

# **AUSTRALIAN BUREAU OF STATISTICS**

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## MULTIPLE JOBHOLDING, AUSTRALIA, AUGUST 1983

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#### **EXPLANATORY NOTES**

#### Introduction

In association with the August 1983 labour force survey conducted throughout Australia, employed persons were asked about the nature and extent of multiple jobholding.

- 2. During the two weeks beginning Monday 8 August 1983 specially trained interviewers asked the questions of those of the 70,000 respondents in August labour force survey who fell within the scope of this survey.
- 3. Results of similar surveys, first conducted in November 1965, have been published in *Multiple Jobholding, Australia* (6216.0).

#### Scope

- 4. The survey included all civilians aged fifteen years and over who were employed except:
  - (a) certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations;
  - (b) overseas residents in Australia;
  - (c) members of non-Australian defence forces (and their dependants) stationed in Australia; and
  - (d) students boarding at school, persons permanently unable to work, some patients in hospitals and sanatoria, and inmates of jails, reformatories, etc.

#### **Definitions**

- 5. Persons were classified as *multiple jobholders* if, during the survey week, they
  - (a) worked in a second job or held a second job from which they were absent because of holidays, sickness or any other reason; and
  - (b) were an *employee* (i.e. employed as a wage or salary earner) in at least one of their jobs.

Work as an unpaid family helper or service in the reserve defence forces was not regarded as a second job. Persons who by the nature of their employment worked for more than one employer, e.g. domestics, odd-job men, baby-sitters, etc., were not counted as multiple jobholders unless they also held another job of a different kind; nor were those who worked for more than one employer solely by reason of changing jobs during the survey week.

- 6. The main job was defined as the job at which most hours were usually worked or, where an equal number of hours were usually worked at two or more jobs, the job considered by the respondent to be the main job.
- 7. Definitions of the principal labour force categories appearing in this publication are given in *The Labour Force, Australia* (6203.0).
- 8. The term *not married* comprised never married, widowed and divorced.
- 9. Proportion of labour force referred to the number of multiple jobholders in each group as a percentage of the civilian labour force in the same group.

#### Comparability of series

- 10. Because the August 1979 and subsequent survey estimates are based on revised population estimates derived from the results of the 1976 Population Census (adjusted for underenumeration) and a revised population survey questionnaire, care should be used in comparing estimates with those shown in previous issues of this publication.
- 11. Main job is defined as the job in which the respondent usually worked more hours (see paragraph 6 above). For the August 1978 and prior surveys, main job was defined as the job in which the respondent worked more hours in the survey week.

#### Reliability of the estimates

- 12. Estimates in this publication are subject to two sources of error:
  - (a) sampling error: 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. More information about this topic and tables of estimated standard errors for this survey will be found in the Technical note.
  - (b) non-sampling error: inaccuracies may occur because of imperfections in reporting by respondents and interviewers and errors made in the coding and processing of data. These inaccuracies may occur in any enumeration, whether it be a full count or only a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures.

#### Related publications

13. Other ABS publications which may be of interest include:

Labour Mobility, Australia, During the Year Ended February 1983 (6209.0)

Labour Force Experience, Australia, During the Year Ended February 1983 (6206.0)

Working Hours Arrangements, Australia, February to May 1981 (6338.0)

Working Hours Arrangements—Supplementary Tables, Australia, February to May 1981 (6339.0)

The Labour Force, Australia (6203.0)—issued monthly

14. Current publications produced by the ABS are listed in the Catalogue of Publications, Australia (1101.0). The ABS also issues, on Tuesdays and Fridays, a Publications Advice (1105.0) which lists publications to be released in the following few days. The Catalogue and Publications Advice are available from any ABS office.

#### Symbols and other usages

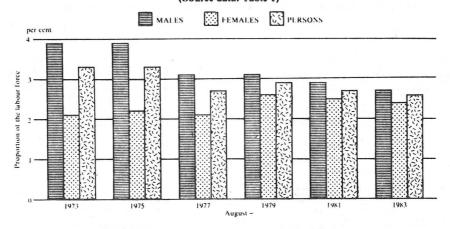
- \* subject to sampling variability too high for most practical uses. See paragraph 12 above
- .. not applicable
- n.e.c. not elsewhere classified
- 15. Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

