp and paper complex was completed when the first paper machine commenced production. The machine has an annual capacity of about 65 000 tonnes of paper. Production at Wesley Vale is mainly of magazine papers. A particle board factory, run by the subsidiary Burnie Timber Pty Ltd, also operates at Wesley Vale; annual production is about 15 million square metres *Long Reach* — APPM completed its woodchip plant and made its first export shipment in 1972. The Company has long-term contracts for the export of woodchips to Japan. *Triabunna* — In 1979 APPM took over Tasmanian Pulp and Forest Holdings Ltd which operates a woodchip export mill at Triabunna and also has long-term contracts with Japan.

*Australian Newsprint Mills Ltd (Boyer):* Since beginning operations in 1941, this Company has increased its annual production of newsprint from 27 400 tonnes to its present capacity of 220 000 tonnes in Tasmania. The Company also operates a newsprint mill at Albury in New South Wales with an output of 180 000 tonnes per annum. ANM is Australia's only producer of newsprint and currently supplies approximately 85 per cent of Australia's requirement. The Boyer plant is being constantly upgraded and its product range expanded beyond standard newsprint. This is requiring continuing capital expenditure to improve product quality and productivity. In the past 12 months, \$2.5 million was spent on a cleaning system for one of the three paper machines on site and further expenditure is being planned. ANM is the largest company with its head office in Tasmania and indicates that there is an optimistic future for expansion of its operations in this State.

#### **Basic Metal Products**

*Comalco Aluminium (Bell Bay) Ltd (George Town):* Australia's first aluminium smelter commenced production in 1955 at Bell Bay, owned by the then Australian Aluminium Production Commission, a joint venture of the Commonwealth and Tasmanian Governments, with an annual capacity of 12 000 tonnes of metal. In 1961, the plant and facilities were acquired by the present company and the capacity increased in stages to 117 000 tonnes per annum, with a current employment of 1 270. Products made include rolling block, extrusion billet, foundry alloy ingot, T-bar alloy, primary metal as ingot, T-bar, and granules. As associated company, Comalco Aluminium Powder, produces aluminium powder, aluminium paste, and high alloy metal powder briquettes.

*Electrolytic Zinc Company of A/Asia Ltd (Risdon and Rosebery):* Established in 1916, the factory at Risdon is the largest producer of zinc in Australia and the second largest electrolytic-zinc plant in the world. It exports an extensive range of zinc and zinc alloys to over 30 countries. The Risdon plant has the capacity to produce more than 600 tonnes of zinc per day. Apart from the zinc and zinc alloys, the Company also produces cadmium, sulphuric acid, superphosphate, and aluminium sulphate. The zinc plant supplies a large proportion of Australia's total requirements.

Mine production capacity at the Company's West Coast mines at Rosebery is 650 000 tonnes of silver-lead-zinc-copper-gold ore per annum. The associated concentrating mill at Rosebery has capacity to treat 850 000 tonnes of ore per annum including treatment of ore from the Que River mine.

*Tasmanian Electro-Metallurgical Co. Pty Ltd (Bell Bay):* In 1962 BHP transferred its major alloy making from Newcastle to a green field site at Bell Bay. Expansion in 1976 gave export capacity and added ferro-silicon and manganese ore sinter to the existing product range of high carbon ferro-manganese and silico-manganese. Exports form a significant proportion of production and are being made for steelmakers and foundries in South East Asia, the Middle East, Japan, United States of America and New Zealand. Capacity is now about 150 000 tonnes per annum of ferro alloys and 250 000 tonnes per annum of manganese ore sinter. Due to a downturn in the world steel industry, operations during 1982 were reduced. Full plant operations resumed in January 1983. Approval has been given to upgrade facilities on site and this will mean that within three years manganese alloy capacity will increase by 33 per cent.

