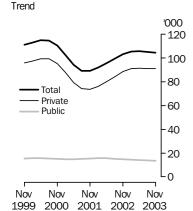


# **JOB VACANCIES**

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) WED 14 JAN 2004

## **Job Vacancies**



# KEY FIGURES

	Nov 2003 '000	Aug 2003 to Nov 2003 % change	Nov 2002 to Nov 2003 % change
Trend estimates			
Private sector	91.0	-0.4	2.5
Public sector	13.6	-2.6	-7.6
Private and public sectors	104.6	-0.6	1.2

# KEY POINTS

#### TREND ESTIMATES

- Total job vacancies in November 2003 were 104,600, a decrease of 0.6% from August 2003.
- The number of job vacancies in the private sector was 91,000 in November 2003, a decrease of 0.4% from August 2003.
- The number of job vacancies in the public sector was 13,600 in November 2003, a decrease of 2.6% from August 2003.

## INQUIRIES

■ For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Manpreet Singh on Perth (08) 9360 5304.

# NOTES

FORTHCOMING ISSUES ISSUE (Quarter) RELEASE DATE

February 2004 1 April 2004 May 2004 1 July 2004

CHANGES IN THIS ISSUE Estimates of job vacancy rates are no longer presented in this publication but are

available on request. See paragraph 20 of the Explanatory Notes. Inquiries should be

made to Manpreet Singh on (08) 9360 5304.

NOTES ON ESTIMATES The annual review of seasonal adjustment factors for series shown in this publication has

been completed. As a result, some previously published seasonally adjusted and trend

estimates have been revised. See paragraphs 22 to 30 of the Explanatory Notes.

SAMPLING ERROR For information on sampling error see the Technical Note. Standard errors for original

estimates contained in this publication are in tables 5 and 6.

ABBREVIATIONS ABN Australian Business Number

ABS Australian Bureau of Statistics

ANZSIC Australian and New Zealand Standard Industrial Classification

ATO Australian Taxation Office

GE group employer

JVS Job Vacancies Survey

PAYGW pay-as-you-go withholding

TAU type of activity unit

Dennis Trewin

Australian Statistician

	ORIGINA	\L								SEASONALLY ADJUSTED	TREND
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.	Aust.	Aust.
• • • • • • • • •	• • • • •	• • • • •	• • • • •	• • • • • •		0		• • • • •	• • • • • •	• • • • • • • • • • • • •	• • • • •
				'	/ACAN(	CIES (	(000)				
2002											
August	34.7	29.8	22.1	7.8	8.2	*2.2	1.5	3.2	109.6	101.2	99.4
November	34.8	22.0	21.0	5.2	7.3	*2.1	1.9	1.7	96.1	98.3	103.4
2003											
February	39.0	27.2	19.9	7.1	12.0	*2.1	1.8	2.3	111.3	110.3	105.5
May August	38.2 36.1	22.9 29.3	19.3 24.1	5.8 6.4	7.8 7.4	*2.0 *1.9	1.2 1.3	2.2 2.4	99.5 108.8	106.9 100.4	105.8 105.2
November	36.4	26.9	24.2	4.0	9.0	1.6	1.4	2.4	105.7	108.3	104.6
		20.0			0.0	2.0				200.0	10.10
• • • • • • • • • • •		• • • • •		• • • • •			• • • • •	• • • • •	• • • • • •	• • • • • • • • • • • • •	• • • • •
			CHAN	GE FR	OM PF	REVIOU	S QUA	RTER	(%)		
2002											
August	11.5	19.6	88.8	11.3	-13.9	31.7	39.9	-0.2	21.4	4.4	4.1
November	0.4	-26.2	-4.8	-33.6	-10.9	-7.6	26.6	-46.5	-12.3	-2.9	4.0
2003											
February	11.9	23.6	-5.4	36.4	63.9	1.6	-9.8	34.8	15.8	12.2	2.0
May	-1.9	-15.8	-3.0	-17.7	-35.2	-2.2	-32.9	-3.8	-10.6	-3.1	0.3
August	-5.6	27.8	24.8	10.2	-4.7	-6.6	7.2	8.0	9.4	-6.1	-0.6
November	0.7	-8.2	0.8	-37.4	21.3	-15.4	10.0	-7.3	-2.9	7.9	-0.6
	CHANG	SE ERO	M CO	RRESP	ONDIN	G OUA	RTFR	OF PRI	EVIOUS	YEAR (%)	
	OHAIV	al INO	W COI	VIVE O	ONDIN	u qua	IX I L IX	01 1111		ILAN (70)	
2001											
November	-33.6	-28.4	8.6	16.7	-27.5	-20.1	-5.7	-19.3	-23.0	-22.7	-19.3
2002											
November	20.4	-11.0	41.2	-21.1	10.1	11.1	131.9	-41.7	9.9	10.0	15.9
2003											
November	4.4	22.1	15.4	-22.6	22.8	-21.5	-28.6	29.8	10.0	10.2	1.2