A. R. BAGNALL Acting Australian Statistician

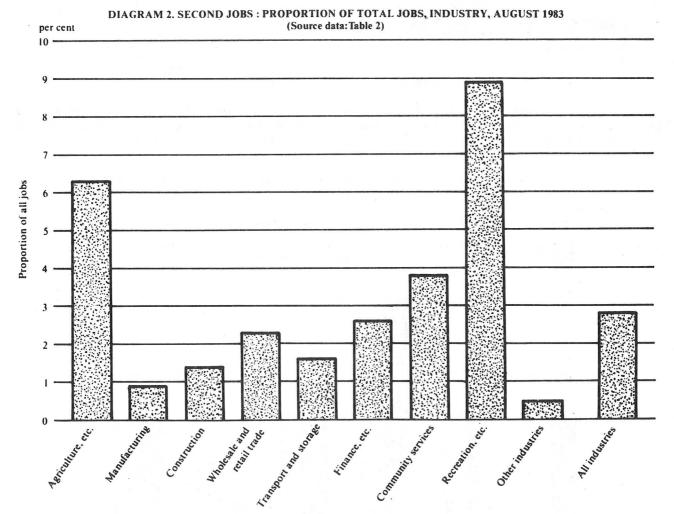
#### **SUMMARY OF FINDINGS**

The incidence of multiple jobholding in Australia has declined over the period 1973 to 1983, and at August 1983 was 2.6 per cent of the total labour force. As a proportion of the relevant labour force, male multiple jobholding decreased while female multiple jobholding increased; the differences in the proportions have decreased. This trend reflected overall labour market trends of significantly increased participation by females and decreasing levels of male participation.

DIAGRAM 1. MULTIPLE JOBHOLDERS: PROPORTION OF THE LABOUR FORCE, AUGUST 1973 TO AUGUST 1983
(Source data: Table 1)

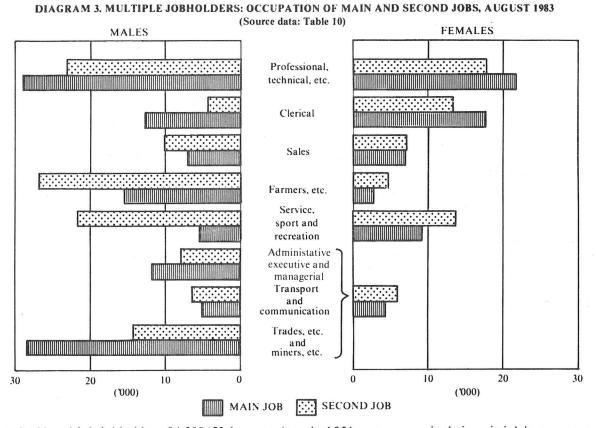


The incidence of multiple jobholding varied significantly across different industries. Expressed as a proportion of all jobs, the number of second jobs was highest in the service industries and in agriculture. This is to be expected, given the different working arrangements that apply in these industries compared with conditions in other industries such as manufacturing and construction, and the increased opportunities for casual or part-time employment. Table 8 shows that the number of multiple jobholders who worked in community services in both their main and second jobs was significantly higher than for any other industry division.

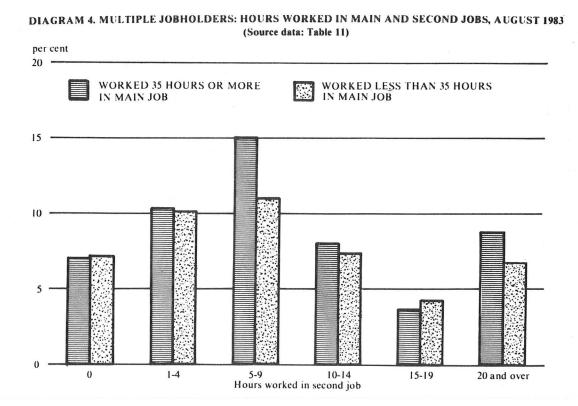


The distribution of multiple jobholders by occupation group also shows significant variation. As expected, those jobs with more flexibility in terms of working hours and conditions and with less dependence on integration with other employee tasks (that is, where individual tasks rather than participation in a processing cycle are more common) are more likely to be the second jobs of persons with more than one job. Thus, the occupations in which second jobs most frequently occurred were farmers, etc., professional and technical occupations and service, sport and recreation occupations.

The high proportion of multiple jobholders who work in professional and technical occupations in their main job is also highlighted. Table 9 shows that the proportion of these persons who worked in the same occupation group in their second job is significantly higher than any other occupation group.



Of the 177,600 multiple jobholders, 94,300 (53.1 per cent) worked 35 hours or more in their main job in survey week and 83,300 (46.9 per cent) worked less than 35 hours. Most multiple jobholders worked less than 10 hours in their second jobs (60.9 per cent) and 14.3 per cent did not work at all during the survey week in their second jobs.



In August 1983, male multiple jobholders employed as wage and salary earners in both jobs who worked in their second jobs during the survey week earned \$328 from their main job, about the same mean weekly earnings as all male wage and salary earners from their main jobs (\$330). On the other hand, female multiple jobholders employed as wage and salary earners in both jobs who worked in their second job during the survey week earned \$190 from their main job, about 87 per cent of mean weekly earnings of all female wage and salary earners from their main jobs. When second jobs are taken into account, multiple jobholders earned more than the mean weekly earnings of all employees from all jobs (males 20.5 per cent more, females 16.0 per cent more). Compared to August 1981, mean weekly earnings of these male multiple jobholders have increased significantly more than mean weekly earnings of the other groups.

