

Manufacturing, Retail & Service Industries

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MANUFACTURING

Contribution of the Manufacturing Industry to gross product and employment

Manufacturing, as specified in Division C of the Australian Standard Industrial Classification (ASIC), 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.

Despite a significant increase in the level of manufacturing gross product (at constant prices) over the last 20 years, the manufacturing sector's contribution to the gross product of all industry fell considerably over the period. From a contribution level of 21.6 per cent in 1971-72, the manufacturing industry share of gross product fell consistently between 1980-81 and 1985-86, flattened out between 1985-86 and 1989-90 and recorded successive falls in 1990-91 and 1991-92. In 1991-92, manufacturing industry

only accounted for 16.3 per cent of all industry gross product.

Employment in the manufacturing sector has also fallen markedly over the last 20 years. In 1971-72 more than 1.3 million persons were employed in manufacturing. From 1971-72 to 1981-82, manufacturing employment stayed well above 1.1 million persons. However, a large fall occurred in 1982-83 (127,000 persons) and despite increases in most years between 1982-83 and 1988-89, the 1.1 million persons employed level of the 1970s was not regained. After successive falls in 1989-90 and 1990-91 employment in the manufacturing sector fell below 962,000 persons. This is the first time that the number of persons employed in manufacturing industry has fallen below one million persons since the present series commenced for 1968-69. The large drop in manufacturing employment over the last two decades coupled with an increase in all industry employment has resulted in the manufacturing share of employment falling from 24.2 per cent in 1971-72 to 14.5 per cent in 1991-92.

20.1 MANUFACTURING INDUSTRY: CONTRIBUTION TO ALL INDUSTRY AGGREGATES

Year	Gross product at constant (average 1984-85) market prices \$m	Employment at 30 June(a) '000	Manufacturing industry contribution to all industry aggregates for	
			Constant price gross product %	Employment %
1971-72	31,670	1,303.5	21.6	24.2
1976-77	34,468	1,195.0	19.9	21.6
1981-82	38,979	1,168.1	19.3	19.4
1982-83	35,773	1,041.1	18.4	18.4
1983-84	36,316	1,046.4	17.8	17.9
1984-85	38,171	1,052.9	17.7	17.5
1985-86	39,091	n.a.	17.3	16.7
1986-87	39,610	1,052.2	17.3	16.2
1987-88	42,108	1,093.4	17.4	16.3
1988-89	44,606	1,096.8	17.6	16.2
1989-90	45,921	1,032.9	17.3	15.6
1990-91	43,556	961.8	16.8	15.0
1991-92	42,212	n.a.	16.3	14.5

(a) Includes working proprietors.

Source: Australian National Accounts: Gross Product, Employment and Hours Worked (5222.0); Manufacturing Industry, Australia (8221.0); The Labour Force, Australia (6204.0).

Manufacturing trends

In the September quarter 1992, the seasonally adjusted index of manufacturing production fell slightly, with a fall of 0.3 per cent following

slight rises in the two previous quarters (graph 20.2).

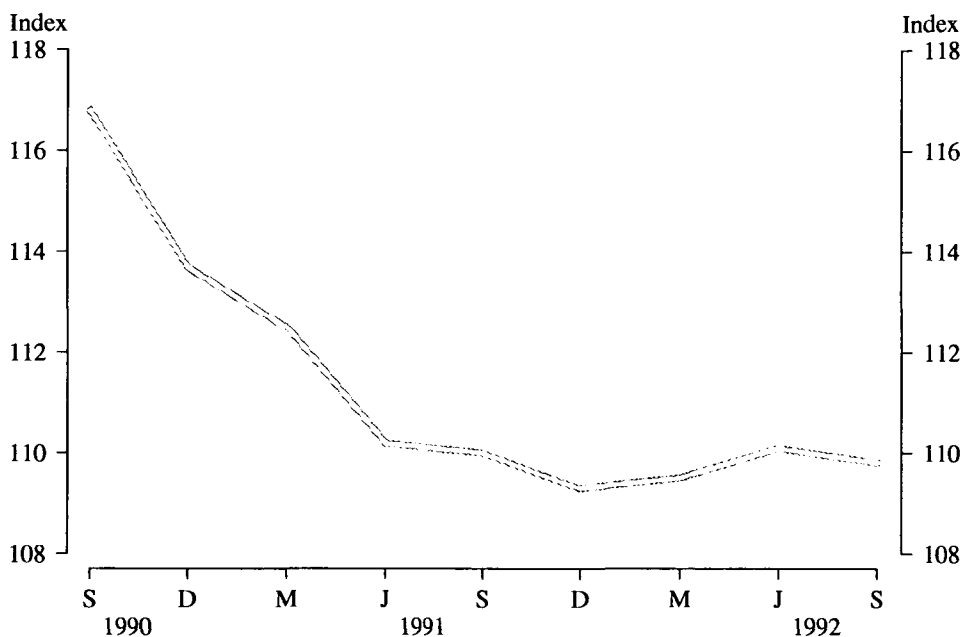
Over the period 1982-83 to 1991-92 the index of manufacturing production increased by almost 20 per cent. After consecutive

increases between 1982–83 and 1989–90, the index recorded successive falls in 1990–91 and 1991–92 (table 20.3).

The largest increases over the period 1982–83 to 1991–92 occurred in Textiles (up 47%) and

Paper, paper products, printing and publishing (up 35%). Transport equipment (down 19%), Clothing and footwear (down 4%) and Non-metallic mineral products (down 1%) were the only industries to record falls over the period.

20.2 INDEX OF TOTAL MANUFACTURING GROSS PRODUCT AT AVERAGE 1984–85 PRICES SEASONALLY ADJUSTED (Reference base year 1984–85 = 100)



Source: *Quarterly Indexes of Industrial Production, Australia* (8125.0).

Structure of the Manufacturing Industry

There were 40,653 manufacturing establishments operating in Australia at 30 June 1991. These establishments employed 961,800 persons, paid \$27,706 million in wages and salaries and recorded \$171,874 million in turnover (table 20.4).

The industries with the most persons employed at 30 June 1991 were Food, beverages and tobacco (169,100), Other machinery and

equipment (121,900) and Paper, paper products, printing and publishing (104,300). Textiles (28,400) was the smallest employer, accounting for only three per cent of manufacturing employment. Food, beverages and tobacco was also the largest contributor to total manufacturing turnover, accounting for 20 per cent, followed by Chemical, petroleum and coal products (14%) and Basic metal products (12%).

20.3 INDEXES OF MANUFACTURING INDUSTRY GROSS PRODUCT AT AVERAGE 1984-85 PRICES (Reference base year 1984-85 = 100.0)

Industry subdivision	1982 -83	1983 -84	1984 -85	1985 -86	1986 -87	1987 -88	1988 -89	1989 -90	1990 -91	1991 -92
Food, beverages and tobacco	99.2	98.9	100.0	101.5	104.2	110.4	114.1	120.8	127.1	120.1
Textiles	87.0	90.8	100.0	102.1	108.5	109.8	110.3	116.4	119.1	128.1
Clothing and footwear	89.7	96.6	100.0	112.5	104.1	106.3	110.2	86.0	83.3	86.2
Wood, wood products and furniture	90.8	95.4	100.0	113.8	103.1	115.7	120.0	130.0	114.6	120.5
Paper, paper products, printing and publishing	88.1	91.9	100.0	103.2	108.6	117.6	125.2	133.1	128.0	118.5
Chemical, petroleum and coal products	94.0	97.5	100.0	98.4	103.0	110.5	112.9	117.9	115.1	121.2
Non-metallic mineral products	91.9	92.5	100.0	113.4	103.3	108.9	123.2	120.0	98.3	91.1
Basic metal products	82.6	91.6	100.0	98.5	99.7	101.9	107.0	109.6	102.5	104.5
Fabricated metal products	102.6	99.8	100.0	109.6	108.6	122.6	134.3	156.1	140.2	130.1
Transport equipment	93.2	91.6	100.0	99.0	93.3	95.6	103.9	98.2	80.4	75.4
Other machinery and equipment	100.2	94.9	100.0	98.9	107.9	114.3	125.1	123.7	115.9	105.7
Miscellaneous manufacturing	92.0	94.4	100.0	91.2	105.2	113.0	118.5	122.7	109.3	106.0
Total manufacturing	93.7	95.1	100.0	102.4	103.8	110.3	116.9	120.3	114.1	110.6

Source: *Quarterly Indexes of Industrial Production, Australia* (8125.0).

