



## THE LABOUR FORCE, AUGUST 1977 (PRELIMINARY)

### INQUIRIES

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### MAIN FEATURES

- Between May and August 1977 the civilian labour force decreased by 7,200 persons (employed –15,400, unemployed +8,300). In seasonally adjusted terms the civilian labour force increased by 56,200 persons (of whom 33,400 were females).
- In August 1977 employed civilians (including employers and self-employed) numbered 5,868,400.
- The estimated number of unemployed persons looking for full-time work was 267,500. A further 55,000 were looking for part-time work.

**NOTE.** Revised estimates for May 1977 are shown in Table 1 of this publication.

### EXPLANATORY NOTES

#### Introduction

This statement contains preliminary estimates of the civilian labour force for August 1977 and estimates for the previous five quarters. The estimates are derived from the results of the population surveys conducted in February, May, August and November each year throughout Australia. The quarterly bulletin *The Labour Force* (Catalogue No. 6203.0. Previously Ref. No. 6.20), which gives information in greater detail, will be published shortly.

2. Preliminary unemployment estimates are published several weeks in advance of this statement in *Unemployment, Preliminary Estimates* (Catalogue No. 6201.0. Previously Ref. No. 6.35).

#### The population survey

3. The survey is based on a multi-stage area sample of private dwellings (about 30,000 houses, flats, etc.) and non-private dwellings (hotels, motels, etc.), and covers about two-thirds of one per cent of the population of Australia. The information is obtained each quarter from the occupants of selected dwellings by carefully chosen and specially trained interviewers. Interviews are carried out during a period of four weeks, so that in each of the months to which the survey

relates, there are four survey weeks, chosen so as to fall within the limits of the calendar month or with minimum encroachment into the adjacent months.

#### Scope

4. The estimates relate to all persons aged fifteen years and over except members of the permanent armed forces and certain diplomatic personnel customarily excluded from census and estimated populations.

#### Classification of the labour force

5. The labour force category to which a person is assigned depends on his *actual activity* (i.e. whether working, looking for work, etc.) during a specified week known as *survey week*, which is the week immediately preceding that in which the interview takes place. Definitions of the principal categories appearing in this statement are given in the quarterly bulletins.

#### Estimation procedure

6. Estimates are obtained by using a complex ratio estimation procedure which ensures that survey estimates conform to independent population estimates by State, area, age and sex. These population estimates are based on very preliminary information and are subject to revision.

#### Reliability of the estimates

7. Since the estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaires and procedures. 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, and not the whole population, was enumerated. The smaller the estimate the higher is the relative standard error: for example, the relative standard error of an estimate for Australia of 2,000,000 is approximately 0.5 per cent (10,000) while that of an estimate of 20,000 is approximately 8 per cent (1,600). 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 from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors.

8. Limitations of space preclude publication of the standard errors of all estimates in this statement. More information on this topic, together with a table of estimated standard errors for States, Territories and Australia, is given in the quarterly bulletin *The Labour Force* (Catalogue No. 6203.0. Previously Ref. No. 6.20).

#### Seasonal adjustment

9. Because of problems in seasonally adjusting the numbers of unemployed persons the procedures used were revised as from August 1976. Because there is insufficient length of series available to enable a complete assessment of the reliability of the new method to be made, it would be claiming too much to suggest that these problems have now been wholly overcome, but the revised estimates are at least a considerable improvement over those published previously. A brief explanation of the problems and the adjustment method now used is given below.

10. The method used (the U.S. Bureau of the Census X-11Q) assumes that the amplitude of seasonal change is proportional to the level of the series. Until 1974 this assumption worked very satisfactorily, but following the rapid rise in the level of unemployment in 1974 the proportional relationship appears to have changed very substantially, and the X-11Q method was unable to adapt sufficiently.

11. By considering the series in two parts an estimate of the effect of the change in the proportional relationship has now been made. By means of prior adjustment factors derived from this estimate and applied to the data, the X-11Q program moving averages

are now able to accommodate the 1974 change. The resulting seasonal factors reflect one proportional relationship up to 1974 and the other relationships since then.

