

Labour Force Status: Comparing Census and Survey Data

Although the Census and the monthly Labour Force Survey (LFS) both collect data on labour force status, they are not strictly comparable due to differences in the following:

- Scope
- Coverage
- Timing
- Collection methodology
- Measurement of underlying labour force concepts
- Treatment of non-response
- Non-response bias
- Non-sampling error and
- Sampling variability.

Scope

Scope is the population about which information is required. The two collections differ in their scope, both geographically and in respect of their target population.

Although included as part of Australia, the Jervis Bay Territory, along with the Territory of Christmas Island and the Territory of Cocos (Keeling) Islands are currently regarded as out-of-scope for ABS collections except for the Census, population estimates, and Cause of Death. The LFS therefore excludes these territories.

The Census aims to count every person in Australia on Census Night, excluding diplomatic personnel. The LFS counts only usual residents, and excludes members of the Australian permanent defence forces, members of non-Australian defence forces and their dependants, stationed in Australia.

Coverage

Coverage is the actual population about which information can be obtained or inferred, and under-enumeration is the degree to which coverage falls short of the intended scope.

Census coverage differs from that of the LFS. In the Census, people were counted where they spent Census Night (which may not be where they usually live) and data from the Census are generally released on this place of enumeration basis (although place of usual residence based data are also available). Census labour force figures for the population aged 15 and over represent counts of people as enumerated, without adjustment for under-enumeration.

In the LFS, coverage rules ensure that each person is associated with only one dwelling, and hence has only one chance of selection. Persons who are away from their usual residence for six weeks or less at the time of interview are enumerated at their usual residence (relevant information may be obtained from other usual residents present at the time of the survey). LFS data relate only to place of usual residence, and the estimates are calculated in such a way as to add up to the independently estimated usually resident population aged 15 and over, a procedure which compensates for under-enumeration in the survey.

Timing

LFS interviews are generally conducted during the two weeks beginning on the Monday between the 6th and 12th of each month. The information obtained relates to the week before the interview (i.e. the reference week). For the August 2001 survey, the LFS interview weeks were moved to commence on 13 August and the reference weeks were therefore the two weeks commencing Monday 6 August. Census data refers to the week prior to Census Night on 7 August 2001.

Collection methodology

Households selected for the LFS are interviewed each month for eight months. The first interview is conducted face-to-face. Subsequent interviews are conducted by telephone (if acceptable to the respondent). The LFS interview could be answered by any responsible adult on behalf of other household members. LFS information is then obtained from the occupants of selected dwellings by specially trained interviewers who ask respondents the survey questions and record the answers.

In the Census, collectors deliver and collect the census forms but the forms are completed by each household, often by each household member. This dependence on self-enumeration rather than interview means that respondent's interpretation and completion of questions may be less accurate.

Measurement of underlying labour force concepts

Differences in the definition of labour force status categories between the two collections should also be borne in mind when comparing figures.

The LFS provides Australia's official source of labour force data. The survey devotes many questions to providing measures of employment and unemployment that are aligned closely with the standards and guidelines set out in Resolutions of the International Conference of Labour Statisticians.

While the Census aims to derive labour force status on a basis comparable with the LFS, the Census questions are not as detailed, nor as comprehensive. This is largely due to space limitations on the census form, as well as constraints imposed by self-enumeration. As a result, the LFS and Census definitions differ for the employed, the unemployed and those not in the labour force.

Treatment of non-response

A further difference between the two collections lies in their treatment of non-response. In the Census, respondents for whom Labour force status was not recorded or imputed are classed in the category 'Not stated'. In contrast, the LFS does not require a Not stated category, because only fully responding questionnaires contribute to the estimates, with any under-enumeration in the survey being automatically compensated for by the weighting process.

Non-response bias

There are two main reasons for non-response in the LFS. One is the inability of interviewers to contact one or more persons in a household. The other is that some persons refuse to respond. Non-response bias will occur if persons not included in the labour force estimation process have significantly different labour force characteristics to those who do respond. While any non-response bias will have an effect on data released from the survey, the effect is minimised by careful management of the level of under-enumeration and non-response. In the Census, under-enumeration and non-response also contribute to non-response bias. Non-response bias is more significant in the Census, as the levels of under-enumeration and non-response to individual questions are higher and more difficult to control than in the LFS.

Non-sampling error

Both collections are also subject to non-sampling error. Non-sampling error may occur because of imperfections in reporting by respondents, errors made in collection, such as recording and coding data, and errors made in processing the data, such as faulty imputation methods. Non-sampling error is likely to be larger in the Census, due to the bigger scale of the operation, the reliance on self-enumeration, and its less frequent collection.

Sampling variability

Since the estimates in the LFS are based on information obtained from occupants of a sample of dwellings, they and the movements derived from them are subject to sampling variability. That is, the estimates may differ from those that would have been produced if all dwellings had been included in the survey. By contrast, the Census aims to enumerate the entire population and results are not subject to sampling variability. When comparing data from the LFS and the Census, the sampling variability of survey data should be taken into account.

CENSUS AND LABOUR FORCE SURVEY COMPARISON

	2001 Census of Population and Housing(a)				Labour Force Survey August 2001(b)(c)		
	Unemployed	Employed(d)	Not stated(e)(f)	Unemployment rate(g)	Unemployed	Employed(h)	Unemployment rate
	no.	no.	no.	%	no.	no.	%
New South Wales	213 196	2 748 396	236 686	7.2	191 300	3 051 000	5.9
Victoria	151 859	2 082 216	156 367	6.8	152 000	2 303 100	6.2
Queensland	140 748	1 568 864	113 364	8.2	145 700	1 702 200	7.9
South Australia	52 340	635 325	36 934	7.6	52 300	673 600	7.2
Western Australia	67 485	828 781	56 326	7.5	64 900	938 200	6.5
Tasmania	20 526	182 522	13 447	10.1	22 000	192 700	10.2
Northern Territory	5 714	90 434	11 000	5.9	7 800	97 400	7.4
Australian Capital Territory	8 720	160 866	7 867	5.1	7 900	165 900	4.6
Australia(i)	660 588	8 297 404	631 991	7.4	644 000	9 124 200	6.6

Footnotes:

- (a) The Census reference period for 'Labour force status' data was the week prior to 7 August 2001.
 (b) Original data.
 (c) This survey reference period was the two week period: Monday August 6, 2001 to Sunday August 19, 2001.
 (d) Excludes 'Not in labour force', 'Not applicable' and 'Overseas visitor'.
 (e) Comprises persons who did not state their labour force status.
 (f) Not included in denominator for calculation of Unemployment rate.
 (g) The denominator for these calculations is the sum of the data shown in the 'Unemployed' and 'Employed' columns, that is, 'Total labour force'.
 (h) Only fully responding questionnaires contribute to survey estimates and any under-enumeration is automatically compensated for by the weighting process.
 (i) Excludes Other territories.

Further information about Australia's labour force statistics is available in *Labour Statistics: Concepts, Sources and Methods* (cat. no. 6102.0) which is available on the ABS web site at <<http://www.abs.gov.au>> (About Statistics — Concepts and Classifications).