DIAGRAM 5. MEAN WEEKLY EARNINGS : MULTIPLE JOBHOLDERS WHO WERE EMPLOYEES IN BOTH JOBS AND WHO WORKED IN THEIR SECOND JOB.AND ALL EMPLOYEES, AUGUST 1983

(Source data: Table 14 and Catalogue No. 6310.0) \$ per week 400 300 200 100 All jobs Main job Second job Main job All jobs - MULTIPLE JOBHOLDERS-- ALL EMPLOYEES -

TABLE 1. MULTIPLE JOBHOLDERS:PROPORTION OF PERSONS IN THE LABOUR FORCE WHO HELD A SECOND JOB, BY OCCUPATION OF MAIN JOB, AUGUST 1973 TO AUGUST 1983 (Per cent)

Occupation group of main job	August 1973	August 1975	August 1977	August 1979	August 1981	August 1983
Professional and technical, etc.	4.7	5.1	4.6	4.7	4.4	5.1
Administrative, executive and managerial	3.2	3.3	2.7	2.8	3.0	3.0
Clerical	3.1	3.3	2.6	2.9	2.8	2.6
Sales	3.5	3.5	2.6	2.9	2.5	2.4
Farmers, fishermen, timbergetters, etc.	4.7	4.6	4.0	4.3	4.8	3.8
Transport and communication	3.5	3.2	2.9	2.7	2.9	1.7
Trades and production-process workers						
and labourers, n.e.c. and miners, etc.	2.7	2.6	1.8	2.0	1.5	1.5
Service, sport and recreation	3.1	3.0	3.2	3.1	3.2	1.9
Total	3.3	3.3	2.7	2.9	2.7	2.6
Males	3.9	3.9	3.1	3.1	2.9	2.7
Females	2.1	2.2	2.1	2.6	2.5	2.4

TABLE 2. SECOND JOBS OF MULTIPLE JOBHOLDERS AS A PROPORTION OF TOTAL JOBS(a): INDUSTRY, AUGUST 1973 TO AUGUST 1983 (Per cent)

							August 1983	
Industry division	August 1973	August 1975	August 1977	August 1979	August 1981	Males	Females	Persons
Agriculture, forestry, fishing								
and hunting	7.8	7.4	6.9	7.0	6.8	6.7	5.1	6.3
Manufacturing	1.1	1.3	0.9	0.8	0.6	0.7	1.3	0.9
Construction	1.7	1.7	1.2	1.6	1.3	1.3	*	1.4
Wholesale and retail trade	2.5	2.7	2.1	2.4	2.3	2.6	1.9	2.3
Transport and storage	2.6	2.2	2.2	2.2	2.3	1.6	*	1.6
Finance, property and								
business services	3.4	4.3	3.3	2.6	2.8	2.9	2.3	2.6
Community services	3.7	4.0	3.5	3.2	3.7	5.1	3.0	3.8
Recreation, personal								
and other services	13.1	12.2	10.4	13.4	8.3	13.4	5.3	8.9
Other	1.0	0.8	*	0.8	0.7	*	*	0.5
Total	3.2	3.3	2.8	3.0	2.7	2.9	2.6	2.8

<sup>(</sup>a) The sum of all employed persons whose main job was in the relevant industry division plus those multiple jobholders whose second job was in the same industry division.

TABLE 3. MULTIPLE JOBHOLDERS: MARITAL STATUS, AUGUST 1983

9 0		Married			Not marrie	d	0.50	Total	
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
			NUMBER	(000)	- A E				
N.S.W.	22.1	10.7	32.8	11.0	7.7	18.6	33.0	18.4	51.4
Vic.	24.4	10.9	35.4	6.3	5.4	11.7	30.7	16.4	47.1
Qld	14.3	7.0	21.4	4.8	2.6	7.4	19.1	9.7	28.8
S.A.	11.4	5.6	16.9	2.5	*	4.1	13.8	7.2	21.0
W.A.	8.5	4.8	13.3	2.2	2.6	4.8	10.7	7.4	18.1
Tas.	2.8	1.4	4.3	*	*	*	3.3	1.7	5.0
A.C.T.	2.3	*	3.1	*	*	*	3.2	*	4.4
Australia(a)	86.9	41.5	128.5	28.2	21.0	49.1	115.1	62.5	177.6
	PF	ROPORTIO	N OF LABO	UR FORC	E (per cent)				4
N.S.W.	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1
Vic.	3.2	2.6	3.0	1.7	1.9	1.8	2.7	2.3	2.6
Qld	3.1	3.1	3.1	2.1	1.7	1.9	2.8	2.5	2.7
S.A.	4.3	4.1	4.2	2.1	*	2.0	3.6	3.2	3.5
W.A.	3.2	3.1	3.2	1.7	3.2	2.3	2.7	3.2	2.9
Tas.	3.4	3.8	3.5	*	*	*	2.8	2.5	2.7
A.C.T.	5.2	*	4.1	*	*	*	4.8	*	3.8
Australia(a)	3.0	2.7	2.9	2.0	2.0	2.0	2.7	2.4	2.6

<sup>(</sup>a) Includes the Northern Territory.

