

**JOB VACANCIES AND OVERTIME, AUSTRALIA, NOVEMBER 1993**

**SUMMARY OF FINDINGS**

**TREND ESTIMATES FOR JOB VACANCIES AND OVERTIME**

		Reference date			Per cent Change	
		19 Nov. 1993	20 Aug. 1993	20 Nov. 1992	Quarterly	Annual
Job Vacancies	'000	39.4	35.9	28.3	9.7	39.3
Overtime per employee	hours	1.22	1.21	1.13	1.2	8.1
Overtime per employee working overtime	hours	7.32	7.30	7.11	0.3	3.0
Proportion of employees working over-time	%	16.67	16.52	15.89	0.9	4.9

**Job Vacancies**

The trend estimate for *job vacancies* in November 1993 was 39,400. This is a rise of 9.7 per cent from August 1993 and continues the trend that began when the series turned upwards from the eight year low of 25,000 recorded in August 1991.

Presently the trend estimate in job vacancies is 44.6 per cent lower than when it last peaked at 71,100 in February 1989.

The trend estimate of job vacancies for the private sector was 29,900 in November 1993, a rise of 6.4 per cent since August 1993 and 41.5 per cent since November last year. The trend series is now 41.6 per cent lower than the peak in February 1989. The trend estimates for public sector vacancies rose by 9.6 per cent from the previous quarter to 8,900 - the highest since August 1991.

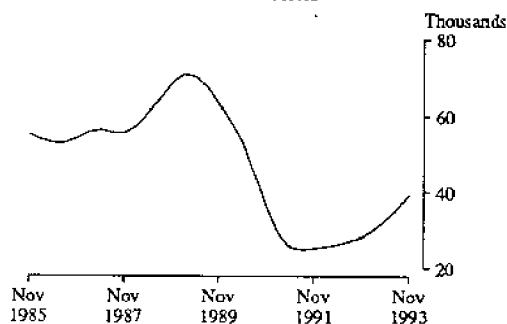
The trend series *job vacancy rate* for Australia was 0.64 per cent compared with 0.66 per cent for August 1993, a decrease of 2.6 per cent, but was 29.0 per cent higher than the rate recorded for November 1992.

**Overtime:**

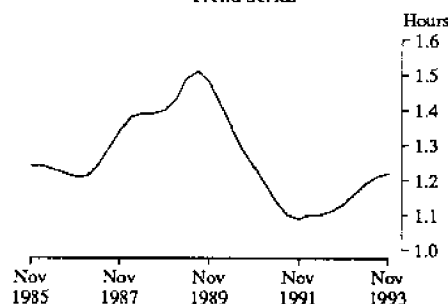
The trend estimate for *average weekly overtime hours per employee* was 1.22 hours, up 1.2 per cent since August 1993. Presently the trend is 19.2 per cent lower than when it last peaked in August 1989.

The trend estimate for *average weekly overtime hours per employee working overtime* was 7.32 hours, up 0.3 per cent from August 1993 and an increase of 3.0 per cent from November 1992. Presently, the trend is 3.3 per cent lower than when it last peaked in August 1989.

**DIAGRAM 1. JOB VACANCIES, AUSTRALIA**  
Trend Series



**DIAGRAM 2. AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE, AUSTRALIA**  
Trend Series



**INQUIRIES**

- for further information about statistics in this publication and the availability of related unpublished statistics, contact Reg Gaull on Perth (09) 323 5304.
- for information about other ABS statistics and services please refer to the back page of this publication.

The trend estimate for *proportion of persons working overtime* was 16.67 per cent, an increase of 0.9 per cent from August 1993 and up 4.9 per cent from November 1992. Presently, the trend is 16.3 per cent lower than when it last peaked in August 1989.

### Seasonal reanalysis

The seasonally adjusted estimates of job vacancies and overtime have been revised in this issue as a result of a

seasonal reanalysis. The reanalysis has taken account of additional information that has become available since the previous reanalysis (see paragraphs 11 and 12 of the Explanatory Notes).

