

RETAIL SALES OF GOODS



DECEMBER QUARTER 1970



COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
CANBERRA, AUSTRALIA

Reference No. 11.4

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PREFACE

This bulletin contains particulars of the value of retail sales of goods by commodity group for each State and Australia for December quarter 1970 and for some earlier periods. Monthly totals, for Australia only, from July 1966 to February 1971 are also shown.

2. Figures for the years 1947-48, 1948-49, 1952-53, 1956-57 and 1961-62 are derived from censuses of retail establishments taken in respect of those years. Figures shown for other years and for monthly and quarterly periods are estimates derived from sample surveys of retail establishments conducted by the Bureau each month and quarter.

Scope of the statistics

3. The statistics included in this bulletin relate to retail sales of goods made by establishments which normally sell by retail to the general public from fixed premises. Sales from premises not open to the general public, such as licensed clubs, are excluded. Sales of some delivered milk and bread are also excluded. Sales of services (as distinct from goods) such as repairs, accommodation, entertainment and meals are excluded. Retail sales relate principally to sales to the final consumer of goods generally used for household and personal purposes. For this reason, sales of building materials, builders' hardware and supplies such as tools of trade, paint, etc., commercial refrigerators, business machines and equipment, tractors, farm machinery and implements, earth-moving equipment, grain, feed, fertilisers and agricultural supplies have been excluded.

4. Details are shown of the value only of retail sales of goods. To assess the movement in the volume of retail sales made, it would be necessary to allow for variation in prices.

Quarterly estimates

5. Quarterly statistics shown in this bulletin are derived from returns received from a sample of retail establishments throughout Australia. These establishments account for approximately 45 per cent of the total value of retail sales in Australia. From these sample returns, totals of all retail establishments in Australia are estimated by methods appropriate to a stratified sample. Estimates from June quarter 1969 are subject to revision at a later stage when more precise information is available relating to trading by new businesses.

6. In addition to the estimates compiled from the full sample, preliminary quarterly figures, which are normally published in less detail about eight weeks after the end of each quarter, are compiled on the basis of returns received from approximately 80 per cent of establishments included in the full quarterly sample. The preliminary figures for December quarter 1970 published in the bulletin "Retail Sales of Goods (Preliminary)" (Reference No. 11.5) of 1 March 1971 are now replaced by the December quarter figures shown herein.

Monthly estimates

7. Provisional monthly estimates, which are published about four weeks after the end of each month, relate only to the total value of retail sales in Australia (excluding motor vehicles, parts, petrol, etc.). These estimates are based on monthly returns collected from a sub-sample of the establishments included in the quarterly sample. The monthly sub-sample is comparatively small since it is designed to provide prompt estimates of the value of retail sales without placing an undue burden on either the resources of the Bureau or upon retail establishments. Monthly estimates are subsequently adjusted in accordance with quarterly estimates when the latter become available.

Standard errors of estimates

8. As the estimates are derived from returns received from a sample of retail establishments they may differ from the results which would have been obtained by a comparable complete collection. A measure of the likely difference is given by the standard error of the estimates. There are about 2 chances in 3 that a sample estimate will differ from results which would be obtained from a comparable complete collection by less than 1 standard error and 19 chances in 20 that the difference would be less than 2 standard errors. If, for example, a sample gives an estimate of \$500 million and the standard error of this estimate is 1 per cent, i.e. \$5 million, then there would be 2 chances in 3 that a comparable complete collection would give a figure within the range of \$495 million to \$505 million and 19 chances in 20 that the figure would be within the range of \$490 million to \$510 million.

9. For December quarter 1970, the standard error of the estimate of total value of retail sales (excluding motor vehicles, parts, petrol, etc.) for Australia is approximately 0.4 per cent and for each State varies between 0.8 and 1.0 per cent. The standard errors of estimates for individual commodity groups (including motor vehicles, parts, petrol, etc.) for Australia vary between 0.9 and 1.6 per cent and those of the corresponding estimates for each State vary between 1.0 and 4.0 per cent and are generally below 3.5 per cent. Set out in the table below are details of the standard errors of the estimates for Australia for individual commodity groups.

VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS
ESTIMATED STANDARD ERRORS, DECEMBER QUARTER 1970

Commodity group	Estimated standard error of the value of retail sales for Australia (per cent)
Groceries	1.1
Butchers' meat	1.2
Other food	1.3
Beer, wine and spirits	1.5
Clothing and drapery	0.9
Footwear	1.5
Hardware, china and glassware	1.4
Electrical goods	1.1
Furniture and floor coverings	1.3
Chemists' goods	1.4
Newspapers, books and stationery	1.6
Other goods	1.3
Total (excl. motor vehicles, parts, petrol, etc.)	0.4
Motor vehicles, parts, petrol, etc.	1.3