TABLE 4. MULTIPLE JOBHOLDERS: AGE AND MARITAL STATUS, AUGUST 1983

			Married			Not marrie	d		Total	
Age group (ye	ars)	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
				NUMBER	(000)					
15-19		*	*	*	5.6	4.8	10.4	5.6	4.8	10.4
20-24		3.2	3.1	6.3	8.4	6.9	15.2	11.6	9.9	21.5
25-34		30.4	15.4	45.7	8.4	5.8	14.2	38.8	21.1	59.9
35-44		30.1	14.8	44.8	3.3	*	5.2	33.3	16.7	50.1
45-54		13.7	7.0	20.8	*	*	*	15.4	8.1	23.5
55 and over		9.6	*	10.9	*	*	*	10.4	*	12.2
Total		86.9	41.5	128.5	28.2	21.0	49.1	115.1	62.5	177.6
		PF	ROPORTIO	N OF LABO	UR FORC	E (per cent)				
15-19		*	*	*	1.5	1.4	1.5	1.5	1.4	1.4
20-24		2.2	2.0	2.1	1.8	2.2	2.0	1.9	2.1	2.0
25-34		3.6	3.3	3.5	2.6	3.2	2.8	3.3	3.2	3.3
35-44		3.5	3.0	3.3	2.7	*	2.5	3.4	2.9	3.2
45-54		2.2	2.3	2.2	*	*	*	2.2	2.2	2.2
55 and over		2.2	*	2.0	*	*	*	2.1	*	1.9
Total		3.0	2.7	2.9	2.0	2.0	2.0	2.7	2.4	2.6

TABLE 5. MULTIPLE JOBHOLDERS: STATUS OF WORKER IN MAIN AND SECOND JOBS, AUGUST 1983 (  $^{\circ}$  000)

		Statu	s of worker i	n second jo	b				
		Employer or self-employed			Employee			Total	
Status of worker in main job	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
		ALL M	ULTIPLE JO	OBHOLDE	ERS				
Married—									
Employer or self-employed				13.6	6.0	19.6	13.6	6.0	19.6
Employee	32.8	11.0	43.8	40.5	24.5	65.0	73.4	35.5	108.9
Total	32.8	11.0	43.8	54.1	30.5	84.6	86.9	41.5	128.5
Not married—		-							
Employer or self-employed				4.4	*	5.2	4.4	*	5.2
Employee	7.8	*	9.8	16.0	18.2	34.2	23.8	20.2	44.0
Total	7.8	*	9.8	20.4	19.0	39.4	28.2	21.0	49.1
Total—				,					
Employer or self-employed				17.9	6.8	24.8	17.9	6.8	24.8
Employee	40.7	13.0	53.6	56.5	42.7	99.2	97.2	55.7	152.9
Total	40.7	13.0	53.6	74.4	49.5	124.0	115.1	62.5	177.6
PERSON	S WHO ACT	UALLY WO	RKED IN A	SECOND	JOB IN TH	E SURVEY	WEEK		
Employer or self-employed				16.0	4.7	20.6	16.0	4.7	20.6
Employee	32.5	11.4	43.9	50.0	37.6	87.6	82.6	49.0	131.5
Total	32.5	11.4	43.9	66.0	42.3	108.3	98.5	53.6	152.2

#### TABLE 6. MULTIPLE JOBHOLDERS:INDUSTRY OF MAIN JOB, AUGUST 1983

		Number ('000)	)	Proport	ion of labour forc	e (per cent)
Industry division of main job	Males	Females	Persons	Males	Females	Persons
Agriculture, forestry, fishing and hunting	12.9	*	15.4	3.9	*	3.6
Manufacturing	17.3	*	20.0	1.8	*	1.6
Construction	6.8	*	7.2	1.7	*	2.1
Wholesale and retail trade	17.3	11.5	28.8	2.3	2.0	2.2
Transport and storage	6.2	*	7.6	1.9	*	2.0
Finance, property and business services	10.5	8.3	18.7	3.3	2.9	3.2
Public administration and defence	8.6	*	10.2	3.9	*	3.1
Community services	21.4	24.9	46.3	5.2	3.6	4.2
Recreation, personal and other services	6.5	8.0	14.5	3.5	3.4	3.4
Other	7.7	*	8.9	2.3	*	2.3
Total	115.1	62.5	177.6	2.7	2.4	2.6

TABLE 7. MULTIPLE JOBHOLDERS: INDUSTRY OF MAIN AND SECOND JOBS, AUGUST 1983 (  $^{\circ}$  000)