*Tioxide Australia Pty Ltd (Burnie):* This Company is a manufacturer of titanium pigments which are used as the base white pigment in paints, enamels, plastics, printing inks, rubber, paper, man-made fibres and a number of other products. At the present time, 10 different grades of pigment are made to meet the varying requirements of user industries. The Company was formed in 1937 as Australian Titan Products Pty Ltd. Plans for construction of the Heybridge plant were delayed by the Second World War and the factory was commissioned in December 1948. The initial annual output was 1 500 tonnes compared with a current capacity of 32 000 tonnes. The Company commenced a \$6.5 million capital program of modernisation during 1982 in order to maintain its competitive position. Tioxide is the predominant supplier of titanium pigments to the Australian market and an increasingly significant supplier to SE Asian countries. A staff of approximately 365 was employed in mid-1984.

#### **Textiles, Clothing and Footwear**

*Coats Patons (Aust.) Ltd (Launceston):* This Company first produced yarns in Tasmania over 60 years ago. The factory produces knitting yarns, both wool and synthetic, and annual production is approximately 1.5 million kilograms.

*Sheridan Textiles (Derwent Park):* Formerly known as UTA Hobart, then Sheridan Domestic Textiles. It is part of the Clothing, Footwear and Textile Group of Dunlop Olympic Ltd. The Derwent Park mill commenced operations as Silk & Textile Printers Pty Ltd in 1948. Production now involves the preparation, dyeing and printing of mainly polyester/cotton percale bed sheeting along with some commission printing.

The mill also manufactures a full range of quality made-up domestic bed linen and shower curtains for Australian and export distribution.

*National Textiles Ltd (Devonport)*: Previously Tootal Australia Pty Ltd, established 1952, manufacturers of woven man-made fibre fabrics in polyester/cotton and polyester/viscose blends for the workwear and fashion dress goods markets. Product rationalisation is currently taking place and the main production lines will be piece-dyed and yarn-dyed towels. The Company is also active in the commission dyeing area, processing fabric mainly constructed of synthetic yarns or blends. The Company manufactures in Devonport, and at Rutherford and Kotara in New South Wales. Australia-wide distribution is through its own selling offices located in all capital cities.

#### ***Fabricated Metal Products***

*Humes Ltd (Statewide)*: The Company operates three divisions in Tasmania: Humes Concrete, producing pre cast concrete; Humes Plastics, manufacturing UPVC and high density polythene pipes and fittings for a wide range of uses; and Humes—ARC, producing prefabricated reinforcement mesh and rod. Steel Mains Pty Ltd, a subsidiary company manufactures water, steam and oil lines up to six metres in diameter. This company also produces pressure vessels, spheres, bulk storage tanks etc. A field crew operates throughout the State installing all types of structural steel, pipelines and mechanical items. A subsidiary company, Tita Fittings Pty Ltd manufactures brass fittings used in connection of polyethylene pipes.

Repc Bearing Co. (Launceston): In 1949 this company was established to manufacture engine bearings for the Australian spare parts trade. The factory has since expanded and diversified its range of products and is now the only automotive bearing manufacturing company in Australia. The Company also undertakes the manufacture of sintered products using powder metallurgy techniques.

#### ***The Stanley Works Pty Ltd by Stanley Tools***

If the law of averages is correct, one in every five Australians owns a Stanley screwdriver and each year those owners buy a new one. In fact, there would be very few Australian tradesmen or home handymen who would not have at least one product of The Stanley Works either in their tool kit or home. The brand names of Stanley, Titan and Turner have become synonymous with high quality hand tools.

Founded in the United States in 1843, The Stanley Works has grown into a world wide company with an international reputation for

hand tools. In 1870 The Works was one of the first companies to develop the technique of cold rolling steel, the method now used in the manufacture of many of its industrial products.

In 1963 the Titan Manufacturing Company Pty Ltd became a jointly owned subsidiary of The Stanley Works, Hobart and the original parent company BHP. The name was changed to Stanley-Titan Pty Ltd.

Late in 1970 Stanley-Titan Pty Ltd acquired Turner Industries Ltd, a long established and well known tool and hardware manufacturer. Turner Industries manufactured tools such as screwdrivers and hacksaw blades and had the asset of an established export market. This was an advantage to Stanley-Titan as the company was able to concentrate on expansion programs rather than seeking export markets. When the merger was completed the name was changed to The Stanley Works Pty Ltd. The Stanley Works, in Australia, operates at two locations, Moonah in Tasmania and Nunawading in Victoria.

