# 13

# Manufacturing

# **Overview**

Manufacturing broadly relates to the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand. This chapter presents a range of data about employment, production, Gross State Product (GSP) at factor cost, turnover and exports for the manufacturing sector as a whole.

Manufacturing remains Victoria's most important industry, despite falling as a proportion of GSP at factor cost since 1984–85 from 22.2% to 17.9% (\$20,630 million) in 1996–97 (table 13.1). The second largest contributor to GSP (fc) was Property and business services which increased from 6.9% to 10.4% over the same period.

Victorian employment in the manufacturing sector accounted for 32.4% of total manufacturing employment in Australia. Victorian employment in the manufacturing industry over the last 22 years has declined by 34.8%, from 470,000 persons in 1973–74 to 306,600 in 1996–97.

	Victoria	Australia
	%	%
Agriculture, forestry and fishing	2.9	3.5
Mining	2.3	4.1
Manufacturing	17.9	14.2
Electricity, gas and water	3.0	2.9
Construction	5.5	6.5
Wholesale trade	6.4	5.9
Retail trade	7.6	7.8
Accommodation, cafes and restaurants	1.9	2.3
Transport and storage	4.6	5.2
Communication	3.5	3.1
Finance and insurance	4.1	3.7
Property and business services	10.4	9.6
Government administration and defence	3.2	4.0
Education	5.0	4.8
Health and community services	6.5	6.2
Culture and recreational services	1.9	1.8
Personal and other services	2.3	2.4
Ownership of dwellings	9.4	10.2
General government(b)	1.6	1.8
Total	100.0	100.0

### 13.1 INDUSTRY CONTRIBUTION TO GSP(AT FACTOR COST)-1996-97(a)

(a) Industries may not add to total due to rounding differences. (b) State details for general government gross operating surplus by industry are not available.

Source: Australian National Accounts: State Accounts, Main Tables, 1996–97 (Cat. no. 5220.0.40.001).

### **Turnover**

Turnover is a key performance measure of establishments in an industry. It covers the sales of goods and services by an establishment (together with transfer of goods to other parts of the same business), and includes all other operating revenue generated by the establishment.

Turnover for the manufacturing industry in Victoria was \$68,420 million for 1996–97, an increase of 4.8% over the last 12 months and 25.1% over the last six years (table 13.2). The largest industry subdivisions contributing to Victorian turnover were Machinery and equipment (25.7%); Food, beverage and tobacco (20.5%); Petroleum, coal, chemical and associated product (16.7%); and Metal product (12.5%). These subdivisions have consistently dominated over the last six years, and all industries recorded an increase over this period with the exception of Textile, clothing, footwear and leather which recorded a drop of 1.3%.

13.2	TURNOVER(a), by	Manufacturing Subdivision

	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97
Industry subdivision	\$m	\$m	\$m	\$m	\$m	\$m
Food, beverage and tobacco	10 811.4	11 291.1	11 924.2	12 471.9	13 064.5	14 029.6
Textile, clothing, footwear and leather	4 777.4	4 575.7	4 784.4	4 472.6	4 649.8	4 714.3
Wood and paper product	2 678.3	2 976.6	3 182.1	3 306.3	3 471.9	3 416.8
Printing, publishing and recorded media	3 447.4	3 733.5	3 933.7	4 255.5	4 172.7	4 567.4
Petroleum, coal, chemical and associated product	9 700.7	9 806.0	10 240.7	10 486.6	11 170.7	11 423.6
Non-metallic product	1 751.8	2 086.2	2 081.2	2 023.3	2 225.4	2 085.9
Metal product	7 671.3	7 396.1	7 626.6	7 827.9	8 522.9	8 540.2
Machinery and equipment	12 347.5	13 484.9	14 676.2	15 353.3	16 206.1	17 591.5
Other manufacturing	1 523.0	1 610.9	1 810.4	1 859.1	1 800.0	2 051.1
Total manufacturing	54 708.8	56 960.9	60 259.5	62 056.6	65 284.1	68 420.4

(a) Value data are at current prices and, therefore, do not discount the impact of price changes. Data for the period 1991–92 to 1995–96 have been adjusted to allow for lags in processing new businesses to, and the omission of some businesses from, the Australian Bureau of Statistics business register.

Source: Manufacturing Industry, Victoria (Cat. no. 8221.2).