			Industry d	ivision of se	cond job			
Industry division of main job	Agriculture, forestry, fishing and hunting	Manufact- uring	Wholesale and retail trade	Finance, property, business services	Community services	Recreation, personal and other services	Other (a)	Total
Agriculture, forestry, fishing	140							
and hunting	5.9	-	3.5	*		3.1	*	15.4
Manufacturing	3.4	*	3.6	*	*	5.1	*	20.0
Wholesale and retail trade Finance, property and	3.8	*	9.0	*	4.2	6.2	*	28.8
business services	*	*	*	4.0	3.8	5.8	*	18.7
Community services	5.5	*	5.9	*	22.7	6.0	*	46.3
Recreation, personal and other								
services	*	*	*	*	3.4	5.5	*	14.5
Other	7.1	*	4.5	3.0	5.0	8.2	4.8	33.9
Total	27.8	10.2	28.8	15.4	42.8	38.2	14.5	177.6
Males	22.7	6.4	18.5	8.9	21.7	25.7	11.2	115.1
Females	5.1	3.8	10.3	6.5	21.1	12.4	3.2	62.5

<sup>(</sup>a) Includes mining; electricity, gas and water; construction; transport and storage; communication; and public administration and defence.

TABLE 8. MULTIPLE JOBHOLDERS: BIRTHPLACE AND PERIOD OF ARRIVAL IN AUSTRALIA, AUGUST 1983

			All multip	le jobholders					
		1ales	-	males		rsons	Persons who actually worked in second job in the survey		in a
	('000)	Proportion of labour force (%)	('000)	Proportion of labour force (%)	('000)	Proportion of labour force (%)	Males ('000)	Females ('000)	Persons ('000)
Born in Australia	92.3	2.9	52.4	2.7	144.7	2.9	79.1	45.3	124.4
Born outside Australia—									
Main English-speaking countries(a)	12.3	2.4	6.2	2.0	18.6	2.2	10.3	5.0	15.3
Other countries	10.5	1.6	3.9	1.1	14.3	1.4	9.1	3.3	12.4
Arrived in Australia —									
Before 1961	8.9	2.2	*	*	11.4	2.0	7.8	*	9.9
1961-1970	7.5	1.8	3.6	1.5	11.1	1.7	6.7	3.1	9.7
1971 to survey date	6.4	1.7	4.0	1.6	10.4	1.7	4.9	3.2	8.1
Total born outside Australia	22.8	1.9	10.1	1.5	32.9	1.8	19.4	8.3	27.7
Total	115.1	2.7	62.5	2.4	177.6	2.6	98.5	53.6	152.2

<sup>(</sup>a) Comprises the United Kingdom, Ireland, Canada, the United States of America, South Africa and New Zealand.

TABLE 9. MULTIPLE JOBHOLDERS: OCCUPATION OF MAIN JOB, AUGUST 1983

		Number ('000)		Proportion	n of labour force	(per cent)
Occupation group	Males	Females	Persons	Males	Females	Persons
Professional and technical, etc.	29.0	21.7	50.7	5.4	4.8	5.1
Administrative, executive and managerial	11.8	*	12.9	3.2	*	3.0
Clerical	12.7	17.7	30.4	3.9	2.1	2.6
Sales	7.0	7.0	14.0	2.5	2.2	2.4
Farmers, fishermen, timbergetters, etc.	15.5	*	18.1	4.1	*	3.8
Transport and communication	5.1	*	6.1	1.7	*	1.7
Trades and production-process workers						
and labourers, n.e.c. and miners, etc.	28.5	*	30.7	1.6	*	1.5
Service, sport and recreation	5.5	9.2	14.7	2.2	2.0	1.9
Total	115.1	62.5	177.6	2.7	2.4	2.6

TABLE 10. MULTIPLE JOBHOLDERS : OCCUPATION OF MAIN AND SECOND JOBS, AUGUST 1983 (' 000)

		Occi	upation group	of second job			
Occupation group of main job	Professional etc.(a)	Clerical	Sales	Farmers, etc.	Trades, etc.(b)	Service, sport and recreation	Total
Professional and technical, etc.	31.0	3.8	3.3	6.1	*	4.3	50.7
Administrative, executive and managerial	5.1	*	*	3.4	*	*	12.9
Clerical	3.9	9.0	3.9	*	*	8.8	30.4
Sales	3.3	*	*	*	*	4.2	14.0
Farmers, fishermen and timbergetters, etc.	*	*	*	8.3	3.3	*	18.1
Transport and communication Trades and production-process workers and	*	*	*	*	*	*	6.1
labourers, n.e.c. and miners, etc.	*	*	4.0	7.5	9.2	7.0	30.7
Service, sport and recreation	*	*	*	*	*	6.9	14.7
Total	50.6	17.6	17.3	31.7	25.0	35.4	177.6

<sup>(</sup>a) Includes administrative, executive and managerial. (b) Comprises trades and production-process workers and labourers, n.e.c., miners and quarry workers and transport and communication.