DIAGRAM 3. AVERAGE WEEKLY OVERTIME HOURS  
PER EMPLOYEE WORKING OVERTIME, AUSTRALIA  
Trend Series

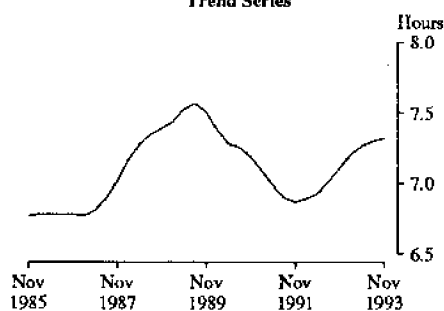
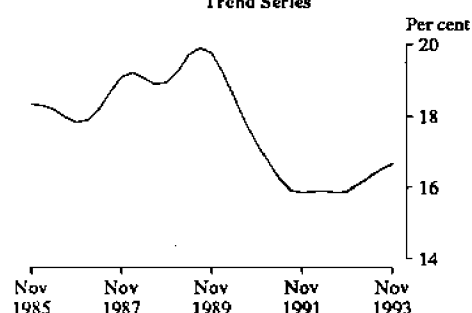


DIAGRAM 4. PERCENTAGE OF EMPLOYED PERSONS  
WORKING OVERTIME, AUSTRALIA  
Trend Series



Note: Trend estimates are subject to revision as subsequent data become available. See Explanatory Notes, paragraphs 7 to 10.

Ian Castles  
Australian Statistician

TABLE 1. TOTAL JOB VACANCIES : PRIVATE AND PUBLIC SECTORS, STATES AND TERRITORIES

Reference date	Original series									Trend series
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	Aust.
PRIVATE SECTOR										
— '000 —										
1992—										
21 August	6.5	5.3	3.6	1.1	* 2.4	* 0.4	* 0.4	* 0.3	20.1	19.4
20 November	8.1	4.8	* 4.0	1.1	* 2.6	* 0.3	* 0.6	* 0.5	22.0	21.2
1993—										
19 February	7.7	6.3	* 3.5	* 1.2	* 3.7	0.2	* 0.1	0.3	23.0	23.1
21 May	10.4	* 4.2	* 4.0	* 1.6	* 2.0	* 0.2	* 0.3	* 0.6	23.2	25.5
20 August	11.8	7.9	5.6	* 0.9	* 3.3	0.3	* 0.4	* 0.3	30.5	28.1
19 November	9.5	8.1	* 5.0	* 2.3	* 3.6	* 0.3	* 0.4	* 0.4	29.6	29.9
Standard errors(a)										
1993—										
November										
Level	1.8	1.7	1.5	0.8	1.0	0.1	0.1	0.2	3.2	(b)
Change (quarterly)	2.6	1.6	1.7	0.8	0.9	0.1	0.2	0.1	3.7	(b)
Change (quarterly)										
— per cent —										
1992—										
November	25.2	-9.3	9.3	-1.2	9.9	-32.1	27.4	55.9	9.3	9.1
1993—										
February	-6.0	30.1	-10.4	6.3	40.5	-19.2	-73.8	-45.4	4.5	9.2
May	35.5	-33.6	12.4	31.9	-45.6	11.2	91.5	127.1	1.1	10.2
August	13.8	89.8	40.1	-43.0	66.2	2.2	39.7	-43.9	31.3	10.5
November	-19.4	2.0	-10.7	150.2	9.4	20.1	13.2	6.6	-3.1	6.4
Change (annual)										
1993—										
November	16.8	67.2	26.1	100.1	39.1	10.2	-20.7	-25.9	34.5	41.5
PUBLIC SECTOR										
— '000 —										
1992—										
21 August	2.8	1.2	1.0	* 0.7	0.8	0.3	0.1	1.0	7.9	8.0
20 November	2.4	1.0	0.9	* 0.8	0.7	0.3	0.1	1.1	7.2	7.2
1993—										
19 February	2.4	1.0	1.3	0.2	0.6	0.2	* 0.4	0.8	6.8	6.9
21 May	2.5	1.2	1.0	0.3	0.5	0.2	* 0.3	* 1.0	7.0	7.3
20 August	2.9	1.1	1.4	* 0.7	0.6	0.3	* 0.3	* 1.1	8.5	8.1
19 November	3.3	1.8	1.2	* 0.5	0.4	0.3	0.3	0.8	8.6	8.9
Standard errors(a)										
1993—										
November										
Level	0.3	0.3	0.1	0.2	0.0	0.0	0.0	0.1	0.5	(b)
Change (quarterly)	0.3	0.2	0.1	0.3	0.1	0.0	0.1	0.3	0.7	(b)
Change (quarterly)										
— per cent —										
1992—										
November	-12.0	-17.2	-11.5	2.7	-17.7	0.3	1.6	5.3	-9.0	-9.4
1993—										
February	-3.8	6.6	53.1	-74.4	-10.9	-30.5	145.9	-26.8	-5.2	-5.0
May	7.2	18.6	-24.0	32.2	-23.5	-23.1	-18.7	36.5	2.0	6.7
August	15.3	-6.4	43.5	184.4	29.1	74.0	8.7	5.6	22.3	10.5
November	13.8	55.4	-13.6	-29.2	-32.9	19.3	-22.3	-29.8	1.0	9.6
Change (annual)										
1993—										
November	35.3	83.8	44.3	-31.7	-40.9	11.1	68.9	-26.0	19.5	22.8

