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CENSUS 81—USUAL RESIDENCE AND INTERNAL MIGRATION

- A** PHONE INQUIRIES *for more information about these statistics—contact Mr Fred Dawes on Canberra (062) 52 58 48 or any of our State offices.*
other inquiries including copies of publications—contact Information Services on Canberra (062) 52 66 27 or in any of our State offices.
- MAIL INQUIRIES *write to Information Services, ABS, P.O. Box 10, Belconnen, A.C.T. 2616 or any of our State offices.*

Introduction

In the 1981 Census of Population and Housing questions were asked to obtain the address of a person's usual residence at census date (Question 8), one year earlier (Question 9) and five years earlier (Question 10). The information given in response to these questions has been used in:

- (a) the preparation of official ABS estimates of the Australian resident population;
- (b) the production of 1981 Census tables based on place of usual residence of the persons included; and
- (c) deriving an indicator of the net movements (i.e. excluding any intermediate movements) of persons between the reference dates. Such movements are generally referred to as internal migration.

This information paper firstly provides a brief description of the underlying concepts of resident population and how estimates of resident population are prepared. The rest of the paper is concerned with how place of usual residence and internal migration indicators were coded in the census and also, with describing some major outputs on these topics.

Estimated resident population

The Australian population census is collected, and results are generally produced, in relation to the location of persons on census night. For the purpose of providing input to the estimated resident population, census counts (actual location) were adjusted to provide census counts of persons based on place of usual residence (known as census counts, place of usual residence).

For figures relating only to Australia as a whole, the adjustment entailed removing from the 1981 Census count persons who reported (in Question 8—see below) that they usually lived overseas. For production of State figures on a usual residence basis it was necessary to subtract from the census counts (actual location) persons usually resident in other States, as well as those usually resident overseas, and to add in persons usually resident in the State who were counted elsewhere in Australia on census day. Similarly, to obtain census counts, place of usual residence for local government authority areas (LGA's), persons usually living in other LGA's or overseas were removed, and usual residents of the LGA who were counted elsewhere in Australia were added to the census count (actual location). Two further adjustments were necessary to obtain the estimated resident population.

Although by international standards the 1981 Census achieved a very high coverage of the population actually resident in Australia on census night, a small proportion of persons was inevitably missed in the counting. The number of omissions was estimated from the results of the Post-Enumeration Survey (PES) conducted shortly after completion of the census collection. These estimates formed the basis of the adjustments for under-enumeration made to numbers of males and females, by age, at the Australian and State levels, and to total number of persons at the LGA level.

(It should be noted that for the Northern Territory, the Australian Capital Territory and the City of Brisbane, in which the general pattern of administrative division into local government areas with relatively small populations is not followed, some special 'census LGA's' have been specified by the ABS. This enables small area statistics to be provided in census results for these areas which are more or less consistent with those available for other regions. The term LGA in this publication is used to include census LGA's and to exclude the parent jurisdictions of which they are part).

The final adjustment to the census counts was to include in counts down to the LGA level estimates of usual residents who were temporarily overseas. These estimates were obtained by analysis of the passenger cards which all persons arriving in or departing from Australia must complete.

These three steps—adjustment of census counts as collected to derive *census counts*, *place of usual residence*; the adjustment in accordance with PES results for census under-enumeration; and the estimation and inclusion of usual residents temporarily absent overseas—result in the *estimated resident population* at 30 June 1981 (census day).

The *estimated resident population* at census date is updated quarterly for Australia and the States, and annually for LGA's. Information sources for these updates are births and deaths registered in Australia, long-term and permanent overseas arrivals and departures, estimates of changes of usual residence involving interstate movement and, mainly for LGA updates, some inferential information provided by house building approvals, school enrolments and electricity connections.

No census characteristics other than sex and age of persons are available for *estimated resident populations* of States and Australia; for LGA's, only estimates of numbers of persons, without any characteristics, are available.