TABLE 11. MULTIPLE JOBHOLDERS : HOURS WORKED IN MAIN AND SECOND JOBS, AUGUST 1983 (\*000)

			Hours worke	d in second job	, ,		Total number
Hours worked in main job	0	1-4	5-9	10-14	15-19	20 and over	of multiple jobholders
0	4.1	*	*	*	*	*	5.3
1-14	4.1	10.2	6.9	*		4.2	27.7
15-29	*	5.0	7.5	8.0	4.8	6.0	33.8
30-34	*	*	4.6	3.0		4.4	16.4
35-39	*	8.6	9.0	3.6		3.8	26.8
40	4.2	3.2	7.8	5.5	3.4	5.9	29.9
41-48	*	5.6	5.2	*		3.8	18.5
49 and over	4.7	*	4.6	3.4	*	4.9	19.2
Total	25.4	36.4	46.2	27.5	14.2	27.8	177.6
Males	16.6	18.5	29.5	18.2	9.8	22.5	115.1
Females	8.9	17.9	16.7	9.3	4.5	5.3	62.5

TABLE 12. MULTIPLE JOBHOLDERS : INDUSTRY OF SECOND JOB AND HOURS WORKED IN SECOND JOB, AUGUST 1983 (\*000)

			Hours worke	d in second jo	ob	7	Total number		
Industry division of second job	0	1-4	5-9	10-14	15-19	20 and over	of multiple jobholders	Males	Females
Agriculture, forestry,									
fishing and hunting	6.2	*	4.1	5.0	3.0	7.4	27.8	22.7	5.1
Manufacturing		3.7	3.0	*	*	*	10.2	6.4	3.8
Wholesale and									
retail trade	*	4.8	10.4	4.5	*	4.3	28.8	18.5	10.3
Finance, property and									
business services		4.9	4.2		3.8	*	15.4	8.9	6.5
Community services	5.8	15.9	8.3	5.8	3.0	4.0	42.8	21.7	21.1
Recreation, personal	• 10								
and other services	3.6	7.5	12.8	7.4	*	5.0	38.2	25.7	12.4
Other industries(a)	- 12.00	4.6	3.5		3.2	3.1	14.5	11.2	3.2
Other maustries(a)		-4.0	5.5			3.1	11.5	11.2	3.2
Total	25.4	36.4	46.2	27.5	14.2	27.8	177.6	115.1	62.5

(a) Includes mining; electricity, gas and water; construction; transport and storage; communication; and public administration and defence.

TABLE 13. MULTIPLE JOBHOLDERS : OCCUPATION OF SECOND JOB AND HOURS WORKED IN SECOND JOB, AUGUST 1983 ( $^{\circ}$  000)

			Hours worke	d in second job		7	Total number		
Occupation of second job	0	1-4	5-9	10-14	15-19	20 and over	of multiple jobholders	Males	Females
Professional, etc.(a)	8.0	15.4	10.4	7.3	3.7	5.9	50.6	31.2	19.4
Clerical	*	3.8	5.6	*		3.3	17.6	4.3	13.3
Sales	*	3.5	7.2	*		3.6	17.3	10.1	7.1
Farmers, fishermen,									
timbergetters, etc.	6.5	*	5.6	5.8	*	8.5	31.7	26.9	4.7
Trades, etc.(b)	4.1	3.0	7.0	3.6	*	4.7	25.0	20.8	4.2
Service, sport									
and recreation	*	8.4	10.4	6.7	*	4.5	35.4	21.7	13.7
Total	25.4	36.4	46.2	27.5	14.2	27.8	177.6	115.1	62.5

<sup>(</sup>a) Includes administrative, executive and managerial. (b) Includes trades and production-process workers and labourers n.e.c.; miners and quarry workers; transport and communication.

TABLE 14. MULTIPLE JOBHOLDERS WHO WERE EMPLOYEES IN BOTH JOBS AND WHO WORKED IN THEIR SECOND JOB IN THE SURVEY WEEK:
WEEKLY EARNINGS IN MAIN JOB AND WEEKLY EARNINGS IN SECOND JOB, AUGUST 1983