20.4 SUMMARY OF OPERATIONS OF THE MANUFACTURING INDUSTRY, 1990-91

Industry subdivision	Estab- lishments operating at 30 June (no.)	Employ- ment at 30 June(a) ('000)	Wages and salaries (b) (\$m)	Turnover (\$m)	Persons employed per estab- lishment (no.)	Turnover per person employed (\$'000)
Food, beverages and tobacco	3,972	169.1	4,500	34,974	43	207
Textiles	960	28.4	744	4,049	30	142
Clothing and footwear	2,557	55.6	1,190	4,969	22	89
Wood, wood products and furniture	6,725	75.9	1,765	7,829	11	103
Paper, paper products, printing and publishing	4,694	104.3	3,244	14,793	22	142
Chemical, petroleum and coal products	1,131	52.0	1,909	23,485	46	451
Non-metallic mineral products	1,687	39.8	1,286	7,516	24	189
Basic metal products	809	66.8	2,440	21,446	83	321
Fabricated metal products	6,628	97.7	2,636	12,341	15	126
Transport equipment	2,018	89.4	2,728	15,597	44	174
Other machinery and equipment	5,717	121.9	3,609	16,334	21	134
Miscellaneous manufacturing	3,755	60.8	1,656	8,541	16	140
Total manufacturing	40,653	961.8	27,706	171,874	24	179

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

Source: *Manufacturing Industry, Australia* (8221.0).

Turnover

Turnover figures include sales of goods whether produced by the establishment or not; transfers out of goods to other establishments of the same enterprise; bounties and subsidies on production; plus all other operating revenue from outside the enterprise (such as commission, repair and service revenue and rent, leasing and hiring revenue), plus capital

work for own use, or for rental or lease. Receipts from interest, royalties, dividends, and sales of fixed tangible assets are excluded.

New South Wales (34%) and Victoria (33%) combined comprised two-thirds of manufacturing turnover in 1990-91. New South Wales contributed about a third of the turnover in most industries, with Other machinery and equipment (43% of Australian

total) and Transport equipment (17% of Australian total) being the most notable exceptions. Victoria dominated in Clothing and footwear (49%), Textiles (48%) and Transport equipment (48%) but contributed only 17 per cent of Australian turnover for Basic metal products. Although Queensland accounted for only 14 per cent of

manufacturing turnover, it contributed 21 per cent of Australian turnover in the Food, beverages and tobacco industry. Similarly, South Australia accounted for 27 per cent of Australian turnover for Transport equipment compared with only 9 per cent of total manufacturing turnover for Australia.

20.5 TURNOVER BY MANUFACTURING INDUSTRY, 1990-91 (\$ million)

Industry subdivision	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Food, beverages and tobacco	10,519	10,533	7,289	2,813	2,503	1,149	100	70	34,974
Textiles	1,213	1,952	168	402	160	150	n.p.	n.p.	4,049
Clothing and footwear	1,807	2,438	301	317	71	26	n.p.	n.p.	4,969
Wood, wood products and furniture	2,554	1,977	1,313	727	717	462	18	62	7,829
Paper, paper products, printing and publishing	5,744	4,977	1,578	867	709	804	28	87	14,793
Chemical, petroleum and coal products	8,517	8,179	2,833	1,426	2,333	n.p.	n.p.	—	23,485
Non-metallic mineral products	2,670	1,890	1,438	551	710	151	46	61	7,516
Basic metal products	7,835	3,661	3,975	1,516	3,384	n.p.	361	n.p.	21,446
Fabricated metal products	4,389	3,898	1,941	851	965	155		n.p.	12,341
Transport equipment	2,575	7,556	828	4,137	363	118	13	8	15,597
Other machinery and equipment	6,966	5,645	1,137	1,636	820	75	8	48	16,334
Miscellaneous manufacturing	3,037	3,430	756	849	407	50	8	6	8,541
Total manufacturing	57,824	56,135	23,556	16,092	13,141	4,097	587	443	171,874

Source: *Manufacturing Industry, Australia* (8221.0).

Employment

New South Wales (34%) and Victoria (33%) dominate manufacturing in Australia, comprising two-thirds of employment in 1990-91. However, different industries dominate, in terms of employment, in different States (table 20.6).

New South Wales dominates in Basic metal products (46% of the Australian total) and Chemical, petroleum and coal products (43% of the Australian total); Victoria comprises a significant proportion of industry employment in Textiles (50%), Clothing and footwear (48%), and Transport equipment (48%); Queensland contributes significantly to Food, beverages and tobacco (20%) and Wood, wood products and furniture (19%) while South Australia contributes significantly to the Transport equipment work force (18%).

The quarterly Survey of Employment and Earnings is the ABS' major source of statistics on employed wage and salary earners. For

further information refer to the chapter, Labour.

Manufacturing employment/turnover ratios

The average employment size of manufacturing establishments remained relatively constant between 1986-87 and 1990-91, with most industries displaying a similar trend. However, Basic metal products and Transport equipment both recorded significant falls in average employment size over the period (table 20.7).

Average turnover per person employed in the manufacturing sector during 1990-91 was \$179,000. This represented an increase of 60 per cent over 1986-87 (in current price terms). Chemical, petroleum and coal products (\$451,000) and Basic metal products (\$321,000) showed the highest ratios of turnover to employment in 1990-91, while Clothing and footwear (\$89,000) showed the lowest.

Chemical, petroleum and coal products showed the greatest increase in turnover per person employed between 1986-87 and 1990-91 (116%). However this movement was significantly affected by a change in accounting practices by a number of businesses involved in the petroleum refinery

industry (prior to 1989-90, manufacturing turnover for these businesses only reflected the value of commission earned by the manufacturing establishments involved). Transport equipment (up 76%) recorded the next largest increase in the ratio of turnover to employment.

20.6 EMPLOYMENT IN MANUFACTURING AT 30 JUNE 1991 (^{'000})

Industry subdivision	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Food, beverages and tobacco	51.0	48.2	34.1	16.1	12.5	6.0	0.6	0.6	169.1
Textiles	7.0	14.3	1.4	2.5	1.8	1.4	n.p.	n.p.	28.4
Clothing and footwear	19.0	26.8	4.5	3.7	1.1	0.3	n.p.	n.p.	55.6
Wood, wood products and furniture	23.6	19.5	14.5	7.1	7.2	3.2	0.2	0.5	75.9
Paper, paper products, printing and publishing	38.6	33.8	12.5	7.2	6.4	4.6	0.4	0.9	104.3
Chemical, petroleum and coal products	22.3	18.3	4.6	2.8	3.5	n.p.	n.p.	—	52.0
Non-metallic mineral products	13.4	10.6	7.2	3.1	4.3	0.8	0.2	0.2	39.8
Basic metal products	30.5	10.8	7.6	7.5	6.3	n.p.	0.8	n.p.	66.8
Fabricated metal products	34.9	29.3	15.8	7.6	7.9	1.5	0.4	0.4	97.7
Transport equipment	19.9	42.5	6.5	15.9	3.0	1.3	0.2	0.1	89.4
Other machinery and equipment	50.8	38.5	10.6	13.5	7.3	0.9	0.1	0.3	121.9
Miscellaneous manufacturing	20.0	23.4	6.5	7.3	3.0	0.5	0.1	0.1	60.8
Total manufacturing	330.9	316.0	125.7	94.4	64.3	24.3	2.9	3.2	961.8

Source: *Manufacturing Industry, Australia* (8221.0).

20.7 MANUFACTURING EMPLOYMENT/TURNOVER RATIOS

Industry subdivision	Persons employed per establishment (no.)					Turnover per person employed (\$'000)				
	1986-87	1987-88	1988-89	1989-90	1990-91	1986-87	1987-88	1988-89	1989-90	1990-91
Food, beverages and tobacco	40	38	41	41	43	147	158	173	190	207
Textiles	38	36	35	33	30	98	109	126	133	142
Clothing and footwear	28	26	26	25	22	57	62	70	78	89
Wood, wood products and furniture	11	11	13	12	11	74	82	91	99	103
Paper, paper products, printing and publishing	25	24	25	23	22	96	108	118	128	142
Chemical, petroleum and coal products	49	46	47	46	46	209	234	258	393	451
Non-metallic mineral products	17	17	22	22	24	136	146	169	187	189
Basic metal products	103	105	96	84	83	191	219	273	311	321
Fabricated metal products	16	15	17	16	15	85	95	109	121	126
Transport equipment	54	50	54	50	44	99	115	126	157	174
Other machinery and equipment	24	23	25	23	21	90	96	109	120	134
Miscellaneous manufacturing	16	16	17	16	16	98	107	120	131	140
Total manufacturing	25	24	26	25	24	112	124	140	162	179

Source: *Manufacturing Industry, Australia* (8221.0).