#### ***Tasmanian Operations***

Initially BHP established a plant in Hobart in 1942 to make barbed wire and nails. After the end of World War II a new plant was opened to manufacture Australia's first line of edge-tools. New lines were continually added and in 1963 the production of trimming knives, tape rules, bailey planes, block planes, hand drills and bit braces was introduced.

The Moonah plant became the Company's major hand tool manufacturing plant while the Nunawading plant concentrated on hardware and certain tools. A product repair service also is maintained at Nunawading as some of the products, by their very nature, wear out and it is company policy to repair rather than replace. Because of the stringent quality control that is maintained throughout the manufacturing of all products, instances of faulty products are extremely rare.

Stanley Works became the first plant in Australia capable of making multi-coloured extruded plastic rod used for the coloured screwdriver handles. At least half of the cost of making a screwdriver is in the plastic for the handle.

The Moonah plant is one of only four factories in the world producing Scotch pattern auger bits, a highly skilled operation requiring high quality materials. Bright drawn steel from Rylands Bros Newcastle and black hot rolled rods from the Newcastle steelworks are used in the manufacture of the auger bits.

In order to be able to compete with its overseas rivals, Stanley Works is continually upgrading

its plant with the latest technological equipment. Recently a microprocessor was developed in conjunction with the Engineering Department of the Tasmanian University, to run the machine which prints the measuring tapes. An electronic eye system was developed and was expected to vastly reduce the losses from inaccurate measures.

The company is installing program logic controllers to automatically run two of its machines. It is also examining the feasibility of introducing a computer-aided design facility to its Hobart plant to design special-purpose products for its tool range. Program logic controllers use the same technology as a microcomputer but in a form specially designed for the manufacturing industry.

The company introduced its first program logic controllers four years ago and since then has been continually upgrading. One of the older program logic controllers installed for the past three years produces screwdriver handles.

Stanley Works manufactures 50 000 different product lines including tools and industrial products and is currently developing, in America, tools for use underwater and for the American space research program.

The company currently employs 168 staff including 13 apprentices at its Moonah plant.

Materials for use in the manufacture of Stanley products is mainly imported from Japan and the finished tools are exported to New Zealand, South-East Asia and South America.

Future developments are for the continued implementation of new technology to enable the Company to remain competitive in the market.



*Drilling a sub-assembly for bit brace manufacture*

### **Non-metallic Mineral Products**

**Goliath Portland Cement Co. Ltd (Railton):** This company is a wholly owned subsidiary of Goliath Cement Holdings Limited and has been involved in cement production in Tasmania since 1928. With installation, in 1980, of new plant and equipment using the most modern technology currently available, cement production capacity was lifted to 750 000 tonnes per annum. Plans are complete to install an additional plant to lift this capacity to one million tonnes per annum. The company operates its own 4 000 tonne ship the *M.V. Goliath* to transport bulk cement to mainland markets. Goliath has also been exporting bagged palletised cement to Papua New Guinea and other Pacific Island destinations since 1970.

### **18.1.2 Size of Companies**

Tasmania's manufacturing sector is dominated by small firms; only six per cent of the 875 establishments have a workforce of 100 or more employees. Contrarily, almost 80 per cent of the establishments have a workforce of less than 20. If small is beautiful, then the structure of Tasmania's manufacturing sector is probably ideal. Almost all industry groups comprise a majority of firms having a workforce of less than 50; the only exception is the textile group with 5 companies with more than 100 employees and 5 companies with a workforce of less than 50 employees.

### **18.2 Size of Manufacturing Establishments, Tasmania, 1984**

<i>Number of employees</i>	<i>Establishments</i>	
	<i>Number</i>	<i>%</i>
Less than 4	319	36.5
4-9	244	27.9
10-19	129	14.7
20-49	94	10.7
50-99	37	4.2
100-199	30	3.4
200-499	15	1.7
500-999	3	0.3
1000+	4	0.5
Total	875	100.0

### **18.1.3 Manufacturing and Geography**

The decentralization of population that is a feature of Tasmania is reflected in the geography of the manufacturing sector in the State. Manufacturing establishments as well as employment provided is fairly evenly distributed throughout the State. So too is the economic value created by the sector, although on a per head basis, manufacturing is of least value in the south of the State.