		Male	S			Female	es			Person	15	
	Weekly e	arnings in seco	nd joh	Mean	Weekly	earnings in secor	nd job	Mean	Weekly e	arnings in seco	nd job	Mean
	Under \$30	\$30 and over	Total	weekly earnings in second job	Under \$30	\$30 and over	Total	weekly earnings in second job	Under \$30	\$30 and over	Total	weekly earnings in second job
Weekly earnings in main job(\$)—		,000		\$		,000		\$		, 000		\$
Under 160	3.0	4.7	7.7	47	7.4	11.7	19.1	. 54	10.5	16.4	26.9	52
160 and under 220	*	3.2	3.5	65	*	3.9	5.8	64	*	7.1	9.3	65
220 and under 240	*	*	*	*	*	*	*	*	*	*	3.8	69
240 and under 280	*	4.6	5.8	74	*	} 3.9 {	3.3	58	*	7.0	9.1	68
280 and under 320	*	5.4	6.5	66	*	\ \ \ \ \ \	*	*	*	6.9	8.0	68
320 and over	*	21.6	24.6	79	*	5.4	5.9	101	3.5	27.0	30.5	83
Total	8.9	41.1	50.0	71	11.8	25.8	37.6	65	20.7	67.0	87.6	68
					dollars							
Mean earnings in main job	266	342	328		142	212	190		195	291	269	
Median earnings in main job	266	329	317		125	173	158		158	283	257	

TABLE 15. MULTIPLE JOBHOLDERS WHO WERE EMPLOYEES IN BOTH JOBS AND WHO WORKED IN THEIR SECOND JOB IN THE SURVEY WEEK: WEEKLY EARNINGS IN SECOND JOB AND MEAN WEEKLY EARNINGS IN MAIN JOB, AUGUST 1983

			Weekly earnings in second job(\$)											
		1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-99	100-139	140 and over	Total	
	300				N	UMBER ('000	))						á	
Males		*	*	4.3	5.1	4.2	6.0	4.9	4.2	6.0	6.2	4.4	50.0	
Females Persons		5.3	4.1 6.2	4.8 9.1	4.4 9.5	6.7	3.7 9.7	6.3	5.9	3.0 9.0	5.6 11.8	3.7 8.1	37.6 87.6	
			3	MEAN	N WEEKLY	EARNINGS	N MAIN JOI	B (\$)				N N N		
Males		*	*	272	282	369	314	392	352	323	331	398	328	
Females Persons		231	103 140	159 213	201 245	288	205 273	343	311	201 283	224 280	281 344	190 269	

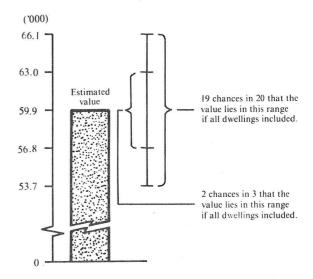
#### **TECHNICAL NOTE**

#### **Estimation procedure**

The estimates are derived from the population survey by use of a ratio estimation procedure which ensures that the estimates conform to an independently estimated distribution of the population for each capital city and remainder of State by age and sex, rather than to the corresponding distribution within the sample itself.

#### Reliability of the estimates

- Since the estimates in this publication 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. Another measure of the likely difference is the relative standard error, which is obtained by expressing the standard error as a percentage of the estimate.
- 3. Space does not allow for the separate indication of the standard errors of all estimates in this publication. A table of standard errors for general application is given on the following page (Table A). Since they are averages based on calculations for a limited number of past surveys over a wide range of labour force characteristics, 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. Table B shows relative standard errors of estimates of mean and median earnings.
- 4. An example of the calculation and the use of standard errors in relation to estimates of persons is as follows. From Table 4 on page 7, the estimated number of multiple jobholders aged 25-34 years in August 1983 was 59,900. Since this estimate is between 50,000 and 100,000 in Table A, the standard error for Australia will be between 2,900 and 3,900 and can be approximated as 3,100 (rounded to the nearest 100). Therefore, there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall in the range 56,800 to 63,000 and about nineteen chances in twenty that the value will fall within the range 53,700 to 66,100. This example is illustrated in the following diagram.
- 5. An example of the use of Table B is as follows. Table 15 shows the mean weekly earnings of all female multiple jobholders in their main job as \$190 and the number of such employees as 37,600. Table B shows the relative standard errors of estimates based on 30,000 and 50,000 employees to be 3.71 per cent and 2.87 per cent



respectively. By interpolation the relative standard error of the estimate is about 3.4 per cent or a standard error of \$6.50 (3.4 per cent of \$190). Therefore there are about two chances in three that the mean weekly earnings of female multiple jobholders would fall within the range \$183.50 to \$196.50, and about nineteen chances in twenty that they would fall within the range \$177.00 to \$203.00.

- 6. As can be seen from the standard error tables, 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 the tables in this publication, estimates less than the lowest levels shown in the standard error table have not been published. Although figures for these small components can in some cases be derived by subtraction, they should not be regarded as reliable.
- 7. Proportions and percentages formed from the ratio of two estimates are also subject to sampling error. The size of the error depends on the accuracy of both the numerator and the denominator. An approximate relative standard error (RSE) of a proportion may be calculated by the following formula:

RSE 
$$(x/y) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

8. Considering the example from paragraph 4, the 59,900 multiple jobholders aged 25-34 years represent 33.7 per cent of all 177,600 multiple jobholders in August 1983. The standard error of 177,600 is approximately 4,800 so the relative standard error is 2.7 per cent. The relative standard error for 59,900 is 5.2 per cent. Applying the above formula, the relative standard error of the proportion is  $\sqrt{(5.2)^2 - (2.7)^2}$  or 4.4 per cent, giving a standard error for the proportion (33.7 per cent) of 1.5 percentage points. Therefore, there are about two chances in three that the proportion of multiple jobholders aged 25-34 years is between 32.2 per cent and 35.2 per cent and nineteen chances in twenty the proportion is within the range 30.7 per cent to 36.7 per cent.