Labour costs

Major labour costs in the manufacturing industry fell marginally between 1989-90 and 1990-91 with labour costs for 1990-91 being only three

per cent above those for 1988-89. For each year in the period 1988-89 to 1990-91, earnings comprised around 88 to 89 per cent of total costs. This ratio is consistent with the average for all industries.

20.8 MAJOR LABOUR COSTS OF MANUFACTURING INDUSTRY

Type of labour cost	1990-91				
			Percentage distribution of labour costs by type		
	1988-89	1989-90	1990-91	Manufacturing	All industries
	\$m	\$m	\$m	%	%
Earnings	27,281	28,032	27,728	87.9	88.2
Other labour costs	3,316	3,596	3,818	12.1	11.8
Payroll tax	1,312	1,342	1,394	4.4	3.5
Superannuation	918	1,086	1,174	3.7	5.5
Workers' compensation	936	1,009	1,054	3.3	2.1
Fringe benefits tax	150	159	196	0.6	0.7
Total major labour costs	30,597	31,628	31,546	100.0	100.0

Source: *Labour Costs, Australia* (6348.0).

Average total labour costs per employee in 1990-91 of \$32,386 represented an increase of nearly 14 per cent over 1988-89 costs and was 5 per cent above 1989-90 costs. For

1990-91, the average labour costs in the manufacturing industry were significantly higher than the average of \$29,734 per employee for all industries.

20.9 AVERAGE LABOUR COST PER EMPLOYEE IN MANUFACTURING INDUSTRY (\$)

Type of labour cost	1988-89	1989-90	1990-91	
			Manufacturing	All industries
Earnings	25,374	27,306	28,466	26,225
Other labour costs	3,084	3,503	3,920	3,509
Payroll tax	1,220	1,307	1,431	1,029
Superannuation	853	1,058	1,205	1,647
Workers' compensation	871	983	1,082	630
Fringe benefits tax	140	155	201	203
Total major labour costs	28,457	30,809	32,386	29,734

Source: *Labour Costs, Australia* (6348.0).

Training expenditure

In the three month period July 1990 to September 1990, average training expenditure per employee in the manufacturing industry was \$148.80, with an average of 6.7 paid training hours per employee being recorded (table 20.10). Average training expenditure per employee in Chemical, petroleum and coal

products of \$309.60 was more than double the manufacturing average, with figures for Basic metal products and Transport equipment also being relatively high. Wood, wood products and furniture recorded the lowest value for average training expenditure per employee (\$76.50). The average of 16.8 paid training hours per employee recorded in Transport equipment was more than two and a half

times the manufacturing industry average of 6.7 hours per employee.

Although the manufacturing industry spent less on training per employee than the average for all industries, it had a higher average of paid training hours per employee.

20.10 MANUFACTURING INDUSTRY: AVERAGE TRAINING EXPENDITURE AND PAID TRAINING HOURS PER EMPLOYEE, JULY TO SEPTEMBER 1990

<i>Industry subdivision</i>	<i>Average training expenditure per employee(a)</i>	<i>Average paid training hours per employee(b)</i>
	\$	no.
Food, beverages and tobacco	89.1	3.5
Textiles, Clothing and footwear	95.3	4.1
Wood, wood products and furniture	76.5	4.9
Paper, paper products, printing and publishing	171.2	8.4
Chemical, petroleum and coal products	309.6	8.3
Non-metallic mineral products	103.9	4.3
Basic metal products	288.8	10.9
Fabricated metal machinery and equipment(c)	117.9	5.0
Transport equipment	275.9	16.8
Miscellaneous manufacturing	100.2	3.3
Total manufacturing	148.8	6.7
All industries	162.8	5.9

(a) Estimated training expenditure divided by estimated total number of employees. (b) The total time receiving formal training averaged over the total number of employees. (c) Includes Fabricated metal products and Other machinery and equipment.

Source: *Employer Training Expenditure, Australia (6353.0)*.

Industrial disputes

There were 239 industrial disputes in progress in the manufacturing industry during 1991. These disputes involved nearly 475,000 employees and resulted in a loss of more than 833,000 working days (table 20.11). The Basic metal products, Fabricated metal products, Transport equipment, and Other machinery and equipment industries combined accounted for 61 per cent of the disputes; comprising nearly 74 per cent of employees involved and 80 per cent of working days lost.

Although disputes in the manufacturing industry only represented 23 per cent of all disputes, 40 per cent of employees involved and 52 per cent of working days lost were attributable to this sector.

Trade union membership

Between 1982 and 1986, a fall in the proportion of manufacturing employees with trade union membership coupled with a contraction in manufacturing industry employment resulted in a decrease in union

membership of nearly 90,000 persons (14%) in this industry. The number of manufacturing employees with union membership fell a further 90,100 persons (17%) between 1986 and 1992, resulting in an overall fall of nearly 180,000 persons (28%) between 1982 and 1992. Despite this large fall in membership numbers, manufacturing industry continues to display a higher rate of union membership than the average for all industries (table 20.12).

The number of trade union members in all industries decreased between 1982 and 1992 and in percentage terms membership followed a downward trend similar to manufacturing.

Although nearly a half of permanent manufacturing employees belonged to a trade union in 1992, less than a fifth of casual employees were members. Female employees (both permanent and casual) displayed lower membership rates than males of the same employment status. The membership rate for casual manufacturing employees was higher than the all industries average (table 20.13).

20.11 MANUFACTURING INDUSTRY: INDUSTRIAL DISPUTES IN PROGRESS DURING 1991

<i>Industry subdivision</i>	<i>Total industrial disputes in progress (no.)(a)</i>	<i>Employees involved (directly and indirectly)('000)</i>	<i>Working days lost ('000)</i>
Food, beverages and tobacco	40	50.0	78.3
Textiles; Clothing and footwear	4	10.4	19.5
Wood, wood products and furniture	4	7.2	7.4
Paper, paper products, printing and publishing	18	29.7	33.2
Chemical, petroleum and coal products	18	15.7	18.9
Metal products, machinery and equipment(b)	146	350.3	664.0
Other manufacturing(c)	9	11.6	12.0
Total manufacturing	239	474.8	833.3
All industries	1,058	1,181.5	1,610.5

(a) Disputes affecting more than one industry have been counted as a separate dispute in each industry. (b) Includes Basic metal products; Fabricated metal products; Transport equipment; and Other machinery and equipment. (c) Includes Non-metallic mineral products; and Miscellaneous manufacturing.

Source: *Industrial Disputes, Australia* (6322.0).

20.12 EMPLOYEES WITH TRADE UNION MEMBERSHIP: MANUFACTURING AND ALL INDUSTRIES

	<i>Manufacturing</i>		<i>All industries</i>	
	<i>Number ('000)</i>	<i>Percentage of total employment</i>	<i>Number ('000)</i>	<i>Percentage of total employment</i>
March-May 1982	635.0	53.9	2,567.6	49.5
August 1986	545.4	51.2	2,593.9	45.6
August 1988	546.7	48.5	2,535.9	41.6
August 1990(a)	520.9	46.1	2,659.6	40.5
August 1992	455.3	44.4	2,508.8	39.6

(a) The August 1990 survey included persons aged 70 years and over.

Source: *Trade Union Members, Australia* (6325.0).

20.13 MANUFACTURING INDUSTRY: PROPORTION OF EMPLOYEES WITH TRADE UNION MEMBERSHIP BY SEX AND EMPLOYEE STATUS, AUGUST 1992 (per cent)

<i>Industry</i>	<i>Males</i>			<i>Females</i>			<i>Persons</i>		
	<i>Permanent employee</i>	<i>Casual employee</i>	<i>Total</i>	<i>Permanent employee</i>	<i>Casual employee</i>	<i>Total</i>	<i>Permanent employee</i>	<i>Casual employee</i>	<i>Total</i>
Manufacturing	50.5	21.6	48.2	38.6	16.7	33.6	47.8	19.1	44.4
All industries	48.1	18.4	43.4	42.9	16.5	34.8	46.0	17.2	39.6

Source: *Trade Union Members, Australia* (6325.0).

