

Population Estimates

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Compiling

Estimated Resident Population (ERP) statistics

from

2001 Census counts

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Overview

- Estimated Resident Population (ERP)
 - ▶ definition, key uses, legislation, history, timing, cautions and limitations
- How ERP differs from Census counts
- How 30 June 2001 ERP was calculated
- Fine detail
- Small areas and Indigenous estimates
- References
 - ▶ two key ABS publications on conference CD-ROM

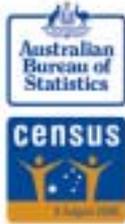
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Estimated Resident Population (ERP) - definition

- Based on the concept that each person can only be accounted for once for any given reference date -
 - ▶ whether they are in the Australian population -
 - has or intends to live in Australia for 12 months or more in the reference year
 - ▶ where they are counted in Australia -
 - each person is allocated to a place of usual residence;
 - that place where the person has lived or intends to live for 6 months or more in a given reference year.

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2006 Census - question 8

8 Where does the person usually live?

- For persons who usually live in another country and who are visiting Australia for less than one year, select 'Other country'.
- For other persons, 'usually live' means the address at which the person has lived or intends to live for a total of six months or more in 2006.
- For persons who now have no usual address, write 'NONE' in the 'Suburb/Locality' box.
- For boarders at boarding school, write the address of the boarding school or college.
- Remember to mark box like this:

The address shown on the front of this form

Elsewhere in Australia – please specify address

Apartment/Flat/Unit number (if any)

Street number

Street name

Suburb/Locality

State/Territory Postcode

Other country

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Estimated Resident Population (ERP) - exclusions

- Overseas visitors living in Australia for less than 12 months
- Australian residents overseas for 12 months or more.
- Foreign diplomats and their families by convention

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Estimated Resident Population (ERP) - does not allow for

- Temporary seasonal migration within a year;
- More than one place of residence (e.g. fly-in/fly-out workers, holiday homes, seasonal residences); or
- Temporary users of services (e.g. overseas and local tourists)

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Estimated Resident Population (ERP) - some key uses

- Legislated decision making
 - ▶ Determining number of seats each State/Territory has in the House of Representatives;
 - ▶ Commonwealth grants to States and Territories and Local Governments;
- Per capita measures (fertility and mortality rates);
- Base data for population projections-
 - ▶ Survey benchmarks (e.g. Labour Force),
 - ▶ Federal electorate boundary redistributions,
 - ▶ Budget planning

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Legislation

- s9(2) *Census and Statistics Act 1905*;
 - ▶ **The Statistician shall collect** such statistical information as is necessary for the purposes of the compilation and analysis, under section 12, of statistics of **the number of the people of each State** as on the last day of March, June, September and December in each year;

- s24 The Constitution
 - ▶ *"latest statistics of the Commonwealth"* as to the people of The Commonwealth and the States.
 - ▶ Two High Court of Australia cases (1975 & 1977):
 - McKinlay & MacKellar

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Legislation

- s47 *Commonwealth Electoral Act, 1918*
 - ▶ 47 (1) **The Australian Statistician must**, on request by the Electoral Commissioner, supply the Electoral Commissioner with:
 - (a) the **statistics** referred to in subsection 46(1B); and
 - (b) the following information in relation to each of the Australian Capital Territory and the Northern Territory:
 - (i) the Australian Statistician's estimate of the net undercount for that Territory at the last Census;
 - (ii) the standard error of the measure of that estimate of the net undercount;
 - (iii) the upper and lower limits of the 95% confidence interval for the measure of that estimate of the net undercount; and
 - (c) any other statistical information that the Electoral Commissioner requires for the purposes of this Division.

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Legislation

- A New Tax Act (Commonwealth-State Financial Arrangements) Act 1999;
 - ▶ continues requirements introduced for States Grants (Tax Reimbursement) Act 1946

7(1) The **estimated population** of a State on 31 December in a GST year is the population of the State on that date **as determined by the Australian Statistician after that date and before 6 June** in the GST year.

(2) In making a determination under this section, **the Australian Statistician must:**

- (a) if practicable, consult with the official Statistician of each State concerned; and
- (b) have regard to the latest statistics in relation to population available to the Australian Statistician on the day on which the determination is made.

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Estimated Resident Population (ERP) - history

- In place since 1982
- Backdated to 1971
- Previously -
 - ▶ census counts without adjustments for usual residence or undercount.
 - ▶ implication of census conducted in winter months -
 - Victorian usual residents enumerated in Queensland.
 - Non-usual residents in snow fields
 - Australian usual residents overseas for N'thn Hemisphere Summer

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Estimated Resident Population (ERP) - frequency & timing

- Australia, States and Territories
 - ▶ @ last day of March, June, September and December:
 - preliminary estimates 5 to 6 months after reference date;
 - 31 December must be published before 6 June in the following year (GST legislation);
 - estimates revised with additional data (financial years revised 15 months later);
 - intercensal estimates finalised after the next Census results are available.