12. The shape of the seasonal variation since 1974 may have changed as well as the relationship between amplitude and level. (For example, the rise in the original series in August 1976 could be due, at least in part, to a new seasonal pattern). If it has, the change will have to be handled by the adaptive capacity of the program itself.

13. As from the May 1976 issue of this statement the unemployment estimates derived from the population survey have been based on a revised definition. See *The Labour Force*, May 1976 (Catalogue No. 6203.0. Previously Ref. No. 6.20), pages 3 and 4, paragraphs 9 to 16 for details. Estimates of unemployment on the revised basis have a different seasonal pattern from those on the old basis. Because only nine quarterly figures on the revised basis were available at the time the current seasonal adjustment factors were calculated it has been necessary to make special estimates for the seasonally adjusted series.

14. All publications produced by the ABS are listed in *Catalogue of Publications 1977* (Catalogue No. 1101.0. Previously Ref. No. 1.8) which is available free of charge from any ABS office.

NOTE. Any discrepancies between totals and sums of components in tables are due to rounding.

TABLE 1. CIVILIAN POPULATION 15 YEARS OF AGE AND OVER (a), BY EMPLOYMENT STATUS

Month	Unemployed (b)													
	Employed (b)(c)			Total		Per cent of labour force (d)		Total excluding persons aged 15-19 years looking for first job		Total labour force (b)			Not in labour force (b) ('000)	Civilian population aged 15 and over (a) ('000)
	Agri-culture ('000)	Other industries ('000)	Total ('000)	Original ('000)	Seasonally adj. (e) ('000)	Original	Seasonally adj. (e)	Original ('000)	Seasonally adj. (e) ('000)	Number		Per cent of population (f)		
										Original ('000)	Seasonally adj. (e) ('000)			
MALES														
1976 - May	284.2	3,543.9	3,828.1	132.4	141.6	3.3	3.6	123.0	128.3	3,960.5	3,954.1	81.0	930.1	4,890.6
Aug. †	282.4	3,485.0	3,767.4	146.2	162.4	3.7	4.1	133.7	143.7	3,913.6	3,942.9	80.0	978.6	4,892.2
Nov.	284.4	3,526.0	3,810.4	144.2	145.6	3.6	3.7	129.0	132.0	3,954.6	3,965.4	80.2	974.1	4,928.7
1977 - Feb.	288.6	3,552.0	3,840.6	173.6	147.8	4.3	3.7	150.5	132.4	4,014.2	3,980.0	81.0	944.2	4,958.4
May r	285.1	3,539.4	3,824.5	170.1	183.7	4.3	4.7	154.7	162.0	3,994.6	3,988.0	80.6	963.8	4,958.4
Aug.	281.1	3,526.0	3,807.1	175.7	195.4	4.4	4.9	160.5	172.8	3,982.8	4,013.2	79.8	1,006.3	4,989.1
MARRIED WOMEN														
1976 - May	57.1	1,230.7	1,287.8	50.9	n.a.	3.8	n.a.	50.7	n.a.	1,338.8	1,346.3	41.0	1,924.4	3,263.2
Aug. †	62.4	1,216.2	1,278.6	51.9	n.a.	3.9	n.a.	51.6	n.a.	1,330.5	1,348.5	40.7	1,942.3	3,272.8
Nov.	58.4	1,251.1	1,309.5	42.2	n.a.	3.1	n.a.	41.8	n.a.	1,351.7	1,326.6	41.0	1,942.6	3,294.3
1977 - Feb.	60.7	1,246.9	1,307.7	67.6	n.a.	4.9	n.a.	66.6	n.a.	1,375.2	1,374.8	41.4	1,944.5	3,319.7
May r	61.7	1,266.1	1,327.7	61.6	n.a.	4.4	n.a.	61.3	n.a.	1,389.3	1,397.2	41.9	1,925.8	3,315.1
Aug.	65.0	1,258.9	1,323.8	63.6	n.a.	4.6	n.a.	63.0	n.a.	1,387.4	1,406.8	41.8	1,932.5	3,319.9
ALL FEMALES														
1976 - May	67.8	1,944.7	2,012.5	115.1	121.2	5.4	5.7	100.4	103.4	2,127.6	2,137.8	42.7	2,851.2	4,978.8
Aug. †	72.2	1,908.0	1,980.2	118.0	133.8	5.6	6.3	104.2	116.9	2,098.2	2,134.1	42.0	2,897.9	4,996.1
Nov.	67.1	1,952.1	2,019.2	110.4	111.1	5.2	5.3	94.5	95.5	2,129.6	2,103.8	42.2	2,912.2	5,041.7
1977 - Feb.	73.0	1,959.6	2,032.7	161.1	136.1	7.3	6.3	131.2	113.8	2,193.8	2,173.5	43.2	2,880.8	5,074.6
May r	73.2	1,986.2	2,059.3	144.0	152.4	6.5	6.9	123.2	127.3	2,203.4	2,213.5	43.4	2,877.9	5,081.3
Aug.	78.2	1,983.1	2,061.3	146.8	167.4	6.6	7.5	124.3	140.0	2,208.1	2,246.9	43.1	2,910.6	5,118.7
PERSONS														
1976 - May	352.0	5,488.6	5,840.6	247.6	262.0	4.1	4.3	223.4	231.0	6,088.1	6,089.0	61.7	3,781.3	9,869.4
Aug. †	354.6	5,393.0	5,747.6	264.1	294.3	4.4	4.8	237.9	260.3	6,011.8	6,072.2	60.8	3,876.5	9,888.3
Nov.	351.5	5,478.1	5,829.6	254.6	260.4	4.2	4.3	223.5	230.5	6,084.2	6,079.6	61.0	3,886.2	9,970.4
1977 - Feb.	361.6	5,511.6	5,873.2	334.8	281.9	5.4	4.6	281.6	244.3	6,208.0	6,150.1	61.9	3,825.0	10,033.0
May r	358.3	5,525.6	5,883.8	314.2	335.2	5.1	5.4	277.9	288.8	6,198.0	6,198.3	61.7	3,841.7	10,039.7
Aug.	359.3	5,509.1	5,868.4	322.5	360.6	5.2	5.8	284.8	312.3	6,190.8	6,254.5	61.2	3,916.9	10,107.8

