

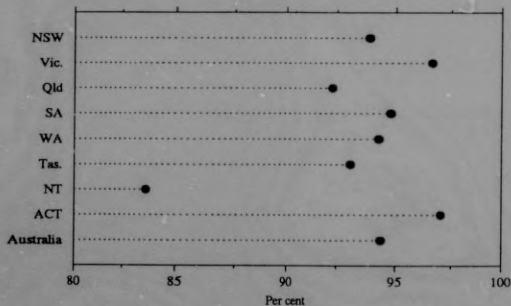
**HOUSEHOLD TELEPHONE CONNECTIONS, AUSTRALIA, AUGUST 1991**

**MAIN FEATURES**

Some of the main features from the 1991 Telephone Connections Survey were:

- 94.4% of households have at least one telephone connection. The corresponding figures in March 1986 and March 1983 were 91.3% and 85.3% respectively.
- The State/Territory with the highest percentage of household telephone connections is the ACT (97.0%) followed by Victoria (96.6%).
- NT has the highest percentage of households with no telephone connection (16.3%).

**PER CENT OF HOUSEHOLDS WITH A TELEPHONE CONNECTED**



**INQUIRIES**

• for further information about statistics in this publication and the availability of related unpublished statistics, contact Soo Kong on Melbourne (03) 615 7350 or any ABS State Office

• for information about other ABS statistics and services please contact Information Services on Canberra (06) 252 6627, 252 5402, 252 6007 or any ABS State Office.

TABLE 1. HOUSEHOLDS: WHETHER TELEPHONE CONNECTED BY STATE AND TERRITORIES OF USUAL RESIDENCE ('000)

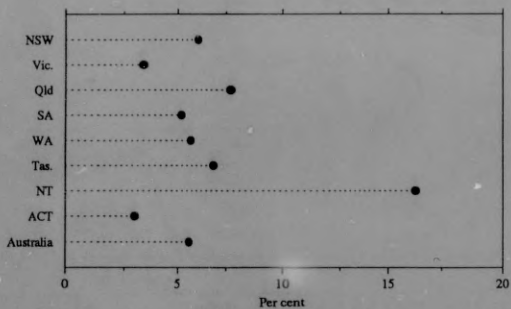
| <i>Telephone connected</i> | <i>NSW</i> | <i>Vic.</i> | <i>Qld</i> | <i>SA</i> | <i>WA</i> | <i>Tas.</i> | <i>NT</i> | <i>ACT</i> | <i>Australia</i> |
|----------------------------|------------|-------------|------------|-----------|-----------|-------------|-----------|------------|------------------|
| Yes                        | 1,953.2    | 1,467.2     | 931.4      | 498.9     | 541.7     | 152.4       | 38.3      | 87.9       | 5,670.9          |
| No                         | 126.1      | 52.4        | 78.2       | 27.3      | 32.9      | 11.4        | 7.4       | 2.8        | 338.4            |
| Total                      | 2,079.3    | 1,519.5     | 1,009.5    | 526.2     | 574.6     | 163.7       | 45.7      | 90.6       | 6,009.2          |

TABLE 2. HOUSEHOLDS: WHETHER TELEPHONE CONNECTED BY STATE AND TERRITORIES OF USUAL RESIDENCE

(Per cent)

| <i>Telephone connected</i> | <i>NSW</i> | <i>Vic.</i> | <i>Qld</i> | <i>SA</i> | <i>WA</i> | <i>Tas.</i> | <i>NT</i> | <i>ACT</i> | <i>Australia</i> |
|----------------------------|------------|-------------|------------|-----------|-----------|-------------|-----------|------------|------------------|
| Yes                        | 93.9       | 96.6        | 92.3       | 94.8      | 94.3      | 93.1        | 83.7      | 97.0       | 94.4             |
| No                         | 6.1        | 3.4         | 7.7        | 5.2       | 5.7       | 6.9         | 16.3      | 3.0        | 5.6              |
| Total                      | 100.0      | 100.0       | 100.0      | 100.0     | 100.0     | 100.0       | 100.0     | 100.0      | 100.0            |

