



INCOME DISTRIBUTION, AUSTRALIA, 1978-79 : FAMILIES (PRELIMINARY)

INQUIRIES

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MAIN FEATURES

In 1978-79, average annual incomes ranged from \$13,280 for families with two members, to \$20,510 for families with six or more members.

The estimated numbers of families and their average annual incomes were:

	No.	\$
Families with no income earners	572,600	6,130
Families with 1 income earner	1,174,600	13,460
Families with 2 income earners	1,583,100	19,280
Families with 3 or more income earners	406,600	28,410
Total, all families	3,736,900	16,430

Note 1. The estimates are subject to sampling variability, as explained in paragraphs 17 to 20. Standard errors are shown on page 3.

2. A family's reported income does not necessarily reflect its standard of living. See paragraph 13.

EXPLANATORY NOTES

Introduction

This publication contains preliminary estimates of family income in 1978-79. The estimates were derived from a survey of annual income which was conducted throughout Australia in the period September to December 1979. Some statistics of the income of individuals, unemployed persons and income units have already been published (see paragraph 22) and further statistics will be published progressively.

2. The survey was based on a multi-stage area sample of private dwellings (about 15,000 houses, flats etc.) and non-private dwellings (hotels, motels etc.) and covered about one-third of one per cent of the population of Australia.

Scope

3. The estimates relate to all persons aged fifteen years and over except: members of the Australian defence forces living in military establishments; certain diplomatic personnel of overseas governments customarily excluded from census and estimated populations; overseas visitors holidaying in Australia;

members of non-Australian defence forces (and their dependants) stationed in Australia; students in boarding schools, patients in hospitals and sanatoria and inmates of gaols, reformatories, etc.

Definitions

4. *Total income.* Questions were asked in respect of each person aged fifteen years or over, except those attending school full time, on the amount of income received in 1978-79 from each of the following sources: wages or salary; own business, farm, profession, etc. (net income); share in a partnership (net income); government social security and welfare cash benefits; superannuation; interest, dividends, rent, etc.; other sources, e.g. trust or will, maintenance or alimony.

5. *Income from government social security and welfare cash benefits* includes income received through programmes of assistance to aged persons, incapacitated and handicapped persons, unemployed and sick persons, veterans and their dependants, widowed and deserted spouses, families and children; cash benefits for education; and other social security and welfare programmes.

6. *Family income* is the sum of the incomes received from all sources by all members of the family for whom particulars of income were obtained.

7. *Median income* is the amount which divides the distribution into two equal groups, one having incomes above the median and the other having incomes below it. Medians were calculated from grouped data with linear interpolation being used within the class interval in which the median fell.

8. *Mean income* is the amount obtained by dividing the total income of a group (e.g. all families with three members) by the number in that group.

9. *Income earners* are persons who derive income from wages or salary or from own business, farm, profession, etc. or from a share in a partnership.

10. *A family* was generally defined as consisting of two or more persons usually living in the same household, the head of the family and spouse (if any) and any person(s) having any of the following relationships to them:

- (a) sons or daughters of any age, if not married and not accompanied by children of their own;
- (b) brothers or sisters 15 years of age or over, if not married and not accompanied by children of their own;

- (c) grandchildren if not married and not accompanied by either of their parents, or by children of their own;
- (d) ancestors, if not married and not accompanied by children under 15 years of age of their own; or
- (e) any children under 15 years of age not accompanied by a parent, unless the children were related to some person in a second family in the household.

11. The following points should be noted in relation to the definition of a family in the previous paragraph:

- (a) family status was determined at the time of the survey. Thus, if members of the family were absent (e.g. children at boarding schools) the family status of the head and other family members could have been affected;
- (b) the term relationship includes relationships by blood, marriage or adoption;
- (c) the marriage relationship includes legal and de facto relationship;
- (d) regardless of relationship, visitors to households were not combined with usual residents to form families;
- (e) a family, as defined, can contain no more than two married persons, and can contain two married persons only if these persons are husband and wife.

Interpretation of results

12. Since the estimates are based on a sample, they are subject to sampling variability. (See paragraphs 17 to 20). In addition, they are subject to errors of response and reporting. Although some respondents referred to their records, in many cases the answers to the questions on income were based on memory. Some understatement in the estimates may be expected because of imperfect recall or misunderstanding, particularly of minor or irregular sources of income.

13. The survey did not obtain information on the standard of living of families or the way in which they had arranged their financial affairs. For a number of reasons the income reported as being received by a family does not necessarily reflect the family's living standard. Gifts and donations, for example those made by relatives or charities, were not counted as income even though in many cases they may have been an important means of support. Many families would have received benefits not involving direct cash payments (e.g. pensioner benefits of various kinds). Others may have chosen to live off their savings.