Capital expenditure

New capital expenditure in the manufacturing industry fell by 8 per cent between 1990-91 and 1991-92, with Textiles, Clothing and footwear (up 36%), Paper, paper products, printing and publishing (up 25%) and Basic metal products (up 24%) registering increases over the period. Fabricated metal products and

Other machinery and equipment (down 27%) experienced the largest fall in new capital expenditure in 1991-92. Only Basic metal products showed consecutive increases in the latest three years, while consecutive decreases were recorded for Transport equipment and Fabricated metal products and Other machinery and equipment over the same period.

20.14 PRIVATE NEW CAPITAL EXPENDITURE IN MANUFACTURING INDUSTRY (\$ million)

Industry subdivision	1989-90	1990-91	1991-92
Food, beverages and tobacco	1,315	1,379	1,171
Textiles; Clothing and footwear	376	192	262
Paper, paper products, printing and publishing	896	546	684
Chemical, petroleum and coal products	1,201	1,184	927
Basic metal products	1,168	1,321	1,639
Transport equipment	779	716	554
Fabricated metal products and Other machinery and equipment	1,060	846	620
Other manufacturing(a)	1,709	1,286	1,003
Total manufacturing	8,504	7,471	6,861

(a) Includes Wood, wood products and furniture; Non-metallic mineral products; and Miscellaneous manufacturing.

Source: *Private New Capital Expenditure, Australia, Actual and Expected Expenditure (5626.0)*.

Stocks

In average 1984-85 price terms, the value of stocks at end of June 1992 was three per cent lower than in June 1991, following a fall of five per cent between June 1990 and June 1991. Only Textiles (up 31%)

recorded a stock increase between June 1990 and June 1992. Fabricated metal products (down 23%) and Miscellaneous manufacturing (down 23%) showed the largest percentage stock rundowns between June 1990 and June 1992.

20.15 BOOK VALUE OF STOCKS OWNED BY PRIVATE MANUFACTURING BUSINESSES AT AVERAGE 1984-85 PRICES (\$ million)

Industry subdivision	1990	1991	June 1992
Food, beverages and tobacco	3,139	3,230	3,121
Textiles	624	688	815
Clothing and footwear	549	521	513
Wood, wood products and furniture	917	802	918
Paper, paper products, printing and publishing	902	761	793
Chemical, petroleum and coal products	2,254	2,158	2,187
Non-metallic mineral products	812	747	732
Basic metal products	2,089	1,962	1,976
Fabricated metal products	1,226	1,021	948
Transport equipment	1,443	1,405	1,162
Other machinery and equipment	2,294	2,183	1,859
Miscellaneous manufacturing	968	829	744
Total manufacturing	17,217	16,307	15,768

Source: *Stocks, Manufacturers' Sales and Expected Sales, Australia (5629.0)*.

Price indexes of articles produced

From 1988-89 to 1991-92, the price index of articles produced by the manufacturing industry rose by 11.6 per cent (over the same period,

the Consumer Price Index rose by 15.9%). The largest increase occurred in the price index of articles produced by the Petroleum products industry (34.3%).

20.16 PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY(a)
(Reference base year 1988-89 = 100.0)

<i>Industry subdivision</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Food, beverages and tobacco	106.9	109.5	112.3
Textiles	103.2	103.4	102.9
Clothing and footwear	107.3	112.0	114.9
Wood, wood products and furniture	107.6	112.7	114.2
Paper, paper products printing and publishing	104.3	111.0	117.3
Chemicals and chemical products	104.4	109.3	109.9
Petroleum products	118.4	150.1	134.3
Non-metallic mineral products	108.7	117.2	119.3
Basic metal products	105.6	106.2	99.9
Fabricated metal products	107.9	113.7	114.3
Transport equipment	105.6	109.9	112.7
Other machinery and equipment	104.2	107.0	107.0
Miscellaneous manufacturing	103.7	106.4	107.8
All manufacturing industry	106.5	111.2	111.6

(a) These indexes relate only to articles produced in the industry for sale or transfer outside the industry.

Source: *Price Indexes of Articles Produced by Manufacturing Industry, Australia (6412.0)*.

Company profits

Profits before income tax earned by manufacturing companies increased by 17 per cent between 1990-91 and 1991-92, however the 1991-92 profit figure of \$5,790 million was still 25 per cent lower than that recorded in 1989-90. Only Paper, paper products, printing and publishing; Food, beverages and tobacco; Textiles, Clothing and footwear; and Fabricated metal products and Other machinery and equipment recorded higher profits in 1991-92 than in 1989-90.

Basic metal products was a significant contributor to manufacturing profits in 1989-90 (19%), but a large fall in profits for 1991-92 resulted in this industry accounting for only two per cent of manufacturing profits in that year.

The increase in manufacturing profit of 17 per cent between 1990-91 and 1991-92 compared favourably with the selected main industries (principally mining, manufacturing, retail, wholesale and construction) increase of only five per cent.

20.17 MANUFACTURING COMPANIES: PROFIT BEFORE INCOME TAX BY INDUSTRY
(\$ million)

<i>Industry subdivision</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Food, beverages and tobacco	1,316	1,543	1,712
Textiles; Clothing and footwear	265	176	269
Paper, paper products, printing and publishing	376	263	752
Chemical, petroleum and coal products	1,022	711	686
Basic metal products	1,454	705	140
Transport equipment	457	-209	58
Fabricated metal products and Other machinery and equipment	1,015	603	1,016
Other manufacturing(a)	1,860	1,164	1,157
Total manufacturing	7,766	4,956	5,790

(a) Includes Wood, wood products and furniture; Non-metallic mineral products; and Miscellaneous manufacturing.

Source: *Company Profits, Australia (5651.0)*.

Foreign investment

The level of foreign investment in manufacturing industry in Australia was

\$50,066 million at 30 June 1991. The industries with the highest levels of foreign investment were Food, beverages and tobacco (\$13,869 million) and Basic metal products

(\$11,263 million). Between 30 June 1989 and 30 June 1991 the level of foreign investment in manufacturing industry increased by nearly eight per cent (in current price terms). Fabricated metal products (up 94%) and Miscellaneous manufacturing (up 28%) showed

the largest percentage increases. Four industry subdivisions recorded falls over the period, with Clothing and footwear (down 36%) and Textiles (down 34%) recording the largest percentage falls.

20.18 FOREIGN INVESTMENT IN MANUFACTURING INDUSTRY(a) AT 30 JUNE
(\$ million)

<i>Industry subdivision</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>
Food, beverages and tobacco	12,532	12,823	13,869
Textiles	553	432	365
Clothing and footwear	211	112	135
Wood, wood products and furniture	56	73	61
Paper, paper products, printing and publishing	3,475	3,935	3,503
Chemical, petroleum and coal products	5,302	5,374	5,340
Non-metallic mineral products	1,138	959	1,035
Basic metal products	11,242	10,625	11,263
Fabricated metal products	843	1,180	1,639
Transport equipment	2,335	2,406	2,510
Other machinery and equipment	2,917	2,632	2,866
Miscellaneous manufacturing	5,851	7,327	7,481
Total manufacturing	46,454	47,878	50,066

(a) The industry categories shown relate to the predominant activity of the enterprise group receiving the investment funds. This is not necessarily the industry of end use of the funds.

Source: *International Investment Position, Australia (5305.0)*.

Principal manufacturing commodities

Table 20.19 shows the total recorded production of some selected articles manufactured in Australia.

Of the 27 selected articles produced by manufacturing establishments, 13 had lower levels of production in 1991-92 than in 1990-91. Only nine commodities had higher levels of production in 1991-92 than in 1988-89.

Concentration in the Manufacturing Industry

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

In 1990-91, the most concentrated industries, in terms of the share of employment accounted for by the largest four enterprise groups, were Basic metal products (49%) and Non-metallic mineral products (40%). The

industries with the lowest levels of concentration were Wood, wood products and furniture (7%), Fabricated metal products (8%) and Other machinery and equipment (8%) (tables 20.20 and 20.21).

Manufacturing technology

The proportion of manufacturing establishments (employing more than nine people) using advanced manufacturing technologies increased by about one-quarter to 41 per cent in the three-year period to December 1991 (tables 20.22 and 20.23). Over the same period, the proportion of manufacturing establishments using the advanced management technique, Total Quality Control/Management (TQC/TQM), increased by more than half to 24 per cent. By 1996, a further nine per cent of manufacturers intend introducing advanced manufacturing technologies and 25 per cent intend introducing TQC/TQM. As at December 1991, the most widely used advanced manufacturing technology was computer aided design and/or engineering.