10. The standard errors shown in paragraph 9 above give a measure of the accuracy of the level of the current quarterly estimates of the value of retail sales. The standard error of the movement in the value of retail sales from quarter to quarter, i.e. the difference between the estimates for the current and previous quarters, is generally about one-third of the standard error of the level of the current quarterly estimate of the value of retail sales. For example, the standard error of the estimate of the value of total retail sales (excluding motor vehicles, parts, petrol, etc.) for Australia is shown in paragraph 9 above as being about 0.4 per cent and the standard error of the corresponding estimate of movement is therefore about 0.1 per cent. The original series in Table 1 of this bulletin shows the movement in the total value of retail sales (excluding motor vehicles, parts, petrol, etc.) for Australia between September and December quarter 1970 as being an increase of \$416.5 million; the standard error of this estimated movement is about 0.1 per cent of the December quarter 1970 estimate of the value of retail sales or approximately \$2.5 million. Therefore, there are 2 chances in 3 that the movement between September and December quarter 1970 was between \$414.0 million and \$419.0 million and 19 chances in 20 that it was between \$411.5 million and \$421.5 million. Expressed in another way, the series shows a proportionate movement of 19.6 per cent in the total value of retail sales (excluding motor vehicles, parts, petrol, etc.) for Australia between September and December quarter 1970 and this has a standard error of 0.1 percentage points, i.e. there are 2 chances in 3 that the proportionate movement was between 19.5 per cent and 19.7 per cent and 19 chances in 20 that it was between 19.4 per cent and 19.8 per cent.

11. The standard error of the provisional estimates of the total value of monthly retail sales (excluding motor vehicles, parts, petrol, etc.) is about 1.0 per cent. The standard error of the month-to-month movement of the provisional estimates of the value of retail sales is generally about 0.3 per cent of the current monthly estimate. For example, the movement in the value of retail sales between the months of January 1971 and February 1971 is shown by the original series in Table 2 as a decrease of \$45.0 million. The standard error of this movement is about 0.3 per cent of the February 1971 estimate i.e. approximately \$2.0 million. Therefore, there are 2 chances in 3 that the movement in the value of retail sales between January and February 1971 was between \$43.0 million and \$47.0 million and 19 chances in 20 that it was between \$41.0 million and \$49.0 million. Expressed in another way, the estimates show a proportionate movement in the value of retail sales between January and February 1971 of 6.3 per cent and this has a standard error of about 0.3 percentage points, i.e. there are 2 chances in 3 that the proportionate movement was between 6.0 per cent and 6.6 per cent and 19 chances in 20 that it was between 5.7 per cent and 6.9 per cent.

12. The provisional monthly estimates may also differ from those which would be obtained from a sample as large as that used to provide quarterly estimates. Hence, the sum of the provisional estimates for the three months comprising a quarter may differ from the estimate obtained for that quarter from the full quarterly sample. The standard error of this difference is approximately 0.8 per cent of the quarterly estimate. The monthly estimates are subsequently adjusted in accordance with the preliminary and final quarterly estimates as soon as they become available.

Seasonally adjusted statistics

13. This bulletin also includes seasonally adjusted retail sales statistics (see Tables 1, 2, 4 and 11). In addition to being adjusted for normal seasonal factors, all series have been adjusted for "trading-day" effects arising from the varying numbers of Sundays, Mondays, Tuesdays, etc. in each month or quarter. While the normal seasonal factors should change only gradually from year to year, the trading-day adjustment for any month or quarter will vary from year to year in accordance with the combination of days which occur in the month or quarter. Adjustment has also been made for the effects of movements in the date of Easter and in this issue the monthly series has been adjusted for the movement in the date of Australia Day. Each of the component series shown in Table 4 has been seasonally adjusted independently. As a consequence, while the unadjusted components in the original series shown in Table 4 add to the totals, the adjusted components may not add to the adjusted totals. It should be noted that the seasonally adjusted figures reflect the sampling errors to which the original figures are subject. Details of the seasonal adjustment methods used together with selected measures of variability for these series are given in the Appendix of this bulletin. Comparative details for other series and a general description of the seasonal adjustment method are given in "Seasonally Adjusted Indicators 1970" (Reference No. 1.10) of 29 June 1970.

Commodity groups

14. In tables in this bulletin showing details of retail sales by commodity group, it should be noted that -

Butcher's meat includes frozen packaged meat;

Other food includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, smallgoods, fish and poultry and wrapped lunches;

Electrical goods includes radios, television and accessories, domestic refrigerators and musical instruments;

Other goods includes tobacco and cigarettes, jewellery, sporting and travel goods, toys and photographic equipment.

N.T. and A.C.T.

15. Particulars in Tables 1-11 of this bulletin exclude the Northern Territory and the Australian Capital Territory. Details of annual retail sales in these territories are included in Tables 12 and 13. Quarterly figures are not collected for the Northern Territory or the Australian Capital Territory. The figures in Tables 12 and 13 relate only to establishments with total annual retail sales of \$1,000 or more. For further details see "Survey of Retail Establishments, Northern Territory" (Reference No. 11.2) of 22 April 1969 and "Survey of Retail Establishments, Australian Capital Territory" (Reference No. 11.3) of 21 February 1969.