 $<sup>^{\</sup>star}$   $\,\,$  estimate has a relative standard error of 25% to 50% and should be used with caution

	ORIGINA	AL								SEASONALLY ADJUSTED	TREND
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.	Aust.	Aust.
		• • • • •			• • • • •			• • • • • •	• • • • •		
				,	VACAN	CIES (	'000)				
2002											
August	29.6	26.5	19.8	7.0	*6.8	*1.9	0.8	1.8	94.2	86.1	84.2
November	30.0	19.0	18.6	4.5	6.0	*1.8	*1.2	0.6	81.7	83.9	88.7
2003											
February	34.9	23.6	17.0	6.4	10.7	*1.9	*1.0	1.3	96.7	95.9	91.1
May	33.6	19.7	17.2	4.9	6.4	*1.7	0.4	*1.1	85.1	92.2	91.6
August	32.0	26.5	21.9	5.7	6.2	*1.6	0.4	*0.8	95.1	86.9	91.3
November	32.7	23.9	21.8	3.4	7.8	*1.3	*0.6	0.6	92.1	94.6	91.0
			CHAN	IGE FF	ROM P	REVIOL	JS QU	ARTER	(%)		
							•				
2002											
August	17.2	21.4	104.1	12.7	-17.0	34.4	-12.0	24.9	25.7	6.1	5.3
November	1.4	-28.4	-6.3	-36.0	-11.0	-3.9	47.1	-63.4	-13.2	-2.5	5.4
2003											
February	16.3	24.3	-8.6	42.2	77.0	4.0	-18.6	103.0	18.3	14.3	2.7
May	-3.8	-16.6	1.4	-22.3	-40.2	-7.2	-54.8	-12.9	-12.0	-3.8	0.5
August November	-4.8	34.8	27.4	14.5	-3.3	-5.5	0.1	-29.2	11.8	-5.7	-0.3
November	2.3	-9.7	-0.3	-40.4	26.3	-19.1	30.7	-28.5	-3.1	8.9	-0.4
	CHANG	E FRO	м сог	RRESP	ONDIN	IG QUA	RTER	OF PR	EVIOUS	S YEAR (%)	
										, ,	
2001											
November	-39.5	-26.5	9.1	18.6	-28.9	-23.3	-8.6	-43.5	-25.6	-25.3	-22.8
2002											
November	25.5	-12.3	46.1	-22.4	18.1	20.1	110.1	-45.7	12.9	12.9	20.5
2003											
November	8.9	26.1	17.6	-24.7	29.4	-26.2	-51.9	-10.5	12.7	12.8	2.5

 $<sup>^{\</sup>star}$   $\,\,$  estimate has a relative standard error of 25% to 50% and should be used with caution