The census questions

The 1981 Census questions on usual residence were as follows:

8. Where does each person usually live? • "Usual" residence is that address at which a person has lived or intends to live for any period of 6 months or more in 1981. • For persons who now have no usual residence, regard this dwelling as their usual residence and tick box 1. • If usual residence is overseas, write only name of country. —→	At the address shown on front of this form ☐ 1 Elsewhere ☐ 2 ↓ If "Elsewhere" please print the usual address. No. and street Suburb, town or locality Name of local council State _____ Postcode _____ Country _____
9. Where was each person's usual residence one year ago (i.e. at 30 June 1980)? • If the person is less than one year old, write "N/A". • For persons who had no usual residence on 30 June 1980, give the address at which they were then living. • If usual residence was overseas, write only "O/S". —→	Same as in question 8 ☐ 1 Elsewhere ☐ 2 ↓ If "Elsewhere" please print usual address one year ago. No. and street Suburb, town or locality Name of local council State _____ Postcode _____
10. Where was each person's usual residence five years ago (i.e. at 30 June 1976)? • If the person is less than five years old, write "N/A". • For persons who had no usual residence on 30 June 1976, give the address at which they were then living. • If usual residence was overseas, write only "O/S". —→	Same as in question 8 ☐ 1 Same as in question 9 ☐ 2 Elsewhere ☐ 3 ↓ If "Elsewhere" please print usual address five years ago. No. and street Suburb, town or locality Name of local council State _____ Postcode _____

While each question required a person to give the actual address of his/her usual residence, only a code for the State and local government area containing the address was entered on to the computer record for further processing. Addresses were obtained to allow for accurate coding to LGA's when a valid LGA name could not be identified, or was not provided, in the response.

There is a small number of cases in which LGA's cross a statistical division boundary, generally where capital city statistical divisions adjoin neighbouring statistical divisions. Since only State and LGA of usual residence were identified and coded in the 1981 Census, usual residence statistics cannot be identified for parts of LGA's. It follows that populations on a usual residence basis can be estimated only for approximations of the statistical divisions involved.

Question 9 did not apply to persons less than one year old, and question 10 did not apply to persons less than 5 years old.

Usual residence and internal migration coding

Each of the usual residence questions asked respondents for their usual place of residence at a stated time, i.e., census date (Question 8), one year earlier (Question 9) and five years earlier (Question 10). Usual residence was defined in Question 8 as being the 'address at which a person has lived or intends to live for any period of 6 months or more in 1981'; this concept was implied for Questions 9 and 10.

If usual residence was in Australia, respondents were asked to give their residential address, postcode, and the name of the local council. The address, postcode and council name were not required to be repeated if they were the same as in an earlier response.

Where a local council name was provided and could be matched clerically with an entry in an index of local government names, the appropriate LGA code was allocated. Where a local council name was not given, an LGA code was allocated on the basis of the residential address.

If an overseas place of usual residence was indicated in the answer to Question 8, the country of usual residence was coded from an index of countries and Australian external territories (corresponding to the census code list of places of birth for overseas born persons). In Questions 9 and 10, respondents were asked to indicate whether their usual residence was overseas in June 1980 and June 1976 respectively, but not to give the country name.

Persons who were usual residents of a dwelling in which they were enumerated at the 1981 Census were not required to repeat the address on the cover of the census schedule. The State and LGA codes appropriate to the census collection district (CD) in which they were enumerated were automatically allocated to the June 1981 usual residence field. Similarly, when the Question 9 location was a repeat of that of Question 8, or Question 10 a repeat of 8 or 9, the transfer of the appropriate codes to these fields was carried out automatically by computer.

Persons who on census night 1981 were on board non-naval vessels in or between Australian ports (or on long distance trains, buses or aircraft) and in Question 8 gave an address in Australia as their usual residence were coded to the LGA containing that address. A small number of persons who were on board non-naval vessels in or between Australian ports (or on long distance trains, buses or aircraft) indicated that they were a usual resident of the address at which they were enumerated and were allocated a separate usual residence code describing them as 'migratory'. However, similar responses to Questions 9 and 10 were interpreted as 'not stated' responses.

Most respondents who were not enumerated at their usual 1981 place of residence provided a codable local council name; but for the earlier periods (1980 and 1976) the numbers of omitted or uncodable names increased. In such cases, the suburb name, town, postcode or other locality information (if any) provided in answer to the question was used in referring to the multi-volume Localities Index. This index includes all suburbs, towns and other locality names, for all States and Territories, which were known at the time of its preparation, together with the corresponding LGA codes. Some large non-private dwellings are also included in the index to assist in coding when the usual residence was given as a dwelling of this kind. For some localities which are located in two or more LGAs, the index includes an alphabetic directory of street names indicating to which area they belong; in these cases, street name, if given by the respondent, was consulted to assist in determining the LGA of usual residence.

If the information provided for children proved inadequate for the allocation of an LGA code, the LGA of usual residence of the mother, if present and adequately reported, or father, if mother was absent, was used and the appropriate code given. Similarly, spouses were given the code determined for their partner, subject to a check on the duration of marriage. Otherwise, a 'not stated' code was allocated where information for LGA coding was absent or inadequate.