VALUE OF RETAIL SALES: AUSTRALIA QUARTERLY TOTALS

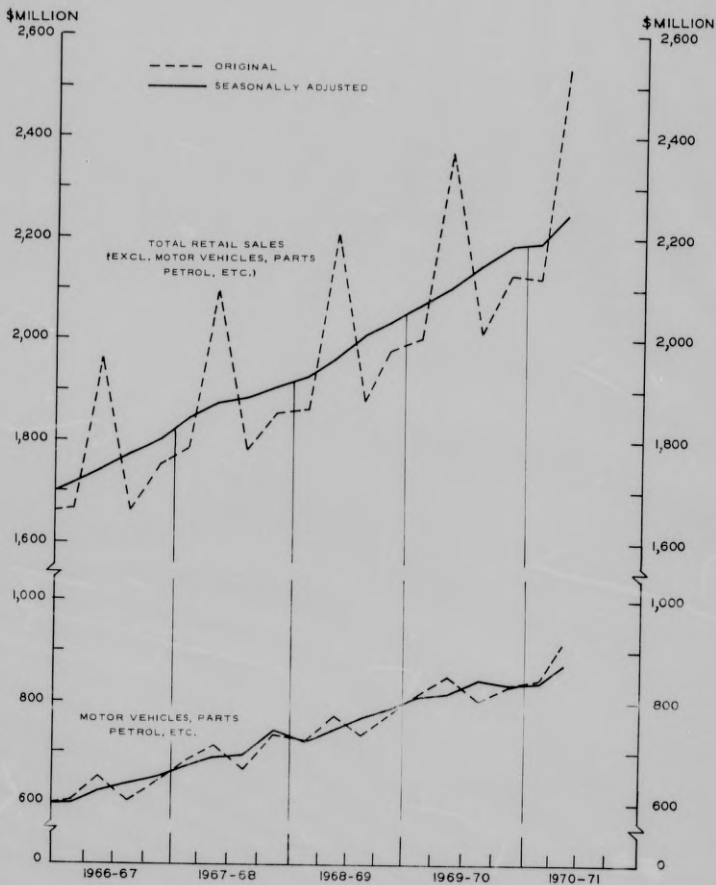


TABLE 3. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) : AUSTRALIA (a)
(\$ million)

Commodity group	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
Groceries	858.3	892.8	939.0	1,014.4	1,090.4	1,161.5	1,248.2	1,317.7	1,399.9
Butchers' meat	422.3	444.9	469.7	510.9	548.7	590.3	615.5	627.7	667.9
Other food	729.9	765.6	795.2	847.1	891.5	946.5	999.6	1,029.2	1,097.9
Total food and groceries	2,010.5	2,103.3	2,203.9	2,372.4	2,530.6	2,698.3	2,863.3	2,974.6	3,165.7
Beer, wine and spirits ..	545.9	574.4	593.2	631.1	684.4	743.8	811.0	863.7	936.8
Clothing and drapery ..	900.0	930.0	1,015.1	1,079.5	1,120.4	1,172.9	1,246.2	1,304.0	1,384.6
Footwear	154.7	162.4	171.1	177.4	180.5	197.3	208.9	213.6	229.4
Hardware, china and glassware ..	146.0	155.0	153.5	162.9	164.0	175.6	183.4	200.3	221.6
Electrical goods	348.0	367.2	390.1	415.0	401.0	408.8	445.5	462.0	496.6
Furniture and floor coverings ..	230.1	245.0	272.2	302.6	311.4	322.3	355.9	388.7	423.0
Chemists' goods	265.8	284.3	305.6	333.8	362.0	387.5	416.8	453.3	499.3
Newspapers, books and stationery ..	166.4	172.7	190.9	202.5	213.7	235.0	251.9	270.0	292.4
Other goods	489.7	520.6	562.5	608.9	653.3	701.1	734.7	802.1	867.5
Total (excluding motor vehicles, parts, petrol, etc.)	5,257.1	5,514.9	5,858.1	6,286.1	6,621.3	7,042.6	7,517.6	7,932.3	8,516.9

(a) Excludes Northern Territory and Australian Capital Territory (see Tables 7 and 8).