(a) For scope of estimates see page 1, paragraph 4. (b) For definitions see the explanatory notes to the latest issue of *The Labour Force* (Catalogue No. 6203.0. Previously Ref. No. 6.20). (c) Employed includes employers and self-employed in addition to wage and salary earners. For monthly statistics of wage and salary earners see *Employment and Unemployment* (Catalogue No. 6213.0. Previously Ref. No. 6.4). (d) The number of unemployed in each group as a percentage of the labour force in the same group. (e) For details of the methods used in seasonally adjusting these series see *Seasonally Adjusted Indicators, 1977* (Catalogue No. 1308.0. Previously Ref. No. 1.10). See also page 2, paragraphs 9 to 13. (f) The labour force (original) in each group as a percentage of the civilian population aged 15 years and over in the same group (labour force participation rate).

n.a. Not available. † Affected by industrial dispute. r - revised.

TABLE 2. EMPLOYED PERSONS (a), AUGUST 1977

	Males	Married women	Other females (b)	All females	Persons
NUMBER EMPLOYED ('000)					
Full-time workers (a)	3,626.4	771.0	600.9	1,371.9	4,998.3
Part-time workers (a)	180.7	552.8	136.6	689.4	870.0
<b>Total</b>	<b>3,807.1</b>	<b>1,323.8</b>	<b>737.5</b>	<b>2,061.3</b>	<b>5,868.4</b>
AVERAGE HOURS WORKED (c)					
Agriculture	52.0	27.9	34.7	29.0	47.0
Manufacturing	39.1	33.0	35.9	33.8	37.8
Construction	38.7	20.0	38.8	23.3	37.6
Wholesale and retail trade	41.3	29.9	30.4	30.1	36.7
Community services (d)	38.0	27.0	33.4	29.4	32.6
<b>All industries</b>	<b>40.1</b>	<b>28.6</b>	<b>32.9</b>	<b>30.2</b>	<b>36.6</b>
Full-time workers (a)	41.3	38.1	37.4	37.8	40.4
Part-time workers (a)	14.6	15.4	13.1	15.0	14.9