14. Other points which should be kept in mind in interpreting the results of this survey are as follows:

- (a) For the purposes of the survey, total income included all income received while living in

Australia (including income received from an overseas source) and all income received from an Australian source while living overseas.

- (b) The income of a family does not include amounts received by persons who were members of the family during all or part of the year 1978-79 but no longer resided with the family at the time of the interview. Thus, income received during 1978-79 by persons who had died before the interview was not included.

15. Characteristics of families, such as marital status of members and family composition (see paragraphs 10 to 11) were recorded as at the time of the interview. Some families which experienced, between July 1978 and the date of the interview, a major change in their status of the kinds indicated below, were excluded from the tables:

- (a) families whose head or spouse had lived outside Australia for more than twelve weeks during 1978-79 and had worked overseas in a job or jobs unrelated to an Australian job or business (e.g. migrants arriving in Australia after September 1978 and Australian residents who worked temporarily overseas);
- (b) families whose female head had lived with her husband for more than twelve weeks during 1978-79 but was not doing so at the time of the interview (e.g. females who were widowed or became separated after September 1978); and
- (c) families which contained any persons aged 15 years or over who were at school for more than twelve weeks during 1978-79, but were not at school and not living with their parent(s) at the time of the interview.

Families in which the head or spouse was outside the scope of the survey (see paragraph 3) or was a non-respondent were also excluded.

16. Care should be exercised when comparing the 1978-79 estimates with those of 1973-74 income survey, as none of the above exclusions applied in 1973-74.

Reliability of the estimates

17. Since the estimates are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is, they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the *standard error*, which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included, and about nineteen chances in twenty that the difference will be less than two standard errors. The standard error can also be expressed as a percentage of the estimate, and this is known as the *relative standard error*.

18. Space does not allow for the separate indication of the standard error of all estimates in this publication. The table below shows standard errors of estimates of numbers of families for a range of estimate sizes, together with relative standard errors of estimates of median and mean incomes. These figures will not give a precise measure of the standard error of a particular estimate, but they will provide an indication of its magnitude.

19. Examples of the calculation and use of standard errors are given below:

- (a) From the table it will be seen that the estimate of 104,300 families whose total income was between \$7,000 and \$8,000 (Table 1) has a standard error of about 5,600. Therefore there are about two chances in three that the number of families with total income in that range would be between 98,700 and 109,900 and about nineteen chances in twenty that it would be between 93,100 and 115,500 if all dwellings had been included in the survey.

- (b) Table 3 shows that the estimated number of families with one income recipient was 301,700 and that their estimated mean income was \$8,150. From the table below it will be seen that the relative standard error of the mean income of 301,700 families is about 3.1 per cent. As 3.1 per cent of \$8,150 is about \$253, there are about two chances in three that the mean income would be between \$7,897 and \$8,403 and about nineteen chances in twenty that it would be between \$7,644 and \$8,656.

20. As the standard errors in the table show, the smaller the estimate the higher is the relative standard error. Very small estimates are thus subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In this publication estimates below 6,000, and means and medians based on such estimates, have not been included. Although figures for the number of families can in some cases be derived by subtraction they should not be regarded as reliable.

21. The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may have occurred because of imperfections in reporting by interviewers and respondents. Inaccuracies of this kind are referred to

as the *non-sampling error*, and they may occur in any enumeration, whether it be a full count or only a sample. See paragraph 12.

Size of estimate (families)	Standard errors of estimates		Relative standard error of median or mean income (per cent)
	Standard error (number)	Relative standard error (per cent)	
6,000	1,560	26.0	22.1
10,000	1,980	19.8	17.2
20,000	2,830	14.2	12.1
50,000	4,100	8.2	7.7
100,000	5,500	5.5	5.4
200,000	7,200	3.6	3.8
300,000	8,500	2.8	3.1
500,000	10,200	2.0	2.4
1,000,000	12,900	1.3	1.7
2,000,000	15,600	0.8	1.1
5,000,000	21,300	0.4	0.7

Related publications

22. Users may also wish to refer to the following publications, which are available on request:

Income Distribution, Australia, 1978-79 : Individuals (Preliminary) (6501.0)

Unemployed Persons : Income Distribution, Australia, 1978-79 (6521.0)

Income Distribution, Australia, 1978-79 : Income Units (Preliminary) (6522.0)

23. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia* (1101.0), which is available free of charge from any ABS office.