	ORIGINA	AL.								SEASONALLY ADJUSTED	TREND
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.	Aust.	Aust.
• • • • • • • • •	• • • • •	• • • • •	• • • • •		· · · · · ·	CIES (	· · · · · · · · · · · · · · · · · · ·	• • • • •	• • • • • •	• • • • • • • • • • • •	• • • • •
				,	VACAN	CIES (	000)				
2002											
August	5.1	3.3	2.3	0.8	1.4	0.4	0.7	1.5	15.4	15.1	15.2
November	4.8	3.0	2.4	0.7	1.3	0.3	0.7	1.1	14.3	14.4	14.7
2003											
February	4.1	3.6	2.9	0.7	1.3	0.2	0.8	1.0	14.6	14.4	14.4
May	4.6	3.2	2.1	*0.9	1.4	0.3	0.7	1.1	14.4	14.7	14.2
August	4.1	2.8	2.1	0.7	1.2	0.3	0.8	1.6	13.7	13.5	13.9
November	3.7	2.9	2.4	0.6	1.2	0.3	0.8	1.7	13.6	13.7	13.6
• • • • • • • • • • •	• • • • • •	• • • • • •	CILAN						(0/)	• • • • • • • • • • • • • • • • • • • •	• • • • • •
			CHAN	NGE FF	KOW PI	REVIOL	15 QU <i>F</i>	ARTER	(%)		
2002											
August	-12.8	6.6	14.2	0.4	4.4	19.0	334.8	-19.8	0.3	-4.5	-2.9
November	-5.4	-7.9	7.9	-12.0	-10.7	-27.6	2.9	-26.0	-6.9	-4.5	-3.1
2003											
February	-15.6	19.3	19.1	-0.6	3.1	-15.5	4.6	-6.2	1.8	-0.7	-1.7
May	14.4	-10.0	-28.8	24.5	4.4	41.2	-4.8	8.0	-1.7	2.8	-1.4
August	-11.1	-14.7	3.4	-14.1	-11.2	-12.7	11.5	46.9	-4.5	-8.4	-2.2
November	-11.4	6.0	12.3	-14.7	-3.5	6.9	-1.3	3.4	-0.9	1.4	-2.6
		• • • • •	• • • • •					• • • • •	• • • • • •	• • • • • • • • • • • • •	• • • • •
	CHANG	GE FRO	М СО	RRESP	ONDIN	G QUA	RTER	OF PRI	EVIOUS	YEAR (%)	
2001											
November	24.4	-39.7	6.1	4.5	-22.5	-3.4	1.4	13.5	-7.1	-6.8	2.6
2002											
November	-3.8	-1.9	12.8	-12.1	-16.2	-27.1	179.7	-39.1	-4.2	-4.1	-5.2
2003											
November	-23.9	-2.9	-1.5	-9.4	-7.7	11.4	9.6	54.0	-5.3	-5.2	-7.6
11010111001	20.0	2.0	1.0	0.1		,	0.0	0 1.0	0.0	5.2	0

 $<sup>^{\</sup>star}$   $\,\,$  estimate has a relative standard error of 25% to 50% and should be used with caution

	2002		2003	2003			
	••••••	••••••	***************************************	•••••	•••••	••••••	
	August	November	February	May	August	November	
	'000	'000	'000	1000	1000	'000	
• • • • • • • • • • • • • • • • • • • •	• • • • •	• • • • • • •	• • • • • • • • •	• • • • • • •	• • • • • • •	• • • • • • •	
Mining	1.0	1.0	1.1	1.1	1.5	1.4	
Manufacturing	14.0	5.7	12.9	10.9	12.5	12.6	
Electricity, gas and water supply	0.4	0.5	0.3	0.3	0.5	0.5	
Construction	*5.0	*8.0	*6.3	*5.5	*7.2	8.3	
Wholesale trade	5.5	*5.7	5.8	*4.1	*4.4	*4.9	
Retail trade	22.9	14.5	17.6	18.1	*18.3	*16.8	
Accommodation, cafes and restaurants	*6.9	7.9	6.3	5.0	7.0	8.3	
Transport and storage	2.0	*3.4	*2.0	*1.6	*3.0	*3.4	
Communication services	0.5	0.5	0.5	0.5	0.3	0.5	
Finance and insurance	4.5	*5.8	4.2	5.0	4.8	3.9	
Property and business services	15.1	16.7	23.9	*18.8	18.6	21.4	
Government administration and defence	5.5	5.0	4.5	4.9	4.9	5.6	
Education	5.4	3.9	5.7	5.0	5.3	3.5	
Health and community services	13.2	11.0	12.3	12.0	11.7	10.3	
Cultural and recreational services	2.5	2.3	*3.4	3.6	*3.1	*2.2	
Personal and other services	*5.1	*4.1	*4.4	*3.1	*5.7	**2.1	
All industries	109.6	96.1	111.3	99.5	108.8	105.7	

<sup>\*</sup> estimate has a relative standard error of 25% to 50% and should be used with caution

<sup>\*\*</sup> estimate has a relative standard error greater than 50% and is considered too unreliable for general use



# STANDARD ERRORS, Job vacancies—States & territories

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	'000	'000	'000	'000	'000	'000	'000	'000	'000
• • • • • • • • • •	• • • • •	• • • •	LE	VEL	• • • •	• • • •	• • • •	• • • •	• • • •
Private sector	5.9	3.4	3.2	0.4	1.7	0.4	0.2	0.1	7.7
Public sector	0.3	0.3	0.3	_	0.2	_	_	0.3	0.6
Total	5.9	3.4	3.2	0.4	1.7	0.4	0.2	0.3	7.7
	• • • • •								• • • •
		QUAR	TERLY	/ MO	√EME	ΝT			
Private sector	4.0	4.1	3.8	1.2	1.9	0.9	0.2	0.3	7.3
Public sector	0.2	0.2	0.2	0.1	0.2	_	_	0.2	0.5
Total	4.0	4.1	3.8	1.2	1.9	0.9	0.2	0.4	7.3