(a) See footnote (b) to Table 1. (b) Never married, widowed and divorced. (c) Averages have been calculated using actual hours worked during survey week, not hours paid for. All employed persons, including those who did not work during survey week, have been included in the calculations. When recording hours worked, fractions of an hour are disregarded. This procedure results in a slight lowering of the average hour figures. The figures may be affected by public holidays, leave, absenteeism; temporary absence from work due to sickness, accidents and industrial disputes; and work stoppages due to bad weather, plant breakdown, etc. (d) Comprises health, education, libraries, etc.; welfare and religious institutions; and other community services. In May and August each year estimates of average hours are low because hours worked by school teachers are affected by school holidays.

TABLE 3. UNEMPLOYED PERSONS (a), AUGUST 1977

	Males	Married women	Other females (b)	All females	Persons
NUMBER UNEMPLOYED ('000)					
Looking for full-time work (c)	163.1	33.9	70.5	104.4	267.5
Looking for part-time work (d)	12.6	29.7	12.7	42.4	55.0
Aged 15-19 years -					
Looking for first job	15.2	*	21.9	22.5	37.6
Other	40.3	*	37.9	40.3	80.5
<b>Total aged 15-19 years</b>	<b>55.4</b>	<b>*</b>	<b>59.9</b>	<b>62.8</b>	<b>118.2</b>
Aged 20 years and over	120.2	60.7	23.3	84.0	204.3
Unemployed for (e) -					
Under 2 weeks	7.5	4.5	*	8.2	15.7
2 weeks and under 4 weeks	24.0	9.5	9.1	18.6	42.6
4 weeks and under 8 weeks	30.1	14.0	14.7	28.7	58.8
8 weeks and under 13 weeks	28.4	10.4	14.0	24.4	52.8
13 weeks and under 26 weeks	32.8	9.1	13.8	22.8	55.6
26 weeks and under 39 weeks	23.8	8.3	13.2	21.5	45.3
39 weeks and under 52 weeks	6.3	*	*	4.5	10.8
52 weeks and under 65 weeks	10.4	*	4.1	7.1	17.4
65 weeks and over	12.5	*	7.4	10.9	23.3
<b>All unemployed persons</b>	<b>175.7</b>	<b>63.6</b>	<b>83.2</b>	<b>146.8</b>	<b>322.5</b>
AVERAGE DURATION OF UNEMPLOYMENT (f) (weeks)					
Aged 15-19 years	20.5	*	22.4	22.4	21.5
Aged 20 years and over	21.5	17.5	25.1	19.6	20.7
<b>All unemployed persons</b>	<b>21.2</b>	<b>17.7</b>	<b>23.2</b>	<b>20.8</b>	<b>21.0</b>
UNEMPLOYMENT RATES (g) (per cent)					
Looking for full-time work (c)	4.3	4.2	10.5	7.1	5.1
Looking for part-time work (d)	6.5	5.1	8.5	5.8	5.9
Aged 15-19 years	14.6	*	18.6	18.3	16.3
Aged 20 years and over	3.3	4.4	4.7	4.5	3.7
<b>All unemployed persons</b>	<b>4.4</b>	<b>4.6</b>	<b>10.1</b>	<b>6.6</b>	<b>5.2</b>

(a) See footnote (b) to Table 1. (b) Never married, widowed and divorced. (c) Includes persons laid off for the whole week from full-time jobs. (d) Includes persons laid off for the whole week from part-time jobs. (e) Period from the time the person began looking for work, or was laid off, to the end of survey week. (f) Periods of unemployment are recorded only in completed weeks; the averages shown are affected accordingly. (g) The number of unemployed in each group as a percentage of the labour force in the same group.

\* Less than or based on a figure less than 4,000. See the Technical Note to the latest issue of *The Labour Force* (Catalogue No. 6203.0. Previously Ref. No. 6.20).