### Employment

Employment in the manufacturing industry increased by 0.4% over the preceding 12 months, to 306,600 persons in 1996–97 (table 13.3). The Machinery and equipment subdivision employed 73,700 persons (24.0% of total manufacturing employment), followed by 46,400 persons (15.1%) in Food, beverage and tobacco, and 39,100 (12.8%) in Metal product. The largest proportional employment increase from 1995–96 to 1996–97 occurred in Other manufacturing (9%), while the largest decrease was in Wood and paper product manufacture (13%).

From 1991–92 to 1996–97, the largest proportional employment increase occurred in Other manufacturing subdivision (10.3%) and Printing, publishing and recorded media subdivision (8.5%), while the largest decline occurred in Textile, clothing, footwear and leather (9.7%) and Non-metallic mineral product (9.7%).

13.3 EMPLOTMENT(a) By Manufacturing Subdivision						
	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97
Industry subdivision	'000	'000	'000	'000	'000	'000
Food, beverage and tobacco	47.6	45.3	45.3	46.4	44.0	46.4
Textile, clothing, footwear and leather	41.1	39.7	38.6	36.8	37.9	37.1
Wood and paper product	16.4	16.6	17.4	17.8	20.0	17.4
Printing, publishing and recorded media	27.2	28.0	27.3	29.3	28.3	29.5
Petroluem, coal, chemical and associated product	35.5	35.0	34.9	36.3	35.7	36.0
Non-metalic mineral product	10.3	10.0	10.0	9.6	9.7	9.3
Metal product	38.6	37.0	37.6	37.3	38.9	39.1
Machinery and equipment	77.7	75.0	71.7	70.4	73.9	73.7
Other manufacturing	16.5	16.8	17.2	17.3	16.7	18.2
Total Manufacturing	310.7	303.5	299.9	301.2	305.3	306.6

### 13.3 EMPLOYMENT(a) By Manufacturing Subdivision

(a) Includes working proprietors. Data for the period 1991–92 to 1995–96 have been adjusted to allow for lags in processing new businesses to, and the omission of some businesses from, the Australian Bureau of Statistics business register. Source: Manufacturing Industry, Victoria (Cat. no. 8221.2).

## **Production**

In 1997–98, Victorian enterprises accounted for more than half of the national production of whole milk (62.1%), butter and butteroil (83.2%) and cheese (62.7%) (table 13.4). They also accounted for a large proportion of national lamb production (42%).

### 13.4 PRODUCTION OF SELECTED MANUFACTURING COMMODITIES—1997–98

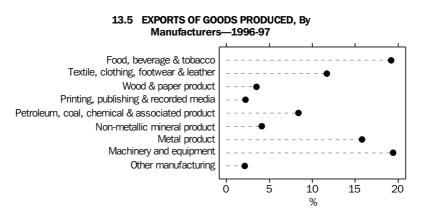
Item	Unit	Victoria	Australia
Meat (carcass weight)			
Beef and veal	'000 tonnes	404 514	1 957 082
Mutton	'000 tonnes	65 667	334 765
Lamb	'000 tonnes	117 620	280 543
Pig meats	'000 tonnes	99 280	343 131
Dairy products			
Whole milk	million litres	5 866	9 440
Butter and butteroil	tonnes	127 914	153 651
Cheese	tonnes	180 997	288 500
Building materials			
Clay bricks for structural purposes	million	316	1 532
Ready mix concrete	'000 cubic metres	3 733	17 412
Energy			
Electricity	giggawatt hour	40 335	176 211
Gas	terajoules	175 089	650 215

Source: Livestock Products, Australia (Cat. no.7215.0); Manufacturing Production, Australia (Cat. no. 8301.0); Unpublished data, Australian Dairy Corporation.

# Exports by manufacturers

Exports by manufacturers relates to the percentage of sales of goods and services produced plus transfers out of goods produced by the manufacturing establishment for sale, which are exported by the manufacturer or its agent.

During 1996–97, 13.8% of sales of goods produced in the Victorian manufacturing industry were subsequently exported by the manufacturer or its agent. These were valued at \$8, 844 million. The industry subdivisions with the highest proportional exports were Machinery and equipment (19.4%); Food, beverage and tobacco (19.2%); and Metal product (15.8%).





# ReferencesABS sourcesAustralian National Accounts: Concepts, Sources and Methods<br/>(Cat. no. 5216.0)Australian National Accounts: State Accounts, Main Tables, 1996–97<br/>(Cat. no. 5220.0.40.001)Livestock Products, Australia (Cat. no. 7215.0)<br/>Manufacturing Industry, Victoria (Cat. no. 8221.2)<br/>Manufacturing Production, Australia (Cat. no. 8301.0)Non-ABS sourcesAustralian Dairy Corporation.