20.19 QUANTITIES OF SELECTED ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS

<i>Article</i>	<i>Unit of quantity</i>	<i>1988-89</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Basic iron, spiegeleisen and sponge iron	'000 tonnes	5,875	6,188	5,600	6,394
Iron and steel ingots or other primary forms(a)	'000 tonnes	6,651	6,681	6,219	6,444
Blooms and slabs(b)	'000 tonnes	2,578	2,440	2,521	2,485
Gas(c)	terajoules	548,454	591,210	536,193	553,438
Electricity	mill.kWh	144,839	151,907	153,822	156,413
Bricks, clay(d)	million	2,175	2,077	1,765	1,655
Cement, portland	'000 tonnes	6,901	7,075	6,110	5,709
Particle boards and similar boards(e)	'000 cu m	n.a.	768	625	644
Plastics in primary forms(f)	'000 tonnes	980	987	949	1,002
Sulphuric acid, oleum	'000 tonnes	1,878	1,464	986	816
Refrigerators, domestic	'000	380	346	363	372
Clothes washing machines, domestic	'000	397	330	326	296
Colour television sets(g)	'000	162	158	167	177
Electric motors	'000	3,076	2,528	2,480	2,421
Lawn mowers, rotary petrol type	'000	298	263	222	214
Motor vehicles					
Cars and station wagons	'000	333	386	311	269
Vehicles for goods and materials(h)	'000	30	26	18	15
Yarn(i)					
Cotton	tonnes	20,364	20,603	23,781	25,069
Wool	tonnes	21,458	19,758	18,809	18,551
Woven fabric(i)					
Cotton (incl. towelling)	'000 sq. m	36,316	40,452	35,766	38,417
Wool (incl. blanketing)	'000 sq. m	9,803	8,459	7,641	8,132
Man-made fibre	'000 sq. m	191,596	173,848	178,419	179,255
Textile floor coverings	'000 sq. m	45,923	45,101	42,854	41,881
Confectionery					
Chocolate base	tonnes	93,418	92,820	93,631	95,071
Other	tonnes	64,655	64,020	64,271	65,415
Beer(j)	million litres	1,951	1,939	1,915	1,862
Tobacco & cigarettes(k)	tonnes	27,158	27,318	26,833	24,538

(a) Includes ingots, puddled bars, pilings, blocks or lumps and steel in the molten state. There is a break in the series as statistics after 1991 exclude a small proportion of total production, due to the withdrawal of consent for the ABS to release the information. (b) From rolling and forging of iron and steel (primary mills output). Excludes from continuous casting. (c) Available for issue through mains. Includes natural gas. (d) For structural purposes. (e) Not laminated. Includes board for subsequent conversion to other purposes. (f) Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms. (g) Excludes combination with radio etc. (h) Includes utilities, panel vans and prime movers for semi-trailers. Excludes off-highway trucks (for example, dump wagons), materials handling trucks (for example, forklift trucks) and semi-trailers. (i) Includes mixtures predominantly of the fibre named. (j) Includes ale and stout. Excludes extra light beer containing less than 1.15 per cent but more than 0.5 per cent by volume of alcohol. (k) Source: Australian Tobacco Marketing Advisory Committee.

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

Source: ABS manufacturing production publications (8357.0 to 8363.0 and 8367.0 to 8369.0).

20.20 CONCENTRATION OF ENTERPRISES IN MANUFACTURING INDUSTRY IN TERMS OF EMPLOYMENT(a)

<i>Enterprise groups ranked by turnover</i>	<i>1977-78</i>		<i>1982-83</i>		<i>1987-88</i>		<i>1988-89</i>		<i>1990-91</i>	
	'000	Ratio	'000	Ratio	'000	Ratio	'000	Ratio	'000	Ratio
4 largest	88.1	0.08	82.4	0.08	64.7	0.06	67.4	0.06	39.2	0.04
8 largest	117.0	0.11	103.9	0.10	93.6	0.09	106.3	0.10	79.7	0.08
12 largest	147.7	0.13	137.3	0.14	120.6	0.11	137.4	0.13	101.5	0.11
16 largest	163.9	0.14	158.5	0.15	139.5	0.13	167.3	0.16	123.2	0.13
20 largest	183.0	0.16	166.7	0.16	154.7	0.15	183.0	0.17	152.4	0.16
25 largest	201.2	0.18	194.2	0.19	181.5	0.17	202.1	0.19	170.2	0.18
50 largest	283.3	0.25	281.7	0.28	250.2	0.24	284.7	0.27	244.3	0.25
100 largest	395.8	0.35	374.0	0.37	339.4	0.32	370.9	0.35	336.2	0.35
200 largest	520.4	0.46	475.3	0.47	431.9	0.41	459.5	0.43	412.8	0.43
All enterprise groups	1,132.7	1.00	1,011.6	1.00	1,063.8	1.00	1,072.6	1.00	961.8	1.00

(a) Employment at end of June. Includes working proprietors.

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

Source: *Manufacturing Industry, Concentration Statistics, Australia (8207.0)* and *Manufacturing Industry, Australia (8221.0)*.

**20.21 CONCENTRATION OF ENTERPRISES IN MANUFACTURING IN TERMS OF
EMPLOYMENT(a) BY INDUSTRY, 1990-91**

Industry subdivision	Enterprise groups ranked by turnover									
	Largest 4		5-8		9-12		13-16		Remainder	
	'000	Ratio	'000	Ratio	'000	Ratio	'000	Ratio	'000	Ratio
Food, beverages and tobacco	20.9	0.12	15.3	0.09	9.8	0.06	11.9	0.07	111.2	0.66
Textiles	5.0	0.18	1.8	0.06	2.5	0.09	1.4	0.05	17.7	0.62
Clothing and footwear	9.3	0.17	2.9	0.05	2.3	0.04	1.5	0.03	39.7	0.71
Wood, wood products and furniture	5.4	0.07	2.8	0.04	2.2	0.03	1.2	0.02	64.2	0.85
Paper, paper products, printing and publishing	24.6	0.24	7.2	0.07	4.0	0.04	4.7	0.05	63.9	0.61
Chemical, petroleum and coal products	8.1	0.16	2.9	0.06	3.6	0.07	2.3	0.04	35.1	0.68
Non-metallic mineral products	15.8	0.40	4.7	0.12	2.0	0.05	1.8	0.04	15.5	0.39
Basic metal products	32.4	0.49	9.1	0.14	6.6	0.10	2.7	0.04	16.0	0.24
Fabricated metal products	7.8	0.08	6.1	0.06	3.5	0.04	2.8	0.03	77.5	0.79
Transport equipment	22.0	0.25	9.2	0.10	7.6	0.08	6.0	0.07	44.6	0.50
Other machinery and equipment	10.0	0.08	6.9	0.06	5.8	0.05	3.3	0.03	95.9	0.79
Miscellaneous manufacturing	8.9	0.15	4.4	0.07	2.0	0.03	1.4	0.02	44.1	0.73
Total manufacturing	39.2	0.04	40.5	0.04	21.8	0.02	21.7	0.02	838.5	0.87

(a) Employment at end of June. Includes working proprietors.

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

Source: *Manufacturing Industry, Concentration Statistics, Australia (8207.0)* and *Manufacturing Industry, Australia (8221.0)*.

**20.22 PROPORTION OF MANUFACTURING ESTABLISHMENTS(a) WITH ADVANCED
TECHNOLOGY, 1988 AND 1991
(per cent)**

ASIC code	Industry subdivision	Proportion of manufacturing establishments having one or more technologies	
		1988	1991
21	Food, beverages and tobacco	28	32
23	Textiles	34	34
24	Clothing and footwear	15	29
25	Wood, wood products and furniture	23	30
26	Paper, paper products, printing and publishing	21	27
27	Chemical, petroleum and coal products	43	44
28	Non-metallic mineral products	41	47
29	Basic metal products	50	62
31	Fabricated metal products	31	46
32	Transport equipment	47	54
33	Other machinery and equipment	56	64
34	Miscellaneous manufacturing	34	44
21-34	Total manufacturing	33	41

(a) Establishments with employment of 10 or more.

Source: *Manufacturing Technology Statistics, Australia, 31 December 1991 (8123.0)*.