See footnotes at end of table.

TABLE 1. TOTAL JOB VACANCIES : PRIVATE AND PUBLIC SECTORS, STATES AND TERRITORIES—continued

Reference date	Original series									Trend series
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	Aust.
TOTAL										
— '000 —										
1992—										
21 August	9.3	6.5	4.6	* 1.9	* 3.2	* 0.7	* 0.6	1.3	28.0	27.2
20 November	10.6	5.8	4.8	* 1.9	* 3.3	0.6	* 0.7	1.5	29.2	28.3
1993—										
19 February	10.0	7.3	4.9	* 1.4	* 4.3	0.4	* 0.5	1.0	29.8	30.1
21 May	12.9	5.4	5.0	* 1.8	* 2.4	0.4	* 0.6	* 1.6	30.2	32.7
20 August	14.7	9.1	7.0	* 1.6	* 3.9	0.5	* 0.7	* 1.4	39.0	35.9
19 November	12.8	9.9	6.2	* 2.8	4.0	0.6	0.7	1.1	38.2	39.4
Standard errors(a)										
1993—										
November										
Level	1.8	1.7	1.5	0.8	1.0	0.1	0.1	0.2	3.2	(b)
Change (quarterly)	2.6	1.6	1.7	0.9	0.9	0.1	0.3	0.3	3.8	(b)
Change (quarterly)										
— per cent —										
1992—										
November	14.1	-10.7	4.9	0.4	2.9	-18.6	20.9	17.2	4.1	4.0
1993—										
February	-5.5	26.2	0.8	-26.4	30.1	-25.0	-27.7	-32.6	2.1	6.4
May	28.9	-26.2	2.6	31.9	-42.5	-5.2	12.8	59.4	1.3	8.7
August	14.1	68.0	40.8	-10.7	59.4	29.9	23.8	-12.3	29.2	9.8
November	-12.9	8.7	-11.2	69.2	3.1	19.7	-2.9	-21.4	-2.2	9.7
Change (annual)										
1993—										
November	21.1	70.0	29.3	46.6	22.8	10.6	-1.9	-26.0	30.8	39.3

(a) See paragraphs 13 to 18 of the Explanatory Notes. (b) See paragraph 14 of the Explanatory Notes.

TABLE 2. JOB VACANCIES : INDUSTRY, AUSTRALIA ('000)

Industry	Reference date						Standard error(a)
	1992		1993				
	21 Aug.	20 Nov	19 Feb.	21 May	20 Aug.	19 Nov.	
Mining	0.2	* 0.2	0.3	0.3	0.3	* 0.7	0.2
Manufacturing	3.4	4.5	2.6	3.4	4.1	4.9	1.0
Electricity, gas and water	0.1	0.2	0.1	0.1	0.2	0.2	0.0
Construction	* 0.7	* 0.5	* 2.6	* 2.1	* 1.5	* 2.2	1.0
Wholesale trade	* 3.0	* 1.2	* 1.7	* 4.0	* 3.5	* 2.2	0.8
Retail trade	4.3	3.5	* 4.2	* 4.1	* 5.8	* 6.1	1.6
Transport and storage; Communication	0.5	* 1.5	* 0.3	* 1.4	* 2.4	* 2.2	1.1
Public administration and defence(b)	2.4	2.8	2.4	1.8	3.2	3.1	0.4
Community services	9.2	5.7	7.9	5.3	7.3	6.8	0.8
Other(c)	4.2	9.1	7.7	7.8	10.7	9.7	1.8
All industries	28.0	29.2	29.8	30.2	39.0	38.2	3.2

(a) Relates only to latest level estimate. See paragraphs 13 to 18 of the Explanatory Notes. (b) Excludes permanent defence forces. (c) Comprises Finance, property and business services and Recreation, personal and other services.