TABLE A. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) : AUSTRALIA (a)

(£ million)

Commodity group	September quarter					December quarter				
	1966	1967	1968	1969	1970	1965	1966	1967	1968	1969
Original										
Groceries ..	282.0	302.4	316.1	337.1	358.9	292.1	311.0	334.0	348.9	370.4
Butchers' meat ..	145.7	155.9	156.5	163.2	174.0	139.4	147.0	154.0	156.3	169.7
Other food ..	226.2	238.8	246.5	259.6	277.2	235.2	248.2	261.0	271.1	287.1
Total food and groceries	653.9	697.1	719.1	759.9	810.1	666.7	706.2	745.0	776.3	827.2
Beer, wine and spirits ..	167.3	181.6	192.0	212.4	225.4	190.5	206.9	223.9	240.2	258.5
Clothing and drapery ..	270.9	297.1	302.9	321.4	336.2	324.2	339.3	362.5	377.6	400.1
Footwear ..	45.7	50.0	49.1	52.8	53.8	50.7	56.0	60.5	60.5	64.7
Hardware, china and glassware ..	38.7	40.9	43.7	49.3	51.5	51.7	55.4	58.6	63.0	70.2
Electrical goods	97.5	102.8	107.9	116.2	122.3	116.9	118.0	129.3	134.5	146.5
Furniture and floor coverings ..	79.8	87.6	94.8	104.3	109.9	90.1	93.1	103.6	113.3	122.5
Chemists' goods	93.8	100.2	107.7	119.2	130.1	100.8	108.6	117.1	125.2	138.2
Newspapers, books and stationery..	53.3	56.9	60.5	65.8	69.8	61.4	65.9	70.3	75.5	80.4
Other goods ..	163.3	172.6	184.5	199.9	213.5	199.3	212.3	220.9	243.5	265.0
Total (excl. motor vehicles, parts, petrol, etc.)	1664.2	1786.8	1862.2	2001.2	2122.6	1852.3	1961.7	2091.7	2209.6	2373.3

Seasonally adjusted (b)

Groceries ..	283.1	304.5	318.7	341.2	362.3	271.7	289.3	307.6	325.5	344.5
Butchers' meat ..	142.6	153.4	154.6	161.1	170.8	136.9	145.4	152.8	155.4	167.9
Other food ..	231.5	245.6	253.8	267.5	285.5	222.0	234.9	247.4	256.7	271.7
Total food and groceries	657.2	702.7	727.2	769.7	828.9	631.6	669.1	708.4	738.3	786.9
Beer, wine and spirits ..	180.9	196.4	209.1	229.7	243.9	170.0	184.4	200.1	213.8	230.2
Clothing and drapery ..	284.7	311.4	316.0	338.5	351.1	278.4	290.1	311.8	323.9	340.2
Footwear ..	48.0	52.3	51.5	55.4	56.5	44.3	48.7	52.9	52.5	56.1
Hardware, china and glassware ..	42.5	45.2	48.7	54.1	56.6	41.0	43.9	46.2	49.4	55.1
Electrical goods	100.9	107.3	112.3	121.5	125.3	101.1	101.9	111.1	115.0	122.5
Furniture and floor coverings ..	78.9	86.5	93.3	102.8	108.3	77.4	79.7	88.4	96.3	104.0
Chemists' goods..	95.4	101.6	109.2	120.6	131.8	89.7	96.4	104.3	111.0	122.7
Newspapers, books and stationery..	57.2	61.4	64.7	71.0	75.0	53.6	58.0	62.2	66.8	70.9
Other goods ..	170.8	181.2	192.7	210.2	224.4	162.8	173.7	181.2	199.4	216.8
Total (excl. motor vehicles, parts, petrol, etc.)	1712.4	1847.4	1928.2	2071.4	2196.1	1644.5	1745.8	1872.5	1963.0	2107.5

(a) Excludes Northern Territory and Australian Capital Territory. (b) See paragraph 13 page 5.

TABLE 4. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.): AUSTRALIA (a) - continued
(£ million)