### 18.3 Geography of Manufacturing, Tasmania (%)

Variable	South	North	North-West
Population	47.0	27.5	25.4
Establishments	38.1	36.5	25.4
Employment	38.8	33.8	27.3
Value added	31.3	39.8	28.8
Value added per head	\$1 604	\$2 158	\$2 150

No individual industry group dominates a region; all are spread throughout the State, although the paper, paper products, printing and publishing group is less significant in the north than it is in the southern and north-western regions of the State. The manufacture of basic metal products on the other hand is, relatively, most significant in the north.

### 18.4 Main Industry Groups by Region

Region	Industry groups
— by employment	
South	Paper, paper products, printing and publishing
	Food and beverages
North	Basic metal products
	Food and beverages
	Wood, wood products and furniture
North-West	Paper, paper products, printing and publishing
	Food and beverages
— by 'value added'	
South	Food and beverages
	Paper, paper products, printing and publishing
North	Wood, wood products and furniture
	Basic metal products
North-West	Paper, paper products, printing and publishing
	Food and beverages

## 18.2 ECONOMIC CONTRIBUTION

### 18.2.1 Historical Review

Although manufacturing has remained the largest contributing sector to the State's economy, its contribution has been slowly, but steadily, eroding. In 1975 there were a total of 628 manufacturing enterprises in Tasmania each employing at least four people; by 1984 there were 556. Over the same period the average annual employment has fallen from just under 29 000 to just over 24 000, a fall of 16.6 per cent. This pattern reflected the impact of international and national economic changes on Australia.

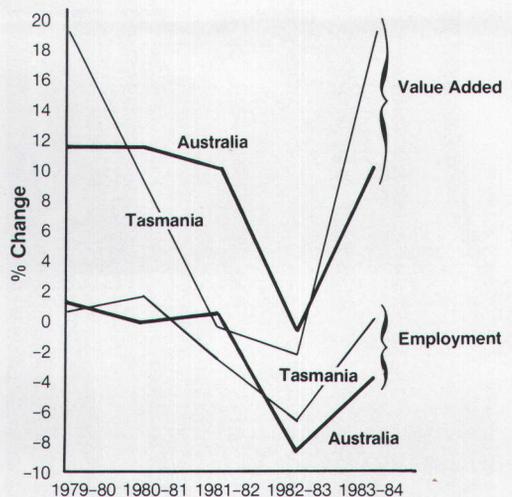
The increase in oil prices in the two years to January 1974 was one of the factors that triggered off a world recession with inflation and unemployment reaching levels that had not been encountered for several decades.

Thus it is that the 'value added' by the manufacturing sector has been declining. In

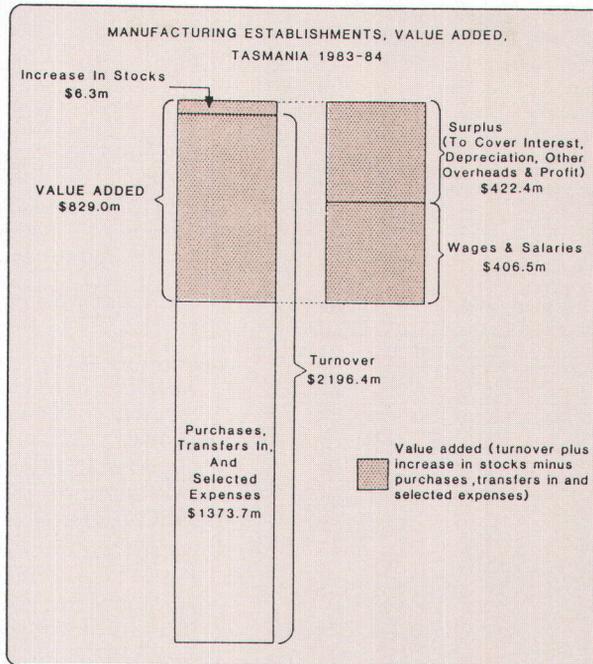
### 18.5 'Value Added' by Manufacturing, Tasmania (\$'000)