PER CENT OF HOUSEHOLDS WITHOUT A TELEPHONE CONNECTED



## EXPLANATORY NOTES

**Introduction**

This publication contains results of the Telephone Connections Survey which was conducted throughout Australia in August 1991. The Telephone Connections Survey was carried out at the request of Telecom Australia on a user funded basis. The ABS had previously conducted similar surveys in March 1983 and March 1986.

2. Information was obtained on whether households in private dwellings did or did not have a telephone connected. Households which did have a telephone connected were asked the number of telephone lines connected. Households which did not have a telephone were asked the main reason for not having it connected. Information was also obtained on the composition of the household and the characteristics of household members.

**Survey Methodology**

3. The survey was conducted as a supplement to the monthly population survey, which is based on a multi-stage area sample of private dwellings (about 71,000 houses, flats etc.) and covers about three-fifths of one per cent of the population of Australia.

4. Interviews were conducted over a period of two weeks commencing on 12 August 1991. The information about telephone connections was obtained within each selected dwelling by specially trained interviewers. Questions were asked of a responsible adult member of the household.

**Scope**

5. The survey includes all persons aged 15 years and over except:

- (a) members of the permanent defence forces;
- (b) certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations;
- (c) overseas residents in Australia; and
- (d) members of non-Australian defence forces (and their dependants) stationed in Australia.

6. Because the telephone connections survey excludes persons in non private dwellings and visitors to private dwellings (who are included in the labour force part of the population survey), employment data and totals of population, etc. in the telephone connections survey are not comparable with similar data published in *The Labour Force, Australia, August 1991* (6203.0).

**Definitions**

7. A single telephone line is considered to have a single telephone number. In a household where there is more than one telephone sharing a single number, it is regarded as a single line.

8. A household is regarded as having more than one telephone line when there is a separate number used in the home, this can also apply to portable telephones with a separate number used in the home.

9. *Connected/connection* means that the telephone was functioning or was only temporarily out of order.

Further details on other definitions used in this survey please refer to *The Labour Force, Australia, August 1991* (6203.0).

**Additional Data**

10. A special table generation facility is now available. A list of data items, available on request, specifies populations and variables which can be used to generate required tables. Please contact Ms Soo Kong, Assistant Director, Statistical Consultancy, ABS Victoria on (03) 615 7350 if you require this service.

**Related Publications**

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

*Household Telephone Connections, Australia, March 1983, (4110.0)*

*Household Telephone Connections, Australia, March 1986, (4112.0)*

*The Labour Force, Australia, August 1991, (6203.0)*

12. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, 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.

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## TECHNICAL NOTE ON DATA RELIABILITY

## Sources of error

There are a number of possible sources of error in sample surveys and these can be classified into two types: *sampling* and *non sampling error*.

## Non sampling errors

2. Non sampling errors may arise as a result of errors in the reporting, recording or processing of the data and occur even if there is a complete enumeration of the population. Non sampling errors can be introduced through: inadequacies in the questionnaire; non response; inaccurate reporting by respondents; errors in the application of the survey procedures; incorrect recording of answers; and errors in data entry and processing.

3. It is difficult to measure size of non-sampling errors and the extent of these errors could vary considerably in significance from survey to survey and from question to question. However, every effort is made in the design of the survey and development of survey procedures to minimise the effect of these errors.

## Sampling errors

4. Sampling error is the error which occurs by chance because the data were only obtained from a sample, not the entire population.