TABLE 4. CIVILIAN POPULATION 15 YEARS OF AGE AND OVER (a), BY EMPLOYMENT STATUS STATES AND TERRITORIES, AUGUST 1977

State or Territory	Employed (b)(c)			Unemployed (b)		Total labour force (b)		Not in labour force (b) ('000)	Civilian population aged 15 and over (a) ('000)
	Agri-culture ('000)	Other indus-tries ('000)	Total ('000)	Number ('000)	Per cent of labour force (d)	Number ('000)	Per cent of popula-tion (f)		
MALES									
New South Wales	76.9	1,270.8	1,347.7	70.4	5.0	1,418.2	79.3	369.6	1,787.8
Victoria	62.0	969.9	1,031.9	38.4	3.6	1,070.4	80.0	267.8	1,338.3
Queensland	64.9	486.9	551.8	27.2	4.7	579.0	79.1	152.9	731.8
South Australia	31.9	318.8	350.8	17.8	4.8	368.5	80.4	89.9	458.4
Western Australia	34.8	294.4	329.2	13.1	3.8	342.3	80.8	81.2	423.5
Tasmania	8.3	103.2	111.5	4.8	4.1	116.3	78.8	31.2	147.5
Northern Territory	2.2	26.2	28.4	*	*	29.3	81.8	6.5	35.8
Australian Capital Territory	*	55.6	55.7	3.0	5.1	58.7	88.8	7.4	66.1
<b>Australia</b>	<b>281.1</b>	<b>3,526.0</b>	<b>3,807.1</b>	<b>175.7</b>	<b>4.4</b>	<b>3,982.8</b>	<b>79.8</b>	<b>1,006.3</b>	<b>4,989.1</b>
FEMALES									
New South Wales	22.0	707.1	729.1	53.2	6.8	782.2	42.4	1,063.8	1,846.0
Victoria	17.4	559.8	577.2	40.6	6.6	617.8	44.6	766.3	1,384.0
Queensland	17.7	257.2	274.8	20.9	7.1	295.7	39.5	452.4	748.1
South Australia	9.2	189.6	198.8	12.6	6.0	211.4	44.7	261.6	473.0
Western Australia	9.5	167.6	177.1	12.6	6.6	189.7	45.4	227.9	417.6
Tasmania	2.2	53.3	55.5	5.1	8.5	60.7	40.5	89.2	149.9
Northern Territory	*	12.9	13.2	*	*	13.6	46.1	15.9	29.5
Australian Capital Territory	*	35.5	35.5	1.5	4.1	36.9	52.3	33.6	70.5
<b>Australia</b>	<b>78.2</b>	<b>1,983.1</b>	<b>2,061.3</b>	<b>146.8</b>	<b>6.6</b>	<b>2,208.1</b>	<b>43.1</b>	<b>2,910.6</b>	<b>5,118.7</b>
PERSONS									
New South Wales	98.9	1,977.9	2,076.8	123.6	5.6	2,200.4	60.6	1,433.4	3,633.8
Victoria	79.4	1,529.7	1,609.1	79.0	4.7	1,688.2	62.0	1,034.1	2,722.3
Queensland	82.6	744.1	826.6	48.1	5.5	874.7	59.1	605.3	1,479.9
South Australia	41.1	508.5	549.6	30.4	5.2	579.9	62.3	351.4	931.4
Western Australia	44.3	462.0	506.3	25.7	4.8	532.0	63.2	309.1	841.1
Tasmania	10.5	156.5	167.0	10.0	5.6	177.0	59.5	120.4	297.4
Northern Territory	2.5	39.1	41.6	*	*	42.9	65.7	22.4	65.3
Australian Capital Territory	*	91.1	91.2	4.5	4.7	95.6	70.0	41.0	136.6
<b>Australia</b>	<b>359.3</b>	<b>5,509.1</b>	<b>5,868.4</b>	<b>322.5</b>	<b>5.2</b>	<b>6,190.8</b>	<b>61.2</b>	<b>3,916.9</b>	<b>10,107.8</b>

For footnotes see Table 1.

\* Subject to sampling variability too high for most practical uses.

NOTE. Standard errors of State estimates are available from the office of the Australian Bureau of Statistics in each State capital. See also page 2, paragraph 8.

R.J. CAMERON  
Australian Statistician