Year	Actual values	1974-75 values (a)
1974-75	402 255	402 255
1976-77	533 288	428 201
1978-79	653 770	435 387
1980-81	713 445	369 579
1982-83	695 135	305 025
1983-84	828 970	342 372

(a) Actual values adjusted using the 'All Manufacturing Industry Index' see ABS Cat. No. 6412.0



Rate of change in employment and 'value added' in manufacturing, Australia and Tasmania, 1979-80 to 1983-84



1974-75 it was \$402.3 million; in 1983-84 it was \$828.9 million or only \$342.4 million in 1974-75 values, but nevertheless an improvement on the previous two years. However, in this period manufacturing in Tasmania has performed better than Australia as a whole, and holds up well against all other States.

During the period since 1975, the 'value added' of all but four industry groups has increased more than the percentage increase of the total manufacturing sector; textiles, wood, wood products and furniture, chemical, petroleum and

coal products and basic metal products. The big improvers have been clothing and footwear, food and beverages, paper and paper products, and in non-metallic mineral products.

**18.2.2 1983-84 Review**

The year ended June 1984 appears to have brought a recovery from the down turn experienced in recent years but most pronounced in 1982-83. Value added increased by 19.3 per cent over the 1982-83 result while fixed capital expenditure less disposals rose by 29.1 per cent. These improvements in productivity and investment were supported by an increase of 11.6 per cent in turnover. Wages and salaries paid for the year was 5.2 per cent more than the previous year. However the sector has not provided more jobs; total average employment in 1983-84 for enterprises with 4 or more employees changed little from 1982-83.

**18.6 Change in 'Value Added' by Industry Groups 1974-75 — 1983-84 Tasmania, (%)**

Industry group	change 1974-75 — 1983-84
Food and beverages	161.5
Textiles	n.p.
Clothing and footwear	245.6
Wood, wood products and furniture	80.9
Paper, paper products and printing	157.3
Chemical, petroleum and coal products	n.p.
Non-metallic mineral products	136.7
Basic metal products	n.p.
Transport equipment	117.0
Other machinery and equipment	108.3
Miscellaneous	116.3
<b>Total</b>	<b>106.1</b>

**18.7 Details of Manufacturing Operations, Tasmania, 1981-82 — 1983-84**

Details	Unit	1982-83	1983-84
Establishments	no.	528	556
Average employment	no.	24085	24056
Wages and salaries	\$m	387.7	406.5
Turnover	\$m	1968.5	2196.3
'Value added'	\$m	695.1	828.9

Almost all industry groups improved in 1983-84; only textiles and chemical, petroleum and coal products declined in 'value added', by 22 and 6.6 per cent respectively. The biggest improvers were the wood, wood products and furniture group, together with food and beverages and transport equipment. Both these latter two groups improved relative to other manufacturing industry groups.

### 18.8 Change in Employment and 'Value Added'

Industry group	% change 1982-83 to 1983-84	
	Employment	'Value added'
Food and beverages	0.3	22.5
Textiles	n.p.	n.p.
Clothing and footwear	8.1	11.3
Wood, wood products and furniture	4.3	44.3
Paper, paper products, printing and publishing	-0.8	11.2
Chemical, petroleum and coal products	n.p.	n.p.
Non-metallic mineral products	5.6	17.4
Basic metal products	n.p.	n.p.
Fabricated metal products	8.6	19.7
Transport and equipment	36.5	33.0
Other machinery and equipment	-6.1	6.5
Miscellaneous	-8.2	3.6
Total	-0.1	19.3

The only industry group to show significant growth in employment was the transport equipment group. This industry has an average employment growth rate of 8.7 per cent over the past five years with an increase in 1983-84 of 36.5 per cent over the previous year; total employment in manufacturing fell slightly. Although the industry is comparatively small with just 3.1 per cent of total 'value added' and only 3.7 per cent of employment the performance of the group is dynamic. The industry includes the construction of motor vehicle bodies, trailers and caravans, motor vehicle parts and ship and boat building.

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