TABLE 3. JOB VACANCY RATES, STATES AND TERRITORIES  
(per cent)

Reference date	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
1992—									
21 August	0.49	0.41	0.47	* 0.41	* 0.62	* 0.49	* 1.02	1.03	0.49
20 November	0.53	0.35	0.53	* 0.42	0.63	0.37	* 1.18	1.17	0.49
1993—									
19 February	0.51	0.46	0.50	* 0.31	* 0.82	0.29	* 0.85	0.81	0.51
21 May	0.64	0.34	0.49	* 0.40	* 0.47	0.29	* 0.81	* 1.24	0.51
20 August	0.73	0.57	0.68	* 0.36	* 0.74	0.36	* 1.11	* 1.10	0.66
19 November	0.62	0.62	0.62	* 0.61	0.76	0.44	1.09	0.87	0.64
Standard errors(a)									
1993—									
November									
Level	0.09	0.11	0.15	0.17	0.18	0.06	0.23	0.18	0.05
Change (quarterly)	0.13	0.10	0.16	0.19	0.17	0.06	0.42	0.24	0.06
Change (quarterly)									
1992—									
November	8.3	-14.1	11.3	1.8	1.2	-24.7	15.8	14.5	1.9
1993—									
February	-3.8	29.9	-5.7	-26.1	31.1	-21.9	-28.0	-31.0	2.7
May	26.2	-26.7	-1.6	30.2	-42.6	1.0	-4.7	53.7	-0.5
August	14.1	71.4	38.8	-10.5	57.5	22.6	37.5	-11.5	29.6
November	-15.3	8.8	-8.4	70.4	1.7	23.5	-2.2	-21.1	-2.6
Change (annual)									
1993—									
November	17.3	77.6	18.0	46.6	20.6	19.4	-7.7	-26.0	29.0

(a) See paragraphs 13 to 18 of the Explanatory Notes.

TABLE 4. OVERTIME : STATES AND TERRITORIES

Reference period - pay period ending on or before	Original series								Trend series	
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	Aust.
AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE										
— hours —										
1992—										
21 August	1.13	1.05	0.97	0.88	1.30	0.90	* 1.50	0.73	1.07	1.11
20 November	1.27	1.20	1.11	0.98	1.43	1.02	1.40	0.88	1.20	1.13
1993—										
19 February	1.28	1.13	0.98	0.95	1.24	1.06	1.05	0.83	1.14	1.16
21 May	1.28	1.11	1.17	0.96	1.27	1.11	* 1.54	0.81	1.18	1.19
20 August	1.26	1.20	1.02	0.96	1.17	0.82	* 1.69	0.79	1.15	1.21
19 November	1.33	1.46	1.21	1.09	1.26	0.99	* 1.76	0.82	1.30	1.22
Standard errors(a)										
1993—										
November										
Level	0.09	0.13	0.10	0.09	0.13	0.09	0.65	0.12	0.05	(b)
Change (quarterly)	0.08	0.08	0.08	0.06	0.07	0.07	0.40	0.06	0.04	(b)
Change (quarterly)										
— per cent —										
1992—										
November	12.8	14.0	13.5	10.8	10.2	13.5	-6.9	20.5	12.9	1.5
1993—										
February	1.0	-5.4	-11.3	-3.3	-13.4	3.8	-25.1	-5.9	-4.8	2.6
May	-0.3	-1.8	19.0	1.1	2.0	4.8	46.9	-1.7	2.9	2.3
August	-1.7	7.9	-12.3	0.1	-7.9	-26.0	9.9	-2.4	-2.0	1.7
November	5.6	21.4	18.1	14.1	8.5	19.8	4.2	4.0	13.0	1.2
Change (annual)										
1993—										
November	4.5	21.7	9.4	11.6	-11.7	-3.4	25.9	-6.1	8.5	8.1

See footnotes at end of table.