Commodity group	March quarter					June quarter				
	1966	1967	1968	1969	1970	1966	1967	1968	1969	1970
Original										
Groceries ..	259.2	280.1	305.5	320.5	339.9	272.3	289.4	310.3	332.2	352.5
Butchers' meat ..	131.8	144.7	148.7	153.2	162.2	140.7	152.9	156.9	161.7	172.3
Other food ..	221.0	238.5	251.2	258.6	279.1	221.7	233.6	248.6	253.0	272.1
Total food and groceries	612.0	663.3	705.4	732.3	781.2	634.7	674.9	715.8	746.9	797.4
Beer, wine and spirits ..	176.4	191.3	215.5	223.1	242.8	164.7	178.3	190.0	208.4	223.1
Clothing and drapery ..	232.7	246.7	257.7	274.1	290.6	297.4	316.0	328.9	349.4	372.5
Footwear ..	38.9	41.9	44.1	45.7	49.2	48.2	53.7	54.3	58.3	62.7
Hardware, china and glassware ..	37.0	40.3	41.5	46.7	50.4	38.4	41.2	42.4	46.9	51.7
Electrical goods ..	92.2	94.6	107.3	103.4	114.0	93.8	98.7	106.1	111.2	119.9
Furniture and floor coverings ..	69.4	70.7	78.3	86.2	93.1	73.3	78.7	86.4	94.4	103.1
Chemists' goods ..	84.6	90.1	97.2	107.0	116.4	90.0	95.0	102.3	113.4	125.5
Newspapers, books and stationery ..	54.6	60.5	66.1	70.9	75.7	49.8	55.3	58.6	63.1	70.5
Other goods ..	147.8	160.8	167.9	185.0	198.9	154.9	164.7	173.3	189.1	203.7
Total (excl. motor vehicles, parts, petrol, etc.)	1545.6	1660.2	1781.0	1879.4	2012.3	1645.2	1756.5	1859.1	1981.1	2130.1
Seasonally adjusted (b)										
Groceries ..	273.0	292.6	317.1	335.1	354.0	278.4	296.7	317.0	339.4	362.5
Butchers' meat ..	137.4	150.4	152.6	158.5	169.1	140.0	151.5	155.6	160.2	170.8
Other food ..	223.8	237.9	251.2	261.0	278.4	227.0	242.1	254.2	258.7	279.0
Total food and groceries	632.7	680.7	718.9	752.9	797.3	645.4	690.6	727.3	758.7	815.5
Beer, wine and spirits ..	172.6	186.6	208.4	218.7	237.0	177.0	192.4	204.1	223.8	240.6
Clothing and drapery ..	280.6	297.6	308.1	330.0	351.7	282.8	301.6	313.5	333.2	356.2
Footwear ..	46.2	49.7	51.9	54.5	58.3	45.6	51.1	51.5	55.3	59.7
Hardware, china and glassware ..	40.5	44.4	44.9	51.3	55.7	41.8	44.8	46.7	51.7	56.6
Electrical goods ..	99.7	101.9	114.6	116.7	125.6	99.0	104.4	112.7	118.3	127.5
Furniture and floor coverings ..	78.5	80.8	88.2	98.4	107.1	78.3	83.6	92.4	101.0	109.7
Chemists' goods ..	91.0	98.0	103.6	115.5	126.4	93.6	98.2	106.7	118.4	130.0
Newspapers, books and stationery ..	53.9	59.6	63.7	68.7	74.3	54.7	60.2	64.6	69.6	77.0
Other goods ..	164.4	177.9	183.7	204.2	219.3	168.0	179.0	188.3	205.6	221.3
Total (excl. motor vehicles, parts, petrol, etc.)	1662.8	1776.8	1884.2	2010.2	2154.3	1687.3	1803.1	1908.9	2035.9	2190.3

(a) Excludes Northern Territory and Australian Capital Territory. (b) See paragraph 13, page 5.

TABLE 5. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) : STATES
(£ million)

Commodity group	JUNE QUARTER 1969						
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
Groceries ..	125.5	94.5	43.7	29.4	29.0	10.3	332.2
Butchers' meat ..	59.1	48.6	22.2	13.5	13.2	5.1	161.7
Other food ..	94.6	73.3	33.0	23.5	21.6	7.0	253.0
Total food and groceries	279.0	216.4	98.9	66.4	63.8	22.4	746.9
Beer, wine and spirits ..	72.8	61.6	29.3	18.5	19.7	6.5	208.4
Clothing and drapery ..	139.2	96.0	43.8	32.8	26.4	11.2	349.4
Footwear ..	21.3	17.9	7.2	5.5	4.6	1.8	58.3
Hardware, china and glassware ..	16.5	14.5	6.5	4.2	4.0	1.4	46.9
Electrical goods ..	41.9	31.2	15.2	10.2	9.7	3.0	111.2
Furniture and floor coverings ..	39.2	24.8	11.1	8.4	8.1	2.8	94.4
Chemists' goods ..	45.4	30.3	16.5	9.5	8.7	3.0	113.4
Newspapers, books and stationery ..	25.7	18.9	7.7	4.2	4.4	2.2	63.1
Other goods ..	73.1	53.6	25.3	16.5	15.1	5.5	189.1
Total (excl. motor vehicles, parts, petrol, etc.)	753.9	565.2	261.5	176.2	164.5	59.8	1981.1

Commodity group	SEPTEMBER QUARTER 1969						
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
Groceries ..	126.2	96.8	45.7	29.5	28.7	10.2	337.1
Butchers' meat ..	59.5	49.3	22.7	13.6	13.1	5.0	163.2
Other food ..	98.8	74.3	33.7	23.7	22.0	7.1	259.6
Total food and groceries	284.5	220.4	102.1	66.8	63.8	22.3	759.9
Beer, wine and spirits ..	73.7	63.0	30.2	18.5	20.3	6.7	212.4
Clothing and drapery ..	127.4	88.0	41.8	28.8	25.4	10.0	321.4
Footwear ..	20.0	15.4	6.8	4.9	4.1	1.6	52.8
Hardware, china and glassware ..	17.6	14.8	7.1	4.5	4.0	1.3	49.3
Electrical goods ..	43.6	31.8	16.5	11.0	10.2	3.1	116.2
Furniture and floor coverings ..	42.9	27.1	12.6	9.9	8.8	3.0	104.3
Chemists' goods ..	47.8	31.4	17.5	10.1	9.3	3.1	119.2
Newspapers, books and stationery ..	26.8	19.5	8.1	4.6	4.6	2.2	65.8
Other goods ..	76.5	57.9	26.4	17.7	15.5	5.9	199.8
Total (excl. motor vehicles, parts, petrol, etc.)	760.8	569.3	269.1	176.8	166.0	59.2	2001.2

(a) Excludes Northern Territory and Australian Capital Territory.