 <sup>—</sup> nil or rounded to zero (including null cells)



# STANDARD ERRORS, Job vacancies—Industry

2002		2003	2003		
August	November	February	May	August	November
'000	'000	'000	'000	'000	'000
• • • • •	• • • • • • •	• • • • • • • • • •	• • • • • • •	• • • • • • •	• • • • • •
0.1	0.2	0.1	0.1	0.2	0.2
3.3	1.1	2.4	2.5	2.2	2.5
0.1	0.1	_	0.1	0.1	_
1.9	2.7	2.4	1.8	2.1	2.1
1.2	1.9	1.4	1.1	1.4	1.5
3.9	2.1	2.4	3.8	5.0	5.2
2.0	1.7	1.4	1.1	1.5	1.6
0.4	1.1	0.6	0.8	1.0	1.0
_	0.1	_	_	_	0.1
1.0	1.9	1.1	0.9	1.1	0.7
2.8	3.5	3.9	4.9	2.9	3.5
0.4	0.4	0.4	0.4	0.4	0.4
0.8	0.6	0.8	0.9	1.1	0.6
2.4	1.0	1.7	1.4	1.5	1.1
0.5	0.4	0.9	0.8	0.8	0.7
1.5	1.2	1.4	1.0	1.7	1.2
7.3	6.3	6.7	7.5	7.5	7.7
	August 000 0.1 3.3 0.1 1.9 1.2 3.9 2.0 0.4 — 1.0 2.8 0.4 0.8 2.4 0.5 1.5	August November  000 000  0.1 0.2  3.3 1.1  0.1 0.1  1.9 2.7  1.2 1.9  3.9 2.1  2.0 1.7  0.4 1.1  — 0.1  1.0 1.9  2.8 3.5  0.4 0.4  0.8 0.6  2.4 1.0  0.5 0.4  1.5 1.2	August November February  1000 1000 1000 1000 1000 1000 1000 1	August         November         February         May           '000         '000         '000         '000           0.1         0.2         0.1         0.1           3.3         1.1         2.4         2.5           0.1         0.1         —         0.1           1.9         2.7         2.4         1.8           1.2         1.9         1.4         1.1           3.9         2.1         2.4         3.8           2.0         1.7         1.4         1.1           0.4         1.1         0.6         0.8           —         0.1         —         —           1.0         1.9         1.1         0.9           2.8         3.5         3.9         4.9           0.4         0.4         0.4         0.4           0.8         0.6         0.8         0.9           2.4         1.0         1.7         1.4           0.5         0.4         0.9         0.8           1.5         1.2         1.4         1.0	August         November         February         May         August           000         '000         '000         '000         '000           0.1         0.2         0.1         0.1         0.2           3.3         1.1         2.4         2.5         2.2           0.1         0.1         —         0.1         0.1           1.9         2.7         2.4         1.8         2.1           1.2         1.9         1.4         1.1         1.4           3.9         2.1         2.4         3.8         5.0           2.0         1.7         1.4         1.1         1.5           0.4         1.1         0.6         0.8         1.0           —         0.1         —         —         —           1.0         1.9         1.1         0.9         1.1           2.8         3.5         3.9         4.9         2.9           0.4         0.4         0.4         0.4         0.4           0.8         0.6         0.8         0.9         1.1           2.4         1.0         1.7         1.4         1.5           0.5         0.4

nil or rounded to zero (including null cells)

#### **EXPLANATORY NOTES**

INTRODUCTION

**1** This publication contains quarterly estimates of job vacancies based on information obtained from a sample survey of employers.

CONCEPTS, SOURCES AND METHODS

**2** Descriptions of the underlying concepts of Australia's job vacancies statistics, and the sources and methods used in compiling these estimates, are presented in *Labour Statistics: Concepts, Sources and Methods, 2001* (cat. no. 6102.0) which is available on the ABS website <a href="http://www.abs.gov.au">http://www.abs.gov.au</a> (About Statistics — Concepts and Classifications).