TABLE 4. OVERTIME : STATES AND TERRITORIES—continued

Reference period - pay period ending on or before	Original series								Trend series	
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	Aust.
AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE WORKING OVERTIME										
— hours —										
1992—										
21 August	7.03	6.86	6.22	5.39	7.78	5.91	8.48	5.58	6.75	7.01
20 November	7.66	7.53	6.66	5.50	8.06	7.52	7.95	6.55	7.31	7.11
1993—										
19 February	8.13	7.32	6.55	5.57	7.19	7.39	6.44	6.89	7.30	7.21
21 May	7.47	7.45	6.94	5.65	7.84	7.32	8.02	6.71	7.25	7.27
20 August	7.28	7.35	6.64	5.55	6.91	6.27	9.18	6.34	7.01	7.30
19 November	7.50	8.34	7.30	6.07	7.62	6.91	* 10.48	6.78	7.60	7.32
Standard errors(a)										
1993—										
November										
Level	0.27	0.30	0.41	0.23	0.29	0.22	2.91	0.66	0.15	(b)
Change (quarterly)	0.29	0.27	0.35	0.21	0.19	0.22	1.79	0.40	0.14	(b)
Change (quarterly)										
— per cent —										
1992—										
November	9.1	9.8	7.0	2.0	3.7	27.2	-6.2	17.5	8.3	1.4
1993—										
February	6.1	-2.9	-1.6	1.3	-10.9	-1.7	-19.0	5.2	-0.2	1.4
May	-8.1	1.8	6.0	1.4	9.1	-0.9	24.6	-2.6	-0.7	0.8
August	-2.6	-1.2	-4.3	-1.8	-11.8	-14.3	14.4	-5.5	-3.3	0.4
November	3.1	13.5	9.8	9.4	10.2	10.1	14.3	6.9	8.4	0.3
Change (annual)										
1993—										
November	-2.1	10.8	9.6	10.3	-5.5	-8.1	31.8	3.5	4.0	3.0
PERCENTAGE OF EMPLOYEES WORKING OVERTIME										
1992—										
21 August	16.02	15.31	15.66	16.37	16.71	15.25	17.72	13.06	15.79	15.87
20 November	16.57	15.89	16.61	17.78	17.77	13.61	17.60	13.39	16.45	15.89
1993—										
19 February	15.78	15.47	14.98	16.97	17.28	14.39	16.27	11.98	15.67	16.08
21 May	17.12	14.92	16.81	16.92	16.15	15.22	19.19	12.10	16.24	16.31
20 August	17.27	16.31	15.41	17.26	16.87	13.15	18.43	12.49	16.46	16.52
19 November	17.68	17.45	16.58	17.99	16.61	14.30	16.80	12.15	17.16	16.67
Standard errors(a)										
1993—										
November										
Level	0.86	1.33	0.96	1.19	1.46	1.09	2.06	0.94	0.51	(b)
Change (quarterly)	0.68	0.85	0.74	0.80	0.88	0.89	1.66	1.11	0.36	(b)
Change (quarterly)										
1992—										
November	3.4	3.8	6.1	8.6	6.3	-10.7	-0.7	2.6	4.2	0.2
1993—										
February	-4.7	-2.6	-9.8	-4.6	-2.8	5.7	-7.5	-10.6	-4.7	1.2
May	8.5	-3.6	12.3	-0.3	-6.5	5.8	17.9	1.0	3.6	1.4
August	0.9	9.3	-8.3	2.0	4.4	-13.7	-3.9	3.2	1.3	1.3
November	2.4	7.0	7.6	4.3	-1.5	8.8	-8.8	-2.7	4.2	0.9
Change (annual)										
1993—										
November	6.8	9.8	-0.2	1.2	-6.5	5.1	-4.5	-9.3	4.3	4.9

(a) See paragraphs 13 to 18 of the Explanatory Notes. (b) See paragraph 14 of the Explanatory Notes.