During the processing of the 1976 Census, a 'not stated' code was allocated for all three usual residence questions when the first question on usual residence (i.e. usual residence at census date) was not answered, even though adequate answers to the usual residence one and five years earlier might have been given. In the 1981 Census processing, responses to Questions 9 and 10 were fully coded even if Question 8 was coded 'not stated'.

Output classifications

The usual residence and internal migration codes written onto the computer record at the clerical coding stage are set out below. The group of three capital letters shown in brackets alongside each of the variables is the mnemonic for the variable; use of these mnemonics allows cross-classified tables and other outputs to be described in the *Catalogue of 1981 Census Tables* (2139.0) and elsewhere in a compact and economical way.

(a) State of usual residence; or overseas resident.

Description	June 1981 (RSC) Code	June 1980 (RSO) Code	June 1976 (RSV) Code
Not applicable		0 (aged less than 1 year)	0 (aged less than 5 years)
New South Wales	1	1	1
Victoria	2	2	2
Queensland	3	3	3
South Australia	4	4	4
Western Australia	5	5	5
Tasmania	6	6	6
Northern Territory	7	7	7
Australian Capital Territory	8	8	8
Overseas	9	9	9
Not stated	A	A	A

(b) LGA of usual residence.

Codes were given for LGA of usual residence for each of the 3 periods, 1981 (RLC), 1980 (RLO) and 1976 (RLV).

A sequential code commencing with 1 was allocated to LGA's (including census LGA's) in each State or Territory; in Queensland, for example, LGA codes run 1-310.

If State of usual residence in 1981 (RSC) was coded as overseas, a code for usual country of residence at June 1981 was also allocated within the range 1-101. As indicated earlier, although respondents were asked to report if their usual residence in June 1980 or 1976 was overseas, they were not asked for the country name. Such persons were included in the category 'not stated, overseas and not applicable' (not applicable relates to persons not then born) for which code 0 was reserved in the 1976 and 1980 LGA of usual residence classifications. In the 1981 place of usual residence classification, since usual overseas residents were coded separately, and a 'not applicable' category was not required, code 0 was used only for 'not stated'.

The code numbers given to LGA's are listed in the *1981 Census of Population and Housing Geographic Code List* (2141.0). LGA names and codes are also available on magnetic tape, being included in the Geographic Descriptor File; in this form they can be used in conjunction with LGA statistical data on magnetic tape to produce tabulations with plain language names for the LGA's.

Country of usual residence 1981 codes correspond exactly with the codes in the classification of birthplace of persons, given in the *Catalogue of 1981 Census Tables* (2139.0).

Place of usual residence 1981 tabulations. Census usual residence information for 1981, as outlined in the early paragraphs of this publication, is a major input to the preparation of the *estimated resident population*. Census data at State and LGA level tabulated on a usual residence basis are also of considerable interest for many other purposes, particularly for areas which attract large numbers of non-residents, and a number of standard tables are produced on this basis. While other census data are generally available at collection district level, usual residence data are only available for LGA's and aggregations of LGA's. There are, however, some problems with usual residence statistics. Not all census returns are completed adequately for a place of usual residence code to be allocated; these records are coded to 'not stated' and counts for the places at which the persons concerned were usually resident at census time will be correspondingly deficient. A further disadvantage is that while it is quite appropriate to re-tabulate persons (and their personal characteristics) as though they had been at their places of usual residence at census date, it would for most purposes only be confusing for such tabulations to show for these persons the dwelling and household characteristics of another place (the one at which they were enumerated). The standard place of usual residence tabulations do not therefore include dwelling or household characteristics.

(c) Internal migration indicators.

While the 1981 usual residence information has special interest and, as indicated, is used in some standard statistical output, the 1980 and 1976 place of usual residence data from the 1981 Census are mainly used (in conjunction with the 1981 data) for internal migration analysis.

The analysis is carried out in two different computer operations, one of which is concerned with identifying whether individuals had different addresses at the nominated dates (implying some internal migration), and the other, for which the clerical area coding has already been described, to identify the source and destination of net movements in the period.

The first of these processes is based on statements (in 'tick boxes') by respondents given in answer to the first part of each of the Questions 8, 9 and 10, and gives rise to the following characteristics and coding.