20.23 PROPORTION OF MANUFACTURING ESTABLISHMENTS^(a) WITH ADVANCED TECHNOLOGY, BY BROAD TECHNOLOGY CATEGORY, 31 DECEMBER 1991
(per cent)

ASIC code	Industry subdivision	Broad technology category				
		Design and engineering	Fabrication, machining and assembly	Automated material handling	Automated inspection and/or testing equipment	Communi- cations and control
21	Food, beverages and tobacco	8	13	9	7	29
23	Textiles	12	15	4	7	26
24	Clothing and footwear	15	17	3	1	8
25	Wood, wood products and furniture	17	18	3	3	13
26	Paper, paper products, printing and publishing	16	8	2	2	15
27	Chemical, petroleum and coal products	19	14	8	8	43
28	Non-metallic mineral products	12	20	15	7	36
29	Basic metal products	28	45	12	8	44
31	Fabricated metal products	23	34	2	1	21
32	Transport equipment	28	44	3	7	34
33	Other machinery and equipment	44	43	3	5	34
34	Miscellaneous manufacturing	23	25	5	7	24
21-34	Total manufacturing	21	24	5	4	24

(a) Establishments with employment of 10 or more.

Source: *Manufacturing Technology Statistics, Australia, 31 December 1991* (8123.0).

Research and experimental development

Research and experimental development (R&D) activity in the business context is systematic investigation or experimentation involving innovation or technical risk, the outcome of which is *new knowledge*, with or without a specific practical application or *new or improved* products, processes, materials, devices or services. R&D activity extends to modifications to existing products/processes.

Business enterprises classified to the Other machinery and equipment industry (see footnote (b) to table 20.24) accounted for nearly 36 per cent of all manufacturing research and development expenditure in 1990-91. Chemical, petroleum and coal products (17%) and Transport equipment (15%) were also major contributors to R&D expenditure.

Expenditure on R&D by manufacturing business enterprises increased by more than 50 per cent between 1986-87 and 1990-91. Paper, paper products, printing and publishing (up 254%) had the largest percentage increase over the period, while Textiles, Clothing and footwear (down 42%) was the only industry to experience a fall in R&D expenditure.

Between 1988-89 and 1990-91 falls in R&D expenditure were recorded by Wood, wood products and furniture (down 30%); Non-metallic mineral products (down 21%); Textiles, Clothing and footwear (down 18%); Transport equipment (down 4%) and Food, beverages and tobacco (down 2%).

Paper, paper products, printing and publishing (up 47%) and Basic metal products (up 43%) exhibited the largest percentage increases over the period.

**20.24 EXPENDITURE ON RESEARCH AND EXPERIMENTAL DEVELOPMENT
BY MANUFACTURING ENTERPRISES**
(\$ million)

Industry subdivision	1986-87	1988-89	Capital expenditure	Labour costs(a)	1990-91 Type of expenditure	
					Other current expenditure	Total
Food, beverages and tobacco	58.8	87.4	11.9	42.5	30.9	85.3
Textiles; Clothing and footwear	12.9	9.1	1.1	3.3	3.1	7.5
Wood, wood products and furniture	6.4	10.4	0.5	4.4	2.4	7.3
Paper, paper products, printing and publishing	10.0	24.1	6.3	10.8	18.4	35.4
Chemical, petroleum and coal products	120.1	147.1	17.7	84.1	76.9	178.7
Non-metallic mineral products	15.3	22.2	2.9	7.4	7.3	17.5
Basic metal products	63.2	91.4	23.3	49.6	57.6	130.5
Fabricated metal products	23.0	26.1	7.8	15.0	9.9	32.6
Transport equipment	127.9	162.3	14.5	81.9	58.7	155.0
Photographic, professional and scientific equipment(b)	25.7	35.7	3.8	23.0	15.1	41.9
Appliances and electrical equipment(b)	174.5	236.4	25.0	155.4	94.8	275.1
Industrial machinery and equipment(b)	43.3	56.1	3.6	27.6	29.1	60.3
Miscellaneous manufacturing	21.6	27.1	3.8	16.3	12.8	32.9
Total manufacturing	702.7	937.2	122.0	521.2	416.9	1,060.0

(a) Includes wages and salaries, payroll tax, payments to contract staff on the payroll, fringe benefits tax and workers compensation, holiday pay, long service leave payments, sick pay, employer contributions to superannuation and pension schemes. (b) Photographic, professional and scientific equipment; Appliances and electrical equipment; and Industrial machinery and equipment comprise subdivision 33 (Other machinery and equipment) of ASIC.

Source: *Research and Experimental Development, Business Enterprises, Australia (8104.0)*.

Commonwealth government authorities

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

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

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

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

Department of Industry, Technology and Regional Development. Through its many diverse programs, the Department of Industry, Technology and Regional

Development (DITRD) aims to develop and support international competitiveness throughout the manufacturing and services sectors. In support of this mission, a number of broad priority areas have been identified:

- internationalisation of Australian industry;
- creation of world class firms and markets;
- achievement of the competitive potential of particular industry sectors;
- achievement of an efficient and attractive general business environment; and
- strengthening of the national science and technology infrastructure (see also chapter on Science and Technology).

The Department has primary responsibility for advising the Government on industry, science and technology. It also delivers programs on behalf of the Government to firms in the Australian manufacturing and services sectors and to the science and technology community.

The Department has two major programs:

- Industry Sectors Program; and
- Industry Infrastructure Program.

The Industry Sectors Program promotes internationally competitive manufacturing and services industries. Of particular priority in 1991-92 were the resource based sectors, including food processing and forest products and the telecommunications and information technology industries. The Industry Sectors Program is administered by the Heavy Industries Light Industries, Construction and Service Industries and Resource Processing and Environment Divisions.

The Industry Infrastructure Program provides an infrastructure which gives the manufacturing and services sectors a greater capacity to become internationally competitive. The Program is administered by the Innovation, International and Policy and Projects Divisions, by the Bureau of Industry Economics, by the Trade Marks and Designs Office and by the NIES Branch of the Heavy Industries Division.

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

Technology and Regional Development, the Bureau has professional independence in the conduct and reporting of its research.

The major objectives of the Bureau are to:

- increase community and industry understanding of economic developments and industry policy issues in the manufacturing and services sectors by conducting and publishing objective research;
- carry out applied economic research to assist the evaluation and formulation of industry policies and programs; and
- foster basic and applied economic research into industry policy issues at Australian tertiary institutions and research institutes.

The research and analysis carried out by the Bureau seeks to identify the principal factors influencing industry performance and growth so that a more competitive and efficient industry structure can be developed.

Major research projects completed by the BIE in 1991-92 include:

- international performance indicators — electricity;
- international performance indicators — rail freight;
- international comparison of the cost of capital;
- environmental regulation: the economics of tradeable permits;
- regulation of occupational noise;
- finance for small business;
- networks: a third form of organisation;
- international comparisons of plant productivity;
- economic evaluation of the CSIRO's industrial research;
- the pharmaceutical industry: impediments and opportunities; and
- economic evaluation of the national space program.

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

The Bureau publishes the results of its research, makes submissions to public enquiries and organises seminars and conferences on key issues of industry economics. The Bureau holds an annual Manufacturing Outlook Conference and Conference of Industry Economics.

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

RETAIL TRADE

The retail and related service industries are a major sector of the Australian economy. These businesses number in excess of 200,000 and employ over 900,000 people.

The most recent statistics about retail trade are derived from a monthly survey of employing businesses. (Non-employers are excluded from

the survey.) Data from this and several other collections are discussed below.

At June 1992, retail trade, adjusted for seasonal and price fluctuations, was at higher levels than in late 1989 and early 1990. As indicated in graph 20.26, this upward trend began with the March quarter 1991, ending the decline of the previous four quarters.

In constant price terms, that is, removing the effect of price changes, 1991-92 retail trade more than recovered the decrease recorded in 1990-91, (table 20.25). Growth of 2.3 per cent for the year put retail trade at a level 0.7 per cent higher than at the end of 1989-90.