TABLE 5. OVERTIME : INDUSTRY, AUSTRALIA

	Reference period - pay period ending on or before						Standard error(a)
Industry	1992		1993				
	21 Aug.	20 Nov.	19 Feb.	21 May	20 Aug.	19 Nov.	
AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE							
Mining	4.95	5.20	5.01	5.49	4.95	4.67	0.44
Manufacturing	2.38	2.92	2.82	2.75	2.62	3.00	0.14
Electricity, gas and water	1.71	1.89	1.90	2.19	1.91	1.98	0.04
Construction	1.80	1.99	1.95	1.93	1.91	2.60	0.43
Wholesale trade	1.23	1.35	1.45	1.43	1.42	2.02	0.35
Retail trade	0.59	0.64	0.58	0.60	0.55	0.68	0.09
Transport and storage; Communication	2.21	2.31	2.07	2.25	2.50	2.57	0.18
Public administration and defence(b)	0.64	0.76	0.74	0.74	0.78	0.75	0.06
Community services	0.34	0.39	0.35	0.38	0.37	0.36	0.02
Other(c)	0.48	0.41	0.35	0.43	0.50	0.50	0.05
All Industries	1.07	1.20	1.14	1.18	1.15	1.30	0.05
AVERAGE WEEKLY OVERTIME HOURS PER EMPLOYEE WORKING OVERTIME							
Mining	10.43	10.82	10.35	10.96	10.79	11.31	0.63
Manufacturing	7.88	8.50	8.68	8.37	7.73	8.61	0.20
Electricity, gas and water	6.88	7.80	7.85	8.23	7.80	8.02	0.23
Construction	7.96	9.80	9.00	9.31	9.81	10.80	0.87
Wholesale trade	6.30	7.97	7.34	6.95	7.09	8.34	0.75
Retail trade	4.58	4.79	4.70	4.58	4.59	5.09	0.23
Transport and storage; Communication	8.55	8.33	7.97	8.23	8.15	8.39	0.33
Public administration and defence(b)	5.29	5.96	6.12	5.80	5.53	5.36	0.23
Community services	4.58	5.21	5.47	5.83	5.31	5.63	0.18
Other(c)	5.45	4.91	4.86	5.37	5.46	5.36	0.34
All industries	6.75	7.31	7.30	7.25	7.01	7.60	0.15
PERCENTAGE OF EMPLOYEES WORKING OVERTIME							
Mining	47.48	48.06	48.38	50.15	45.90	41.29	2.53
Manufacturing	30.24	34.32	32.49	32.91	33.93	34.82	1.17
Electricity, gas and water	24.88	24.25	24.25	26.56	24.47	24.70	0.56
Construction	22.62	20.28	21.64	20.72	19.50	24.11	3.18
Wholesale trade	19.54	16.98	19.70	20.62	19.98	24.23	3.28
Retail trade	12.81	13.44	12.24	13.16	11.97	13.32	1.59
Transport and storage; Communication	25.81	27.73	25.94	27.38	30.62	30.64	1.53
Public administration and defence(b)	12.06	12.79	12.02	12.84	14.02	13.99	1.12
Community services	7.48	7.42	6.36	6.54	6.92	6.46	0.32
Other(c)	8.78	8.33	7.14	8.05	9.09	9.30	0.85
All industries	15.79	16.45	15.67	16.24	16.46	17.16	0.51

(a) Relates only to latest level estimate. See paragraphs 13 to 18 of the Explanatory Notes. (b) Excludes permanent defence forces. (c) Comprises Finance, property and business services and Recreation, personal and other services.

## EXPLANATORY NOTES

### Introduction

This survey contains estimates of job vacancies and overtime for November 1993 based on information obtained from a sample survey of employers.

### Scope of the survey

2. All wage and salary earners who received pay for the reference period are represented in the survey, except:

- members of the Australian permanent defence forces;
- employees of enterprises primarily engaged in agriculture, forestry, fishing and hunting;
- employees in private households employing staff;
- employees of overseas embassies, consulates, etc.;
- employees based outside Australia;
- employees on workers' compensation who are not paid through the payroll.

3. Also excluded are the following persons who are not regarded as employees for the purposes of this survey:

- directors who are not paid a salary;
- proprietors/partners of unincorporated businesses;
- self-employed persons such as subcontractors, owner/drivers, consultants and persons paid solely by commission without a retainer.