## Standard error of estimates

5. One measure of the variability of estimates which occurs as a result of surveying only a sample population is the standard error (SE). There are about two chances in three that a survey estimate is within one standard error of the figure that would have been obtained if all persons had been included, and about nineteen chances in twenty that it is within two standard errors. That is, there are 19 chances in 20 that the true estimate is in the range:

$$[X - 2 \text{ SE}(X)] \text{ to } [X + 2 \text{ SE}(X)]$$

(where X is the estimate)

The standard error of an estimate can be obtained from Table A below. Linear interpolation should be used to calculate the standard error of estimates falling between the sizes of estimates listed in the table.

6. For all tables in this publication, only estimates with relative standard errors of 25 per cent or less, and percentages based on such estimates, are considered sufficiently reliable for most purposes.

## Relative standard errors

7. The standard error can also be expressed as a percentage of the estimate and this is known as the relative standard error (RSE). The RSE is determined by dividing the standard error of an estimate  $\text{SE}(X)$  by the estimate X and expressing it as a percentage.

8. Proportions and percentages (for example, participation rates) 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 (x) and the denominator (y). The formula for the relative standard error (RSE) of a proportion or percentage is given below:

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

9. The look up table on this page provides a guide for the calculation of standard errors and relative standard errors for the estimates in this publication.

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2616 or any ABS State office.

TABLE A. STANDARD ERROR OF ESTIMATES

| Size of estimate | N.S.W. | Vic.   | Qld.   | S.A.  | W.A.  | Tas.  | N.T.  | A.C.T. | Australia               |
|------------------|--------|--------|--------|-------|-------|-------|-------|--------|-------------------------|
|                  |        |        |        |       |       |       |       |        | per cent<br>of estimate |
| 1,000            | 540    | 530    | 440    | 370   | 390   | 280   | 360   | 300    | 45.5                    |
| 1,500            | 660    | 650    | 530    | 440   | 470   | 340   | 430   | 360    | 37.0                    |
| 2,000            | 760    | 750    | 610    | 510   | 540   | 380   | 490   | 410    | 32.4                    |
| 3,000            | 920    | 910    | 740    | 610   | 650   | 450   | 590   | 490    | 26.8                    |
| 4,000            | 1,050  | 1,050  | 850    | 700   | 740   | 510   | 670   | 550    | 23.3                    |
| 5,000            | 1,200  | 1,150  | 940    | 770   | 820   | 560   | 750   | 600    | 20.9                    |
| 6,000            | 1,300  | 1,250  | 1,000  | 830   | 880   | 600   | 810   | 650    | 19.1                    |
| 10,000           | 1,600  | 1,600  | 1,300  | 1,050 | 1,100 | 730   | 1,050 | 800    | 14.8                    |
| 20,000           | 2,200  | 2,200  | 1,750  | 1,400 | 1,500 | 920   | 1,400 | 1,050  | 10.4                    |
| 50,000           | 3,250  | 3,250  | 2,600  | 2,050 | 2,150 | 1,200 | 2,150 | 1,500  | 6.3                     |
| 100,000          | 4,300  | 4,300  | 3,400  | 2,650 | 2,850 | 1,500 | 3,000 | 1,900  | 4.3                     |
| 200,000          | 5,700  | 5,600  | 4,500  | 3,450 | 3,700 | 1,750 | 4,200 | 2,450  | 2.9                     |
| 300,000          | 6,600  | 6,600  | 5,200  | 3,950 | 4,300 | 1,900 |       | 2,800  | 2.3                     |
| 500,000          | 8,000  | 7,900  | 6,300  | 4,750 | 5,200 | 2,100 |       | 3,300  | 1.7                     |
| 1,000,000        | 10,300 | 10,100 | 8,100  | 6,000 | 6,600 |       |       |        | 1.1                     |
| 2,000,000        | 13,000 | 12,800 | 10,300 | 7,500 | 8,400 |       |       |        | 0.7                     |
| 5,000,000        | 17,600 | 17,100 | 13,900 |       |       |       |       |        | 0.4                     |
| 10,000,000       | 21,800 |        |        |       |       |       |       |        | 0.2                     |