TABLE 5. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.) : STATES (continued)
(£ million)

Commodity group	JUNE QUARTER 1970						
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
Groceries ..	133.8	99.2	46.9	31.0	30.8	10.8	352.5
Butchers' meat ..	63.0	52.3	23.6	14.7	13.9	5.3	172.8
Other food ..	102.1	79.0	35.3	24.5	24.0	7.2	272.1
Total food and groceries	298.9	230.5	105.8	70.2	68.7	23.3	797.4
Beer, wine and spirits ..	78.0	65.3	31.0	20.0	21.8	7.0	223.1
Clothing and drapery ..	149.1	102.8	45.5	34.5	28.8	11.8	372.5
Footwear ..	23.0	19.3	7.8	5.9	4.8	1.9	62.7
Hardware, china and glassware ..	18.3	15.7	7.4	4.7	4.2	1.4	51.7
Electrical goods ..	44.8	34.3	16.4	11.1	9.8	3.5	119.9
Furniture and floor coverings ..	42.1	27.4	11.9	9.8	8.8	3.1	103.1
Chemists' goods ..	50.6	33.2	18.9	10.3	9.2	3.3	125.5
Newspapers, books and stationery ..	29.4	20.2	8.7	5.0	5.0	2.2	70.5
Other goods ..	76.0	61.5	26.4	18.1	15.9	5.8	203.7
Total (excl. motor vehicles, parts, petrol, etc.)	810.2	610.2	279.8	189.6	177.0	63.3	2130.1

Commodity group	SEPTEMBER QUARTER 1970						
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
Groceries ..	136.2	102.1	48.3	30.4	31.0	10.9	358.9
Butchers' meat ..	64.1	52.8	23.7	14.2	14.0	5.2	174.0
Other food ..	106.8	79.5	35.6	24.1	23.9	7.3	277.2
Total food and groceries	307.1	234.4	107.6	68.7	68.9	23.4	810.1
Beer, wine and spirits ..	78.0	65.7	32.8	19.8	22.3	6.8	225.4
Clothing and drapery ..	132.2	93.4	43.5	30.7	26.1	10.3	336.2
Footwear ..	19.8	16.0	7.2	4.9	4.3	1.6	53.8
Hardware, china and glassware ..	18.6	15.5	6.9	4.9	4.2	1.4	51.5
Electrical goods ..	46.0	34.5	16.9	11.6	10.2	3.1	122.3
Furniture and floor coverings ..	45.5	29.5	12.3	10.6	8.9	3.1	109.9
Chemists' goods ..	52.8	34.2	19.5	10.8	9.4	3.4	130.1
Newspapers, books and stationery ..	28.5	19.9	9.1	5.0	4.9	2.4	69.8
Other goods ..	79.4	64.7	27.8	18.8	16.6	6.2	213.5
Total (excl. motor vehicles, parts, petrol, etc.)	807.9	607.8	283.6	185.8	175.8	61.7	2122.6

(a) Includes Northern Territory and Australian Capital Territory.

TABLE 6. - TOTAL VALUE OF RETAIL SALES OF MOTOR VEHICLES, PARTS, PETROL, ETC.
(\$ million)