4. All vacancies (as defined in paragraph 4 of the Glossary) for wage and salary earners are represented in the survey, except those:

- in the Australian permanent defence forces;
- in enterprises primarily engaged in agriculture, forestry, fishing and hunting;
- in private households employing staff;
- in overseas embassies, consulates, etc.;
- located outside Australia.

### Survey design

5. A sample of approximately 4,800 employers is selected from the ABS register of businesses to ensure adequate State and industry representation. The sample is updated each quarter to take account of new businesses, those which have ceased operation and structural changes such as takeovers and mergers. The statistical unit for the survey comprises all activities of an enterprise in a particular State or Territory. Each statistical unit is classified to an industry which reflects the predominant activity of the enterprise in the State or Territory. In a small number of cases where an enterprise has significant employment in more than one industry, a separate statistical unit is created for each industry. The statistical units are stratified by State, industry and size of employment and a simple random sample is selected from each stratum.

### Historical series

6. The series were introduced in November 1983. They replaced the job vacancies and overtime series based on information from a sample of employers registered to pay payroll tax and from government organisations. Estimates contained in this publication are not strictly comparable with those obtained prior to November 1983.

### Trend Estimates

7. The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the data, and are more suitable than either the seasonally adjusted or original data for most business decisions and policy advice.

8. The trend estimates in this publication, obtained by dampening out the irregular component from the seasonally adjusted series, are calculated using a centred 7-term Henderson moving average of the seasonally adjusted series. Estimates for the three most recent quarters cannot be calculated using this centred average method; instead an asymmetric average is used. This can lead to revisions in the trend estimates for the last three quarters when data become available for later quarters. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors. The seasonal factors are revised annually. The most recent review took place in the November quarter 1993.

9. If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few quarters as data become available. However, it is important to note that this does not make the trend series inferior to the seasonally adjusted or original series. In such cases the effect of the irregular component on overall movements will remain in the seasonally adjusted and the original estimates but not in the trend series.

10. For information about ABS procedures for deriving trend estimates and analysis of advantages of using them over alternative techniques for monitoring trends, refer to the three ABS Information Papers:

- *A Guide to Interpreting Time Series - Monitoring 'Trends': an Overview* (1348.0);
- *A Guide to Smoothing Series - Estimates of 'Trend'* (1316.0); and
- *Time Series Decomposition - An Overview* (1317.0).

Two feature articles which have appeared in the ABS monthly publication *Australian Economic Indicators* may also be of interest:

- *Picking Turning Points in the Economy* (April 1991); and
- *Smarter Data Use* (March 1992).



### Seasonal Adjustment

11. Seasonal adjustment is a means of removing the estimated effect of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not remove the irregular or non-seasonal influences which may be present in any particular period. Volatile or unsystematic influences may still affect the interpretation of movement in the series, even after adjustment for seasonal variation.

12. No seasonally adjusted series are presented in this publication as the seasonally adjusted series closely follow the trend series and in most cases are not considered to be sufficiently different to warrant publication. However, selected seasonally adjusted series are available on request. The most recent review took place in the November quarter 1993.

### Reliability of estimates

13. As the estimates in this publication are based on information relating to a sample of employers rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the figures that would have been produced if the information had been obtained from all employers. This difference, called sampling error, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as non-sampling error and may occur in any enumeration, whether it be a full count or sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

14. The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the standard error which indicates the degree to which an estimate may vary from the value that would have been obtained from a full enumeration (the 'true' figure). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors. No separate standard errors are calculated for trend estimates.

15. An example of the use of a standard error on levels is as follows. If the estimated number of job vacancies was 25,000 with a standard error of 2,500, then there would be about two chances in three that a full enumeration would have given a figure in the range 22,500 to 27,500 and about nineteen chances in twenty that it would be in the range 20,000 to 30,000.

16. An example of the use of a standard error for a quarterly change estimate is as follows. If the estimated standard error for a quarterly change estimate of job vacancies was 1,000 and the quarterly change estimate between two quarters was 4,500, then there would be about two chances in three that a full enumeration would have given a quarterly change estimate in the range +3,500 to

+5,500 and about nineteen chances in twenty that it would be in the range +2,500 to +6,500.