SCOPE AND COVERAGE

- **3** All job vacancies (as defined in the Glossary) for wage and salary earners are represented in the Job Vacancies Survey (JVS), except those:
  - in the Australian permanent defence forces
  - in businesses primarily engaged in agriculture, forestry and fishing
  - in private households employing staff
  - in overseas embassies, consulates, etc.
  - located outside Australia.
- **4** The sample for the Job Vacancies Survey, like most Australian Bureau of Statistics (ABS) business surveys, is selected from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding (PAYGW) scheme (and prior to 1 June 2000 the Group Employer (GE) scheme). The population is updated quarterly to take account of:
  - new businesses
  - businesses which have ceased employing
  - changes in employment levels
  - changes in industry
  - other general business changes.
- **5** The estimates include an allowance for the time it takes newly registered businesses to get on to the survey population.
- **6** Businesses which have ceased employing are identified when the ATO cancels their PAYGW registration. In addition, businesses which did not remit under the PAYGW scheme for the previous five quarters are removed from the frame.

SURVEY DESIGN

- **7** A sample of approximately 4,800 employers is selected from the ABS Business Register to ensure adequate state and industry representation. The sample is updated each quarter to reflect changes in the ABS Business Register. These changes arise from the emergence of new businesses, takeovers and mergers, changes to industry classification, changes in the number of employees, and businesses which have ceased operations. Such updating of the register can contribute to changes in the estimates of job vacancies.
- **8** The statistical unit for the survey comprises all the activities of an employer in a particular state or territory based on the Australian Business Number (ABN) unit or Type of Activity Unit (TAU) (see paragraphs 11 and 15 of the Explanatory Notes). Each statistical unit is classified to an industry which reflects the predominant activity of the business. The statistical units are stratified by state, sector, industry division and employment size, and within each stratum, statistical units are selected with equal probability.

STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

**9** The ABS uses an economic statistics units model on the ABS Business Register to describe the characteristics of businesses, and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS.

## **EXPLANATORY NOTES** continued

STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER continued

**10** In mid-2002, to better use the information available as a result of The New Tax System, the ABS changed its economic statistics units model. The new units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO Maintained Population, while the remaining businesses are in the ABS Maintained Population. Together, these two sub-populations make up the ABS Business Register population.

ATO maintained population

**11** Most businesses and organisations in Australia need to obtain an Australian Business Number, and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit will be used as the economic statistics unit for all economic collections.

ABS maintained population

- **12** For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with the business. These businesses constitute the ABS Maintained Population. This population consists typically of large, complex and diverse businesses. The new statistical units model described below has been introduced to cover such businesses.
- **13** Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the Corporations Legislation Amendment Act 1991), including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.
- **14** Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia sub-sector).
- **15** Type of Activity Unit: The TAU comprises one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the Australian and New Zealand Standard Industrial Classification [ANZSIC]). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.
- **16** For more information on the impacts of the introduction of the new economic statistics units model, refer to *Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System]* (cat. no. 1372.0).

COMPARABILITY OF SERIES

- 17 Job vacancies series in this publication were introduced with the November 1983 issue of the Job Vacancies and Overtime survey publication. Estimates contained in this publication are not strictly comparable with those obtained prior to November 1983.
- **18** Between August and November 1999 a number of improvements were made to operational procedures, in conjunction with the discontinuation of the overtime component of the survey. These improvements resulted in an increase in job vacancy estimates for the private sector. There was negligible change to public sector estimates. Consequently, private sector estimates prior to November 1999 were adjusted to provide a comparable and compatible time series.

## **EXPLANATORY NOTES** continued

COMPARABILITY OF SERIES continued

- **19** To account for the New Tax System changes described in paragraphs 9 to 16, the historical series from May 2002 back to November 1983 have been revised to make the time series of estimates as continuous as possible.
- **20** From November 2003, number of employees is no longer collected in the Job Vacancies Survey. Consequently job vacancy rates (see Glossary) are no longer presented in this publication. A job vacancy rate series, based on estimates of the number of employees from the Labour Force Survey, is available on request.

EFFECTS OF ROUNDING

**21** Where figures have been rounded, discrepancies may occur between sums of the component items and totals. Percentages in this publication are calculated using unrounded numbers and consequently could differ from percentages that are calculated from the published rounded statistics.