(i) Usual Residence 1981 (RMC)

Question 8 started by asking if persons were usual residents of the dwelling in which they were enumerated. If they were, code 0 was allocated; if not, code 1 was given to the record (and, if the required information was provided, LGA and State of usual residence were coded).

(ii) Internal Migration Indicator 1980, 1981 (RMO)

Question 9 asked if the person's usual residence was the same a year earlier (June 1980) as it was at census date. If it was the same in both years and the address was an Australian one, code 0 was allocated. All other persons aged one year or more, including those usually resident overseas at either time, were given code 1. Persons aged less than 1 year, for whom the question was not applicable, were given code 2.

(iii) Internal Migration Indicator 1976, 1980, 1981 (RMV)

Respondents were asked in Question 10 whether the usual residence in 1976 was the same as at census time, and also if it was the same as in 1980.

Codes allocated for this characteristic indicate whether a person's usual residence was:

- 0 the same in 1976, 1980 and 1981;
- 1 the same in 1976 and 1980, but different in 1981;
- 2 the same in 1976 and 1981, but different in 1980;
- 3 different in 1976 from both 1980 and 1981 (usual residence in 1980 and 1981 may or may not be the same);
- 4 not applicable (if aged less than 5 years).

More detailed information relating to internal migration can be obtained by combining RMV with some of the place of usual residence characteristics.

Some points to note about usual residence tables

Points about the census internal migration indicators which should be noted particularly are that:

(i) Since the indicators are derived from usual residence at certain dates, only the net effect of any multiple movements between those dates can be derived. Thus, for a person who in June 1976 had a usual place of residence in a South Australian rural area, in June 1978 was a usual resident of a dwelling in Melbourne, but by June 1980 was a usual resident of Adelaide, only the net South Australian country to city movement would be revealed.

(ii) In the case of 'out and back' movements, in which persons moved away from a place of usual residence to become a usual resident in some other place, but returned before the end of the reference period to the earlier address as a usual resident, no movement would be shown in the census internal migration figures.

(iii) Usual residence was only coded as being unchanged (i.e. in codes 0, 1 and 2 above) if the usual residence was in Australia.

(iv) Code 3 for the RMV (internal migration 1976, 1980, 1981) indicator above includes persons whose usual residence was the same in 1980 and 1981, as well as those who had different usual residences in all three years. These two cases can be distinguished by cross-reference to the RMO (1980 to 1981) indicator.

Quality of response

The same three questions on place of usual residence were also asked in the 1976 Census and testing prior to that census indicated that the questions gave satisfactory response rates and quality of responses. The non-response rate to each of these questions in the 1981 Census was 2.2 per cent or less.

As indicated above, where an address of usual residence was not furnished, or proved inadequate for identification of the LGA of usual residence, a 'not stated' code was allocated; consequently census counts for LGA's on a usual residence basis will tend to be understated.

Data releases

Some very simple tables on the topics of usual residence and internal migration are available on microfiche from the 1981 Census. These are listed in the *Catalogue of 1981 Census Tables* (2139.0).

Twelve detailed tables on the topic of internal migration are being produced on magnetic tape by the ABS. LGA's are the smallest geographic unit available and larger areas must be defined by aggregating LGA's. The ABS has produced a regrouping of LGA's which approximates statistical divisions and this is used in some of the tables on tape. Details of the characteristics contained in these tables are listed in the *Catalogue of 1981 Census Tables, Edition 2* (2139.0). Information on how to order the tables on tape is contained in *Census 81—Detailed Tables on Magnetic Tape* (2166.0). Brief descriptions of the tables are given below:

MT020—A*MT021. Basic characteristics of interstate movers. These two tables provide details of State of usual residence, 30 June 1981 (RSC), State of usual residence, 30 June 1980 (RSO), and an indicator of net movement between 1976, 1980 and 1981 (RMV). Other variables in MT020—MT021 are:

MT020— sex, age (0-19 in single years, 20-74 in five year groups, 75+),
marital status (now married, other),
period of residence of overseas born persons (5 years, other),
birthplace (overseas born, Australian born),
occupational status,
level of qualifications;

MT021— sex, age (15-24 in 5 year groups, 25-54 in 10 year groups, 55-64 in 5 year groups, 65+),
industry (27 divisions and selected or grouped subdivisions),
occupation (24 major and selected minor groups),
level of qualifications;

MT022 and MT023 are similar to MT020 and MT021, except that State of usual residence 1976 (RSV) replaces State of usual residence 1980 (RSO), and an indicator which shows mobility between 1981 and 1980 (RMO) replaces the 1976-1980-1981 indicator (RMV).