17. Quarterly movements in estimates of job vacancies and overtime are considered to be statistically significant where they exceed two standard errors.

18. Another measure of the sampling error is the relative standard error, which is obtained by expressing the standard error as a percentage of the estimate. Level estimates with a relative standard error of 25 per cent or more, denoted with an asterisk in this publication, are subject to sampling variability generally considered to be too high for most practical purposes.

### Industry classification

19. Industry is classified according to the Australian Standard Industrial Classification (ASIC) 1983 Edition, Volume 1 - The Classification (1201.0).

### Related publications

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

*Information Paper: New Statistical Series: Employment, Average Weekly Earnings, Job Vacancies and Overtime* (6256.0)

*Job Vacancies, Australia* (6231.0) — issued quarterly, discontinued August 1989

*Overtime, Australia* (6330.0) — issued quarterly, discontinued August 1989

*The Labour Force, Australia* (6203.0) U issued monthly

*Average Weekly Earnings, States and Australia* (6302.0) — issued quarterly

*Average Weekly Earnings, Australia 1941 - 1990* (6350.0) — issued February 1992

*Employed Wage and Salary Earners, Australia* (6248.0) — issued quarterly.

21. 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 next few days. The Catalogue and Publications Advice are available from any ABS office.

### Unpublished statistics

22. Unpublished job vacancies and overtime estimates can be made available on request for various combinations of the following variables: State/Territory, sector (public or private) and industry (broad grouping as per Table 5). It should be noted, however, that estimated lower levels of disaggregation than that published in this bulletin may be subject to sampling variability considered too high for most practical purposes. Inquiries regarding data availability and associated charges should be made to

the officer whose name appears in the Inquiries box at the front of this publication.

#### **Symbols and other usages**

- nil or rounded to zero
- \* subject to sampling variability too high for most practical purposes (see paragraph 18 above)

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

Percentage changes in the Summary of Findings and publication tables are based on unrounded numbers and consequently could differ from percentage changes that are calculated from the published rounded statistics.

#### **Forthcoming issue**

24. The February 1994 issue of *Job Vacancies and Overtime, Australia*, (6354.0) is expected to be released on 31 March 1994.

## APPENDIX A: GLOSSARY

*Average hours of overtime per employee* is calculated by dividing total overtime hours paid for in a particular group by the total number of employees in the same group (including those who were not paid for any overtime).

2. *Average hours of overtime per employee working overtime* is calculated by dividing total overtime hours paid for in a particular group (e.g. industry, State or Territory) by the number of employees who were paid for overtime in the same group.

3. *Employees* refers to all wage and salary earners (as defined in paragraphs 2 and 3 of the Explanatory Notes) who received pay for any part of the reference period.

4. A *job vacancy* is a job available for immediate filling on the survey reference date and for which recruitment action had been taken. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying public or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation. Excluded are jobs available only to persons already employed by the enterprise or organisation. This point is particularly relevant to the Australian Public Service and the Public Services of each of the States and the Territories.

Excluded are vacancies:

- of less than one day's duration;
- to be filled by persons already hired, or by promotion or transfer of existing employees;
- to be filled by employees returning from paid or unpaid leave or after industrial dispute(s);
- not available for immediate filling on the survey reference date;

- not available within the particular State or Territory to which the return relates;
- for work to be carried out under contract;
- for which no effort is being made to fill the position.

5. The *job vacancy rate* is calculated by expressing the number of job vacancies as a percentage of the number of employees plus vacancies.

6. *Overtime* is time worked in excess of award, standard or agreed hours of work for which payment is received. Excluded is any overtime for which employees would not receive payment, e.g. unpaid overtime worked by managerial, executive, etc. staff, normal shiftwork and standard hours paid for at penalty rates.

7. *Overtime hours* represent the number of hours of overtime paid for. Respondents are instructed not to convert overtime hours to their ordinary time equivalent. For example, 100 hours of overtime paid for at time and a half and 20 hours at double time would be counted as 120 hours, not 190.

8. *Reference date* for the survey is the third Friday of the middle month of the quarter. The reference date for the current survey is 19 November 1993.

9. *Reference period* for the survey refers to the last pay period ending on or before the reference date.

10. *Sector*. Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth and State Parliaments. All remaining employees are classified as private sector.



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