SEASONAL ADJUSTMENT

- **22** Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variation. This means that quarter-to-quarter movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.
- 23 The quarterly series have been seasonally adjusted from February quarter 1984 and the historical series can be made available on request. The seasonal factors are reviewed annually to take account of each additional year's original data. The most recent review, using original estimates to August 2003, took place in time for inclusion in the November 2003 estimates.
- **24** Details about the method of seasonal adjustment are available on request.

TREND ESTIMATES

- **25** Seasonally adjusted estimates can be smoothed to reduce the impact of irregular or non-seasonal influences. Smoothed seasonally adjusted series are called trend estimates.
- **26** 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 estimates for most business decisions and policy advice.
- 27 Trend estimates, 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.
- **28** If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few quarters as new 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.
- **29** For more information, refer to *Information Paper: A Guide to Interpreting Time Series—Monitoring Trends* (cat. no. 1349.0) which is available free of charge from the ABS web site <a href="http://www.abs.gov.au">http://www.abs.gov.au</a>.
- **30** Two feature articles which have appeared in the ABS monthly publication *Australian Economic Indicators* (cat. no. 1350.0) may also be of interest:
  - Picking Turning Points in the Economy (April 1991)
  - Smarter Data Use (March 1992)

## **EXPLANATORY NOTES** continued

#### RELATED PUBLICATIONS

- **31** Users may also wish to refer to the following publications which are available from ABS Bookshops:
  - Australian Labour Market Statistics (cat. no. 6105.0)—issued quarterly
  - Average Weekly Earnings, Australia (cat. no. 6302.0)—issued quarterly
  - Employee Earnings and Hours, Australia (cat. no. 6306.0)—issued biennially
  - Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System] (cat. no. 1372.0)—issued 6 May 2002
  - Labour Force, Australia (cat. no. 6202.0)—issued monthly
  - *Labour Statistics: Concepts, Sources and Methods, 2001* (cat. no. 6102.0)—also available free of charge from the ABS web site <a href="http://www.abs.gov.au">http://www.abs.gov.au</a>
  - Wage and Salary Earners, Public Sector, Australia (cat. no. 6248.0)—issued quarterly
- **32** Current publications and other products released by the ABS are listed in the *Catalogue of Publications and Products* (cat. no. 1101.0). The Catalogue is available from any ABS office or the ABS web site <a href="http://www.abs.gov.au">http://www.abs.gov.au</a> (Products and Services). The ABS also issues a daily Release Advice on the web site (Information on Releases) which details products to be released in the week ahead.

ABS DATA AVAILABLE ON REQUEST

**33** As well as the statistics included in this and related publications, the ABS may have other relevant data available on request. For contact information, please refer to the Inquiries box on the front page of this publication.

# TECHNICAL NOTE DATA QUALITY

#### RELIABILITY OF ESTIMATES

- **1** 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 estimates 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.
- **2** 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 which would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about 19 chances in 20 that the difference will be less than two standard errors.
- **3** 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 an estimate in the range 22,500 to 27,500 and about 19 chances in 20 that it would be in the range 20,000 to 30,000.
- **4** 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 19 chances in 20 that it would be in the range +2,500 to +6,500.
- **5** Quarterly movements in estimates of job vacancies are considered to be statistically significant where they exceed two standard errors.
- **6** 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 between 25% and 50%, denoted by an asterisk in this publication, are subject to sampling variability generally considered to be too high for most practical purposes and should be used with caution. Level estimates with a relative standard error of 50% or more, denoted by a double asterisk, are considered to be too unreliable for general use.

#### GLOSSARY

Industry

Industry is classified according to ANZSIC. For more details refer to the *Australian and New Zealand Standard Industrial Classification 1993* (cat. no. 1292.0).

Job vacancy

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 vacancies:

- for jobs which became vacant on the survey date and were filled that same day
- for jobs 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 by contractors
- for which no recruitment action has been taken
- where a person has been appointed but has not yet commenced duty
- to be filled by staff from contract labour agencies
- for jobs available only to persons already employed by the enterprise or organisation.

Job vacancy rate

The job vacancy rate is calculated by expressing the number of job vacancies as a percentage of the number of employee jobs plus the number of job vacancies.

Reference date

The reference date for the survey is the third Friday of the middle month of the quarter. The reference date for the current survey is 21 November 2003.

Sector

Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth Parliament and state/territory parliaments. All remaining employees are classified as private sector.

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Payments, Labour Force, Average Weekly Earnings, Estimated Resident Population and the Consumer Price Index call 1900 986 400 (call cost 77c per minute).

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