Period	Original							Seasonally adjusted (a)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (b)	Aust. (b)
Year								
1947-48	85.4	66.0	35.6	23.0	17.8	7.6	235.4	..
1948-49	123.0	90.2	46.8	33.8	27.4	11.0	332.2	..
1952-53	302.7	217.5	125.7	90.5	75.7	27.4	839.5	..
1952-53	288.0	204.8	112.6	84.3	67.9	25.8	783.4	..
1956-57	433.5	319.8	178.9	124.7	91.4	44.0	1,192.3	..
1961-62	623.1	431.2	218.0	143.1	133.9	53.9	1,603.2	..
1962-63	778.4	525.3	279.7	180.5	159.9	63.3	1,987.1	..
1963-64	842.3	585.1	326.9	212.5	168.6	70.8	2,206.2	..
1964-65	892.7	645.7	353.0	238.0	169.0	75.7	2,374.1	..
1965-66	888.7	655.2	345.9	220.4	181.7	77.4	2,369.3	..
1966-67	967.3	676.8	352.9	214.7	219.5	79.9	2,511.1	..
1967-68	1,080.0	752.3	396.8	241.9	249.7	86.1	2,806.8	..
1968-69	1,174.1	778.8	423.5	260.3	291.9	86.3	3,014.9	..
1969-70	1,304.9	852.1	456.5	283.4	316.1	96.8	3,309.8	..
Quarter								
1966-67								
September	231.0	162.5	89.3	51.7	52.7	19.2	606.4	599.1
December	246.8	178.0	95.0	55.1	56.8	20.6	652.3	625.5
March	236.8	160.2	81.6	52.6	53.6	19.0	603.8	639.7
June	252.7	176.1	87.0	55.3	56.4	21.1	648.6	649.3
1967-68								
September	264.8	186.3	95.0	58.3	57.8	21.3	683.5	673.9
December	276.6	192.2	100.4	63.1	62.5	22.6	717.4	689.7
March	261.7	175.4	92.5	58.9	60.1	19.8	668.4	690.6
June	276.9	198.4	108.9	61.6	69.3	22.4	737.5	744.9
1968-69								
September	278.6	190.5	103.4	61.4	69.6	21.7	725.2	722.3
December	298.9	205.5	109.0	65.7	74.4	22.3	775.8	745.0
March	290.8	186.7	101.5	65.5	72.7	20.9	738.1	770.4
June	305.8	196.1	109.6	67.7	75.2	21.4	775.8	784.0
1969-70								
September	316.0	213.2	115.9	70.5	79.3	23.6	818.5	811.9
December	329.4	223.3	119.0	73.2	82.0	24.6	851.5	817.7
March	321.6	201.5	109.9	70.9	77.3	23.6	804.8	846.0
June	337.9	214.1	111.7	68.8	77.5	25.0	835.0	837.3
1970-71								
September	332.3	225.5	115.8	69.3	77.4	25.4	845.7	839.6

(a) See paragraph 13, page 5. (b) Excludes Northern Territory and Australian Capital Territory (see Tables 7 and 8).

TABLE 7. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS

NORTHERN TERRITORY

(\$'000)

Commodity group	1961-62	1965-66	1966-67	1967-68
Groceries	3,038	4,467	5,449	6,101
Butchers' meat	1,172	2,100	2,582	2,921
Other food	2,334	3,543	4,307	5,113
Total food and groceries	6,544	10,110	12,338	14,135
Beer, wine and spirits	3,076	4,752	5,205	6,399
Clothing and drapery	1,720	2,542	2,877	3,346
Footwear	290	429	482	569
Hardware, china and glassware	494	576	637	754
Electrical goods	656	1,149	1,367	1,823
Furniture and floor coverings	208	449	403	553
Chemists' goods	604	986	1,079	1,323
Newspapers, books and stationery	462	683	773	953
Other goods	1,786	3,049	3,670	4,536
Total (excluding motor vehicles, parts, petrol, etc.)	15,840	24,725	28,831	34,391
Motor vehicles, parts, petrol, etc.	5,830	9,605	11,180	16,522

TABLE 8. - VALUE OF RETAIL SALES OF GOODS BY COMMODITY GROUPS

AUSTRALIAN CAPITAL TERRITORY

(\$'000)

Commodity group	1961-62	1965-66	1966-67	1967-68
Groceries	5,406	9,439	11,194	13,454
Butchers' meat	2,298	3,974	4,352	4,554
Other food	3,662	6,900	7,502	8,346
Total food and groceries	11,366	20,313	23,048	26,354
Beer, wine and spirits	2,630	4,500	5,000	5,843
Clothing and drapery	5,612	10,826	12,571	14,296
Footwear	840	1,630	1,950	2,040
Hardware, china and glassware	1,004	1,435	1,870	2,016
Electrical goods	2,974	3,445	3,811	4,543
Furniture and floor coverings	2,430	4,075	4,297	5,078
Chemists' goods	1,616	2,936	3,721	4,035
Newspapers, books and stationery	1,484	2,432	3,075	3,501
Other goods	3,432	5,340	6,350	6,867
Total (excluding motor vehicles, parts, petrol, etc.)	33,388	56,932	65,693	74,573
Motor vehicles, parts, petrol, etc.	12,972	19,634	23,780	29,671

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ACTING COMMONWEALTH STATISTICIANCOMMONWEALTH BUREAU OF CENSUS AND STATISTICSCANBERRA, A.C.T. 260031 DECEMBER 1970

NOTE. Inquiries concerning these statistics may be made in Canberra by telephoning 490 211 extension 293 or, in each State capital, by telephoning the office of the Bureau of Census and Statistics.

APPENDIXSEASONAL ADJUSTMENT METHODS AND MEASURES OF VARIABILITY

The seasonally adjusted series given in this bulletin have been calculated using the X-11 Variants of the U.S. Bureau of Census Method II seasonal adjustment programs, a description of which is given in the Bureau of Census and Statistics Publication "Seasonally Adjusted Indicators, 1970" (Reference No. 1.10). As described in that publication (in paragraphs 16 to 18 of the "Notes on Seasonal Adjustment Methods"), the manner in which these programs have been employed for each series depends on the selection made from among alternative optional procedures allowed for in the programs. The selection of program options has been based on the results of analyses made for each individual series.