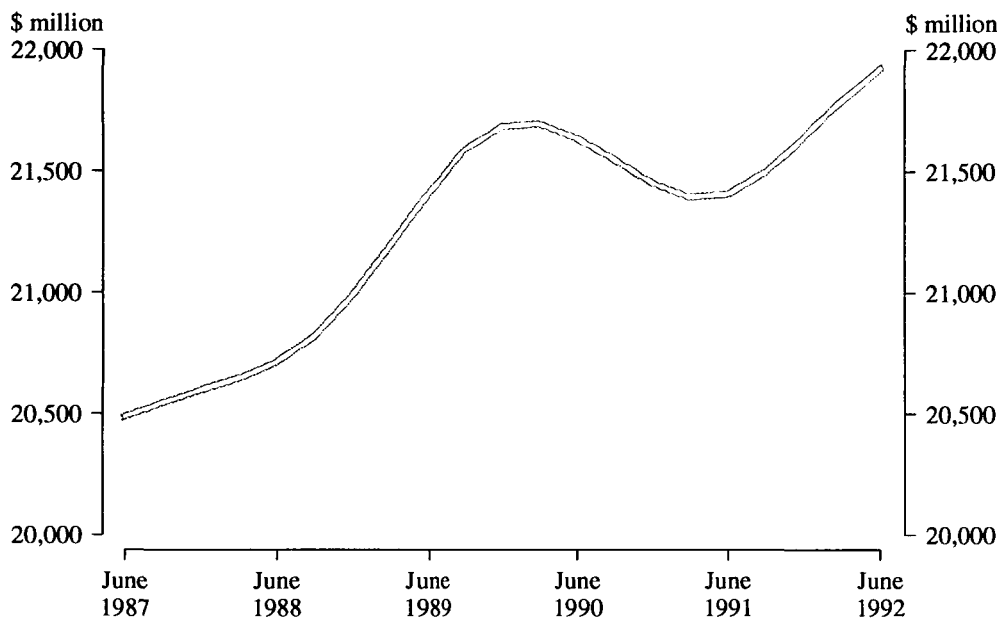
Growth was experienced across most sectors with only two industries, Electrical goods stores and Hotels, liquor stores and licensed clubs, recording decreases. Hotels, liquor stores and licensed clubs contracted by 7.5 per cent in real terms. Butchers recorded real growth of 0.7 per cent compared with a nominal decrease of 1.0 per cent, indicating that sales were greater in volume but at lower prices than the previous financial year.

**20.25 TURNOVER OF SELECTED RETAIL ESTABLISHMENTS AT CONSTANT
(AVERAGE 1989-90) PRICES
(\$ million)**

<i>Industry</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Grocers, confectioners, tobacconists	23,635.5	24,387.2	25,426.5
Butchers	2,220.4	2,219.2	2,233.9
Other food stores	5,769.2	5,808.5	6,147.6
Hotels, liquor stores, licensed clubs	11,730.9	11,231.3	10,393.0
Cafes and restaurants	4,327.5	4,056.5	4,360.6
Clothing and fabric stores	6,376.4	6,205.5	6,481.7
Department and general stores	9,726.0	9,364.4	9,667.9
Footwear stores	1,146.7	1,161.0	1,214.2
Domestic hardware stores, jewellers	2,767.8	2,593.7	2,769.5
Electrical goods stores	5,339.3	5,188.4	5,110.5
Furniture stores	1,822.2	1,720.8	1,836.1
Floor coverings stores	781.5	714.7	765.5
Pharmacies	3,324.0	3,382.0	3,432.3
Newsagents	3,166.8	2,927.9	2,936.2
Other stores	4,525.4	4,378.8	4,495.8
Total	86,659.6	85,339.9	87,271.3

Source: Retail Trade, Australia (8501.0).

**20.26 TURNOVER OF SELECTED RETAIL ESTABLISHMENTS AT CONSTANT
(AVERAGE 1989-90) PRICES**



Source: Unpublished ABS data.

In current price terms retail trade for the financial year 1991-92 amounted to \$93,698.5 million (table 20.27). This

represented a 5.2 per cent increase on 1990-91 which in turn was up 2.8 per cent on the previous financial year.

**20.27 TURNOVER OF SELECTED RETAIL ESTABLISHMENTS AT CURRENT PRICES
(\$ million)**

<i>Industry</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Grocers, confectioners, tobacconists	23,635.5	25,468.1	27,282.4
Butchers	2,220.4	2,237.2	2,214.0
Other food stores	5,769.2	5,938.3	6,499.6
Hotels, liquor stores, licensed clubs	11,730.9	11,985.7	11,486.0
Cafes and restaurants	4,327.5	4,295.7	4,792.7
Clothing and fabric stores	6,376.4	6,496.2	6,888.3
Department and general stores	9,726.0	9,734.1	10,248.8
Footwear stores	1,146.7	1,200.1	1,289.5
Domestic hardware stores, jewellers	2,767.8	2,591.9	2,827.4
Electrical goods stores	5,339.3	5,217.3	5,150.1
Furniture stores	1,822.2	1,828.0	2,008.8
Floor coverings stores	781.5	745.7	793.7
Pharmacies	3,324.0	3,688.8	4,076.4
Newsagents	3,166.8	3,079.8	3,266.8
Other stores	4,525.4	4,588.2	4,874.1
Total	86,659.6	89,094.9	93,698.5

Source: Retail Trade, Australia (8501.0).

Growth was recorded in most retail industries but Butchers; Hotels, liquor stores and licensed clubs; and Electrical goods stores reported decreases. The strongest growth was achieved by Cafes and restaurants; Pharmacies; Domestic hardware stores and jewellers; and Furniture stores; with the largest industry, Grocers, reporting solid growth.

Retail sales of commodities

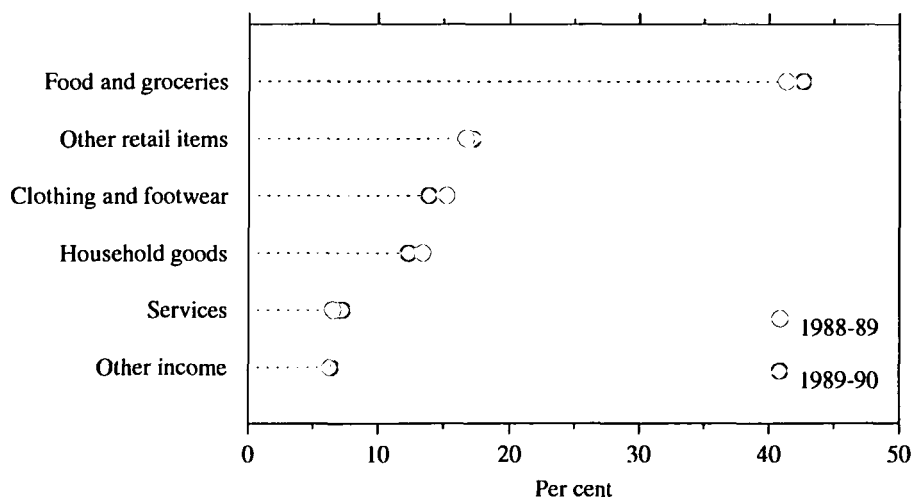
Sales in the Food and groceries commodity group were the largest component of turnover of the retail and related service industries in 1988-89 and 1989-90. For 1988-89 the Food

and groceries commodity group accounted for \$31,703 million or 42.1 per cent of total turnover. Sales increased to \$37,013 million or 42.7 per cent in 1989-90.

Of the other major commodities, Clothing and footwear accounted for 15.3 per cent of total turnover in 1988-89 and 13.9 per cent in 1989-90, while Household goods accounted for 13.5 per cent and 12.4 per cent in 1988-89 and 1989-90 respectively.

Graph 20.28 shows the proportions that each of the commodity groups represented of the total turnover figure in these two years.

20.28 MAJOR COMMODITY GROUPS, PROPORTION OF TOTAL TURNOVER
1988-89 AND 1989-90
(current prices)

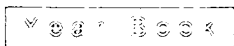


Source: Retail Trade, Australia, Commodity Details (8512.0).