MT024—MT025. Inter-LGA movement.

MT024 contains State and LGA of usual residence 1981 (RSC and RLC13), State and LGA of usual residence 1980 (RSO and RLO13), and sex.

MT025 is similar to MT024 except that State and LGA of usual residence 1976 (RSV and RLV13) replaces State and LGA of usual residence 1980 (RSO and RLO13).

For these two tables, any LGA which contains less than 1,000 persons has been amalgamated with an adjoining LGA.

MT026—MT031. Internal migration showing more detailed characteristics of movers.

MT026—MT028 contain details of persons for whom statistical division of usual residence in 1981 was different from statistical division of usual residence in 1980. The table shows for each State an approximation (see above) of each statistical division of usual residence in 1981:

(a) where the move was within the State, the statistical division (approximate) from which a person moved since 1980; and

(b) where the move was from interstate, the State from which the movement was made (RLO08).

All tables include classification by sex. Other classificatory variables are as follows:

MT026— age (5 year groups up to 14, 10 year groups up to 74 years, 75+),
occupational status (employed, unemployed, not in labour force);

MT027— occupation (14 major groups), income;

MT028— qualifications (level and field);

MT029— MT031 contain details of persons whose LGA of usual residence 1981 (RLC) was different from LGA of usual residence 1976 (RLV), but are otherwise the same as tables MT026—MT028 except that statistical division (approximate) and State of residence in 1976 (RLV08) replace those for 1980.

Related publications

A general description of the statistics planned for release from the 1981 Census is contained in *Census 81—Data Release Plans* (2142.0) and its *Addendum*. Other related publications are listed below. Note that none of these publications contain statistics.

Catalogue of 1981 Census Tables(2139.0)(a)
Making Sense of Census 81(2140.0)(a)
Geographic Code List(2141.0)(a)
Census 81—Magnetic Tape Summary Files(2143.0)(a)
Census 81—Statistical Publications(2144.0)(a)
Census 81—Microfiche(2145.0)(a)
Census 81—Maps(2146.0)(a)
Census 81—Industry(2147.0)(a)
Census 81—Occupation(2148.0)(a)
Census 81—Education Qualifications(2149.0)(a)
Census 81—Dwelling, Household, Family(2150.0)(a)
Census 81—Income(2151.0)(a)
Census 81—Language(2152.0)(a)
Census 81—Aboriginals and Torres Strait Islanders(2153.0)(a)
Census 81—Journey to Work(2154.0)(a)
Census 81—Effects of Introduced Random Error(2156.0)(a)
Census 81—Sample Files on Magnetic Tape(2165.0)(a)
Census 81—Detailed Tables on Magnetic Tape(2166.0)(a)

(a) already available

Further information

If you require further information about the census, please contact any of the ABS offices listed in the Appendix to this paper.

APPENDIX

INQUIRIES

NEW SOUTH WALES	Information Services St Andrew's House Sydney. NSW. 2000 (Box 796 GPO Sydney 2001) Phone (02) 268 4395-6-7 Telex AA20819	WESTERN AUSTRALIA	Information Services 1-3 St George's Terrace Perth. WA. 6000 Phone (09) 323 5140 Telex AA92041
VICTORIA	Information Services Commonwealth Banks Building Cnr Elizabeth & Flinders Streets Melbourne. VIC. 3000 (Box 2796Y GPO Melbourne 3001) Phone (03) 652 6192 Telex AA30086	TASMANIA	Information Services Australian Government Centre 10th Floor 188 Collins Street Hobart. TAS. 7000 (Box 66A GPO Hobart 7001) Phone (002) 20 4437 or 20 4495 Telex AA58098
QUEENSLAND	Information Services 345 Ann Street Brisbane. QLD. 4000 Phone (07) 336 022 Telex AA40271	NORTHERN TERRITORY	The Statistician—Northern Territory 7th Floor MLC Building 81 Smith Street Darwin. NT. 5790 (Box 3796 PO Darwin 5794) Phone (089) 81 5222 Telex AA85075
SOUTH AUSTRALIA	Information Services City Mutual Centre 10-20 Pulteney Street Adelaide. SA. 5000 (Box 2272 GPO Adelaide 5001) Phone (08) 228 9439 Telex AA82106	AUSTRALIAN CAPITAL TERRITORY	Information Services Australian Bureau of Statistics Box 10 PO Belconnen. ACT. 2616 Phone (062) 52 6627 Telex AA62020