As the program options employed could affect the results of seasonal adjustment and the interpretation, the more important program options employed in calculating seasonally adjusted figures included in this bulletin are described below. The terminology used is explained in "Seasonally Adjusted Indicators, 1970".

Users should note particularly that in addition to being adjusted for the normal seasonal factors, all of the series published in seasonally adjusted form in this bulletin have been adjusted for "trading-day" effects arising from the varying numbers of Sundays, Mondays, Tuesdays, etc., in each month or quarter. In contrast with the normal seasonal factors, which may be expected to change only gradually from year to year, the trading-day adjustments for any month or quarter will vary from year to year in accordance with the combination of days which occur in particular months or quarters. Adjustment has also been made to all series included in this bulletin for the effects of movements in the date of Easter, but not of Australia Day.

Multiplicative adjustment has been employed in calculating all the seasonally adjusted series in this bulletin. For 'Monthly Retail Sales - Total', the trend has been calculated using a 9 term (i.e. 9 months) moving average (Henderson weighted) and for all quarterly series a similar 5 term moving average. In calculating seasonal factors for all the series a 3 x 5 term moving average (i.e. a 3 term moving average of a 5 term moving average) has been employed and special adjustments have been made in the cases of 'Monthly Retail Sales - Total' and 'Quarterly Retail Sales - Hardware, China and Glassware' to allow for the evident effects of abrupt changes in the seasonal patterns. The program standard limits for graduated treatment of extremes, i.e. 1.5 and 2.5 standard deviations, have been used for all the series.

Each of the component series shown in Table 4 has been seasonally adjusted independently. As a consequence, while the unadjusted components in the original series shown in Table 4 add to the totals, the adjusted components may not add to the adjusted totals. It should also be noted that the seasonally adjusted figures reflect the sampling errors to which the original figures are subject.

The seasonally adjusted figures published in this bulletin are based on analyses of series over 9 years in the case of 'Monthly Retail Sales - Total'; 14 years in the case of 'Quarterly Retail Sales - Total' and 'Quarterly Retail Sales - Motor Vehicles, Parts, Petrol, etc.'; and 12 years in the case of the remaining quarterly retail sales series.

To assist in interpreting movements shown by particular series included in this bulletin, selected measures of variability for original and seasonally adjusted series, for trend and irregular components and for seasonal and trading-day adjustment factors are shown in the table below. These measures are averages, without regard to 'sign', of the percentage change in the indicated series from month to month, or quarter to quarter, and for seasonal factors from year to year, over the whole number of months or quarters of the adjusted series (but in some instances omitting changes for the most recent months or quarters). The effects of special adjustments for the influence of Easter, and of apparent abrupt changes in seasonality are excluded from these measures of variability.

MEASURES OF VARIABILITY

Series	Average percentage change without regard to sign:						
	From quarter to quarter in *						From year to year in the seas. factors
	Original series	Seas. adj. series	Trend series	Irreg. series	Seas. factors	Trading-day adj. factors	
<u>Monthly Retail Sales:</u>							
Total (excl. M.V., parts, etc.)	8.29	0.85	0.49	0.70	6.84	4.24	0.07
<u>Quarterly Retail Sales:</u>							
Groceries	6.08	1.54	1.44	0.44	4.53	0.98	0.11
Butchers' meat	2.92	1.75	1.48	0.62	1.53	1.01	0.10
Other food	4.65	1.48	1.33	0.66	4.18	0.99	0.09
Total food and groceries	4.42	1.46	1.38	0.35	3.04	0.98	0.06
Beer, wine and spirits	9.83	1.68	1.44	0.65	9.88	1.02	0.03
Clothing and drapery	21.92	1.43	1.32	0.38	21.40	1.10	0.06
Footwear	19.68	1.81	1.45	1.04	19.26	1.05	0.14
Hardware, china and glassware	15.42	2.18	1.55	1.18	16.67	0.98	0.30
Electrical goods	11.52	2.43	2.07	0.91	9.70	1.16	0.20
Furniture and floor coverings	14.35	2.27	2.16	0.62	12.23	0.96	0.13
Chemists' goods	10.15	2.29	2.18	0.74	7.81	0.98	0.15
Newspapers, books and stationery	11.81	1.63	1.56	0.71	11.16	1.06	0.20
Other goods	16.19	1.91	1.70	0.67	14.23	1.02	0.09
<u>Total (excl. M.V., parts, etc.)</u>	9.56	1.39	1.34	0.29	8.69	1.02	0.09
Motor vehicles, parts, petrol, etc.	6.48	3.24	2.84	1.33	4.08	1.06	0.25

* From month to month for monthly series.