Employment

At March 1992 there were 935,553 people employed in the retail and related service industries compared with 912,362 at March 1991. Overall, there were more part-time employees (57.7%) than full time. In the 12

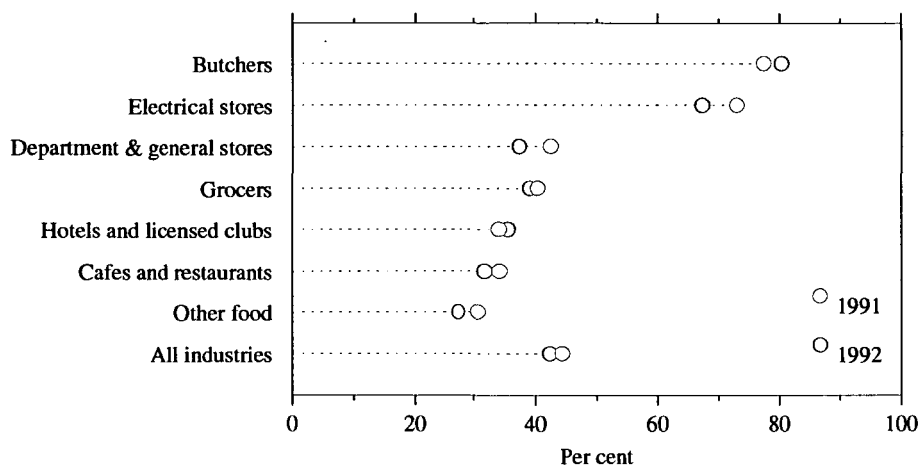
months ending March 1992, the number of full-time employees fell from 405,113 (44.4%) to 395,879 (42.3%) (graph 20.29). This drop was the result of a 2.3 per cent decrease in the number of full-time jobs and a 6.4 per cent increase in the number of part-time positions.



The composition of the work force varies across different types of retail stores. For instance, Butchers employ predominantly

full-time workers, while Hotels, liquor stores and licensed clubs employ mostly part-time workers (graph 20.29).

**20.29 PERCENTAGE OF FULL-TIME EMPLOYEES FOR SELECTED RETAIL INDUSTRIES
MARCH QUARTERS 1991 AND 1992**

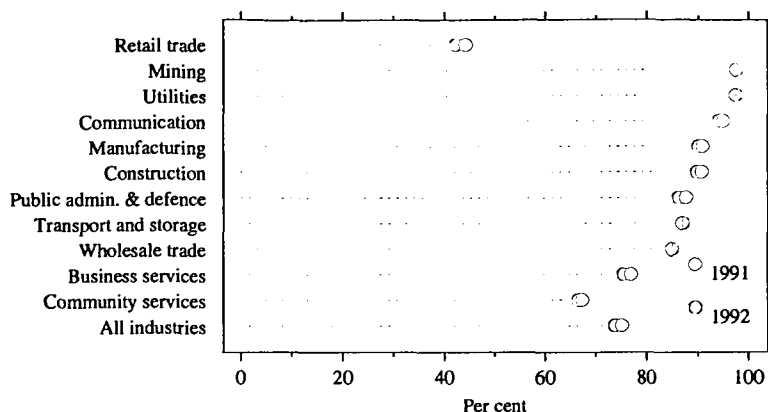


Source: Unpublished data under the title *Employed Wage and Salary Earners, Australia* (6248.0).

In comparison with other industries, retail trade has a significantly lower percentage of full-time employees (graph 20.30). Also indicated in the graph, is the relatively greater fall in the proportion of full-time employees in retail trade

compared with other industries, such as Wholesale trade and Mining, where there has been little or no apparent shift in the proportion of full-time workers.

**20.30 PERCENTAGE OF FULL-TIME EMPLOYEES FOR SELECTED INDUSTRIES
MARCH QUARTERS 1991 AND 1992**



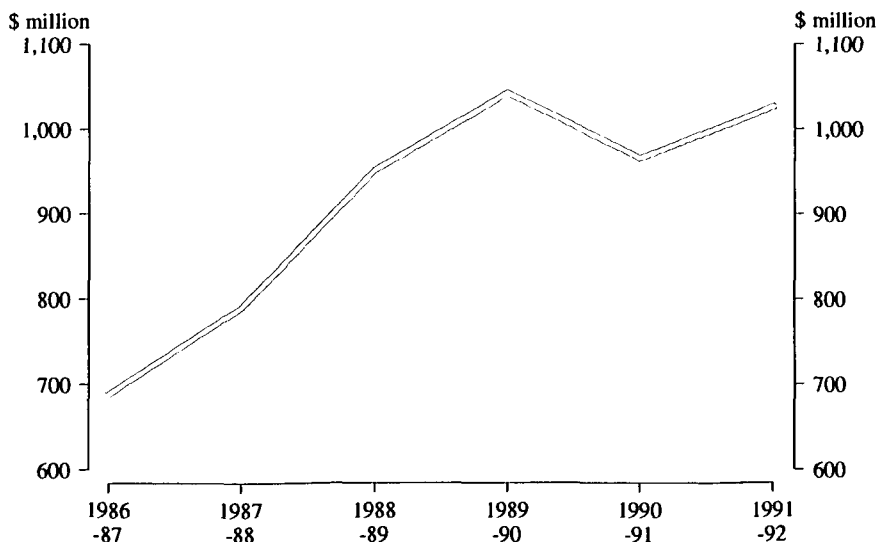
Source: *Employed Wage and Salary Earners, Australia* (6248.0).

Company profits

Company profits of the retail industry for the 1991-92 financial year amounted to more than

a billion dollars, a recovery to 1989-90 profit levels. Food stores were the major contributor to retail company profits (graph 20.31).

20.31 TOTAL RETAIL TRADE(a), COMPANY PROFITS BEFORE TAX



(a) Profits from cafes and restaurants, hotels and licensed clubs, and the sale of motor vehicles, are excluded.

Source: *Company Profits, Australia* (5651.0).

SERVICE INDUSTRIES

Surveys of service industries are only conducted by the ABS periodically. The next surveys are being undertaken in respect of 1991-92 and the results are not yet available.

The following table provides a summary of operational characteristics of certain service industries covered in the Services Industries Surveys for 1986-87 and 1987-88.

20.32 SELECTED SERVICE INDUSTRIES: SUMMARY OF OPERATIONS
1986-87 AND 1987-88

<i>Industry (ASIC class)</i>	<i>Enterprises operating at end June</i>	<i>Persons employed at end June</i>	<i>Wages and salaries(a)</i>	<i>Turnover</i>	<i>Gross product</i>	<i>Net operating surplus</i>
	<i>no.</i>	<i>no.</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
1986-87						
Motor vehicle hire (5711)	281	3,173	54.8	446.8	102.1	20.6
Travel agency services (5741)(b)	1,494	11,632	191.5	428.8	207.2	- 0.2
Motion picture theatres (9133)	202	4,472	56.6	256.5	96.2	29.2
Cafes and restaurants (9231)	8,489	85,974	646.7	2,583.9	942.2	221.5
Hotels and bars (9232)	4,986	82,644	814.8	4,807.6	1,270.0	370.5
Accommodation (9233)	4,841	56,364	640.3	2,281.5	1,078.8	310.7
Licensed clubs (9241-3)	3,927	52,336	687.8	2,636.1	1,059.4	229.0
Laundries and dry cleaners (9340)(c)	1,581	12,452	142.0	400.1	228.4	52.6
Hairdressers and beauty salons (9351-2)	11,027	39,628	300.0	790.0	433.0	113.1
Photography services (9361)	1,547	4,290	36.5	183.3	67.6	23.3
1987-88						
Real estate agents (6310)	5,741	42,196	835	2,201	1,262	356
Architectural services (6334)	4,534	17,717	354	1,030	584	185
Surveying services (6335)	1,104	6,872	116	309	178	46
Engineering and technical services (6336)(d)	5,190	28,326	682	1,716	1,000	223
Legal services (6371)	6,459	55,363	500	3,069	1,427	884
Accounting services (6372)	6,048	49,479	503	2,334	1,050	497
Computing services (6381)	3,691	24,067	585	1,628	775	78
Advertising services (6382)	2,390	16,048	423	4,675	619	147
Debt collecting and credit reporting services (6385)	234	2,658	52	142	69	12
Pest control services (6386)	565	2,902	44	135	76	25
Cleaning services (6387)(e)	4,181	44,322	330	622	434	81
Security/protection and business services n.e.c. (6388 and 6389)(f)	1,087	25,483	365	839	515	120

(a) Gross earnings of all employees before taxation and other deductions. Drawings of working proprietors and partners are excluded.

(b) Includes Australian branch offices of foreign resident airlines and the travel agency divisions of the major financial institutions (mainly banks). (c) Excludes carpet cleaning services. (d) Includes quantity surveyors. (e) Includes carpet cleaning services.

(f) Excludes quantity surveyors.

Source: ABS Service Industry survey publications (8652.0 to 8660.0 and 8663.0 to 8673.0).

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FOR MORE INFORMATION

The ABS has a far wider range of information on Australia than that contained in the *Year Book*. Information is available in the form of regular publications, electronic data services, special tables and from investigations of published and unpublished data.

For further information contact ABS Information Services at one of the addresses listed on the page facing the Introduction to the *Year Book*.