9. Published figures may also be used to estimate the difference between two survey estimates (of numbers or percentages). Such a figure is itself an estimate and is therefore subject to sampling error. The sampling error of the difference between two estimates depends on their standard errors and the relationship (correlation) between them. An approximate standard error (SE) of the difference between two estimates (x-y) may be calculated by the following formula:

SE (x-y) = 
$$\sqrt{[SE(x)]^2 + [SE(y)]^2}$$

While this formula will only be exact for differences between separate and uncorrelated characteristics or subpopulations it is expected to provide a good approximation for all differences likely to be of interest in this publication.

10. The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents and errors made in the coding and processing of data. 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.

TABLE A.—STANDARD ERRORS OF ESTIMATES

	N. S. W.	Vic.	Old	C 1	W.A.	Tas.	N. T.	1 C T	Aust	ralia	
Size of estimate (persons)	N.S. W.	vic.	Qiti	Qld S.A. —number		rus.	N. 1.	A.C.T.	of	Per cent of estimate	
1,000						250					
1,500				-		300	410	390			
2,000				460	490	340	470	440			
2,500			630	510	540	380	510	480			
3,000			690	550	590	410	550	510	800	26.7	
3,500	920	910	740	580	630	430	590	540	860	24.6	
4,000	980	960	780	620	660	460	620	560	920	23.0	
4,500	1,000	1,000	820	650	700	480	650	590	970	21.6	
5,000	1,100	1,100	860	680	730	500	680	610	1,000	20.0	
6,000	1,200	1,200	930	730	790	530	740	650	1,100	18.0	
10,000	1,500	1,400	1,200	900	970	640	910	750	1,400	14.0	
20,000	2,000	1,900	1,500	1,200	1,300	810	1,200	910	2,000	10.0	
50,000	3,000	2,700	2,200	1,600	1,700	1,100	1,700	1,100	2,900	5.8	
100,000	3,900	3,500	2,800	2,100	2,200	1,300		1,300	3,900	3.9	
200,000	5,000	4,400	3,600	2,600	2,700	1,500			5,100	2.6	
300,000	5,800	5,000	4,100	2,900	3,000				6,000	2.0	
500,000	6,900	5,800	4,800	3,300	3,500				7,200	1.4	
1,000,000	8,500	7,000	5,900						9,100	0.9	
2,000,000	10,000	8,400							11,000	0.6	
5,000,000									15,000	0.3	

TABLE B.—ESTIMATES OF RELATIVE STANDARD ERRORS OF MEANS AND MEDIANS (PER CENT)

Number of employees	N. S. W.	Vic.	Qld	S.A.	W.A.	Tas.	N. T.	A.C.T.	Australia	
1,000	23.45	23.45	19.62	16.58	16.58	12.86	16.58	16.58	20.31	
1,500	19.15	19.15	16.02	13.54	13.55	10.49	13.54	13.54	16.58	
2,000	16.58	16.58	13.87	11.73	11.72	9.08	11.73	11.73	14.36	
3,000	13.54	13.54	11.33	9.57	9.57	7.42	9.57	9.57	11.73	
5,000	10.49	10.49	8.78	7.42	7.42	5.75	7.42	7.42	9.08	
7,000	8.86	8.86	7.42	6.27	6.27	4.86	6.27	6.27	7.68	
10,000	7.42	7.42	6.21	5.24	5.25	4.06	5.24	5.24	6.42	
15,000	6.06	6.06	5.07	4.28	4.28	3.32	4.28	4.28	5.24	
20,000	5.24	5.24	4.39	3.71	3.71	2.87	3.71	3.71	4.54	
30,000	4.28	4.28	3.58	3.03	3.03	2.35	3.03	3.03	3.71	
50,000	3.32	3.32	2.78	2.35	2.35	1.82		2.35	2.87	
70,000	2.80	2.80	2.35	1.98	1.98	1.54			2.43	
100,000	2.35	2.35	1.96	1.66	1.65	1.29			2.03	
150,000	1.91	1.91	1.60	1.35	1.35				1.66	
200,000	1.66	1.66	1.39	1.17	1.17				1.44	
300,000	1.35	1.35	1.13	0.96	0.96				1.17	
500,000	1.05	1.05	0.88						0.91	
700,000	0.89	0.89							0.77	
,000,000	0.74	0.74							0.64	
,500,000	0.61								0.52	
2,000,000									0.45	
3,000,000									0.37	
5,000,000									0.29	