Symbols and other usages

* subject to sampling variability too high for most practical uses. See paragraphs 17-20.

24. Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

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Australian Statistician

TABLE 1. ALL FAMILIES : FAMILY INCOME AND FAMILY SIZE, AUSTRALIA, 1978-79

	Number in family					Total
	2	3	4	5	6 and over	
Total family income(\$)	-'000 families-					
Under 2,000	(a)15.7	6.8	7.2	*		(a)37.7
2,000 and under 4,000	65.6	10.0	6.2			85.8
4,000 " " 5,000	150.1	29.5	8.5	7.5	10.7	193.5
5,000 " " 6,000	121.9	26.5	16.4	7.1		174.4
6,000 " " 7,000	85.8	21.0	14.4	8.8		134.2
7,000 " " 8,000	48.4	23.2	17.6	6.7	8.3	104.3
8,000 " " 9,000	60.6	30.7	29.8	8.9	8.6	138.7
9,000 " " 10,000	54.0	30.9	30.7	12.2	7.8	135.6
10,000 " " 11,000	63.4	39.1	48.5	21.0	7.2	179.2
11,000 " " 12,000	54.7	33.8	44.6	22.8	12.0	167.8
12,000 " " 13,000	53.8	42.2	56.4	24.2	10.6	187.2
13,000 " " 14,000	46.8	36.5	54.2	19.3	11.9	168.6
14,000 " " 15,000	48.8	35.8	43.6	25.1	11.6	164.9
15,000 " " 16,000	48.0	41.3	50.2	27.0	14.2	180.7
16,000 " " 18,000	94.7	58.8	90.9	50.1	19.8	314.4
18,000 " " 20,000	95.0	59.7	75.2	41.3	21.3	292.5
20,000 " " 25,000	157.2	103.3	149.6	73.9	37.1	521.0
25,000 " " 30,000	74.6	51.3	64.0	45.0	24.7	259.6
30,000 " " 35,000	21.1	28.5	44.4	34.3	12.5	140.9
35,000 " " 40,000	12.3	13.8	18.2	9.0	12.4	65.5
40,000 " " 50,000	9.0	6.3	13.0	9.9	11.5	49.6
50,000 and over	6.1	9.7	11.7	8.7	*	41.1
Total	1,387.4	738.5	895.3	468.6	247.2	3,736.9
	-dollars-					
Median income	11,430	15,080	16,420	17,510	18,070	14,980
Mean income	13,280	16,650	18,270	19,730	20,510	16,430

(a) Includes 5,100 families reporting no income.

TABLE 2. ALL FAMILIES : FAMILY INCOME AND NUMBER OF INCOME EARNERS, AUSTRALIA, 1978-79

	Number of income earners in family				Total
	None	1	2	3 and over	
Total family income (\$)	-'000 families-				
Under 2,000	(a)31.4	*	5.9		(a)37.7
2,000 and under 4,000	60.9	20.2			85.8
4,000 " " 5,000	157.3	26.4	9.8		193.5
5,000 " " 6,000	124.3	41.0	8.6		174.4
6,000 " " 7,000	70.0	40.2	22.4	7.0	134.2
7,000 " " 8,000	29.8	52.8	20.6		104.3
8,000 " " 9,000	28.8	69.7	38.9		138.7
9,000 " " 10,000	14.8	86.7	31.2		135.6
10,000 " " 11,000	12.4	109.4	55.5		179.2
11,000 " " 12,000	11.1	92.8	59.4	6.3	167.8
12,000 " " 13,000	6.9	112.2	64.7		187.2
13,000 " " 14,000	6.1	79.9	81.1	6.9	168.6
14,000 " " 15,000		74.2	81.7	6.8	164.9
15,000 " " 16,000		70.1	97.6	9.7	180.7
16,000 " " 18,000	6.9	102.3	189.1	19.2	314.4
18,000 " " 20,000	*	59.6	197.8	32.0	292.5
20,000 " " 25,000	6.2	81.6	345.3	90.0	521.0
25,000 " " 30,000		19.5	149.7	88.4	259.6
30,000 " " 35,000	*	11.6	64.0	63.8	140.9
35,000 " " 40,000	*	7.0	24.3	33.6	65.5
40,000 " " 50,000	*	*	20.3	23.0	49.6
50,000 and over	*	6.1	15.1	19.9	41.1
Total	572.6	1,174.6	1,583.1	406.6	3,736.9
	-dollars-				
Median income	5,300	12,380	18,250	26,440	14,980
Mean income	6,130	13,460	19,280	28,410	16,430

(a) Includes 5,100 families reporting no income.