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Estimated Resident Population (ERP) - frequency & timing

- Sub-state/territory areas (e.g. LGAs)
 - ▶ Only available for 30 June each year:
 - preliminary estimates normally released in the following February/March;
 - also revised annually;
 - finalised after next Census
- Age/sex estimates, 30 June
 - state/territory release in December
 - Sub-state/territory released in June of following year.

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Estimated Resident Population (ERP) - cautions and limitations

- Retrospective estimates based on available data -
 - always have a reference date in the past
 - revised as additional data becomes available

- Not a projection into the future -
 - projections are based on recent ERP + assumptions for future growth (e.g. births, deaths, migration).

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Estimated Resident Population (ERP) - cautions and limitations

- They are not:
 - ▶ average population during the year;
 - ▶ peak population during a year; or
 - ▶ a measure of itinerant or service population

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Census counts (vs. ERP)

- Census conducted on a place of enumeration basis (mostly),
- Reference date offset from 30 June (7 August 2001),
- Excludes Australians overseas on Census night
 - includes some who have not gone through normal migration procedures,
- Includes overseas visitors,

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Census counts (vs. ERP)

- Not adjusted for under and over counting
- Contains enumeration errors requiring adjustment -
 - age rounding and other inconsistencies,
 - Census 'vandals' typically aged 100+,
 - non response to some questions requiring imputation,
 - other unresolved problems with enumeration or processing.

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ERP (vs. Census counts)

- Place of usual residence basis,
- Excludes overseas visitors in Australia for less than 12 months,
- Includes an allowance for net undercount,
- Includes demographic adjustments for inconsistencies and verified enumeration/processing problems,

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ERP (vs. Census counts)

- Includes Australian residents temporarily overseas on Census night
 - by collating incoming passenger cards up to 12 months after the Census,
- Backdated from Census date to 30 June
 - births, deaths, migration
- Compiled between censuses using administrative data
 - births, deaths, migration

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Calculating ERP, 30 June 2001

	Victoria (thousands)
Census count, place of enumeration	4,645.0
+ Residents interstate	+ 79.1
- Interstate visitors	- 30.2
- Overseas visitors	- 32.9
= Census count, usual residence	4,661.0
+ Under-enumeration (a)	+ 67.3
+ Residents temporarily overseas	+ 86.1
= ERP as at 7 August 2001	4,814.4
- Backdating adjustment	- 9.7
= ERP as at 30 June 2001	4,804.7

(a) includes demographic adjustments



Fine detail - non contact dwellings

- ABS estimates the number of residents in private dwellings believed to be occupied on Census night but for which -
 - ▶ no contact was made when the collector called to collect form after Census night
 - collector required to return a minimum of 3 times.
 - ▶ no form is received by mail despite leaving second form, replied paid envelope, reminder letter and advertising.
- Some changes for 2006 Census



Fine detail - non contact dwelling estimates

- Estimates of persons in non-contact dwellings based on -
 - ▶ number of persons advised by the householder on form delivery
 - available for some households
 - ▶ other local information to estimate the average number of persons likely to be in the dwelling.
- Changes to estimation method for 2006 Census

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Fine detail - measuring undercount

- Post Enumeration Survey of households conducted 3 weeks after Census night.
- Aim: identify all possible addresses where surveyed persons may have been counted on Census night.
- 2006 PES: extension to remote areas and discrete Indigenous communities.

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Fine detail - measuring undercount

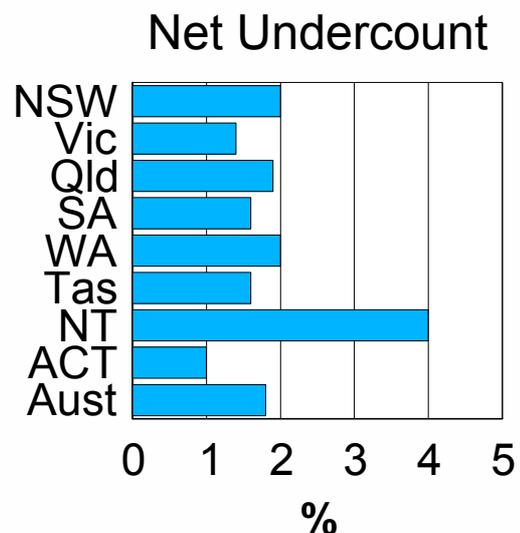
- At Census Data Processing Centre
 - ▶ **Search** Census forms for all possible addresses and
 - ▶ **Match** PES and Census responses based on name, age, sex and other characteristics
- Identify whether persons were
 - ▶ counted,
 - ▶ not counted or
 - ▶ counted more than once.
- Net undercount =
undercount - overcount

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2001 Net Undercount

- Gross undercount:
530,500
- Gross overcount:
88,700
- Processing induced
overcount:
87,100
- Demographic adjustments:
-8,700
- Net undercount:
346,100



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- Arts & Culture
- Community Links
- Health
- Education
- Emergency Services
- Employment
- Land & Environment
- Law & Safety
- Housing
- Sport & Recreation
- Tourism
- Transport & Travel



Indigenous Leadership Development

The NTPS Indigenous Leadership Development Programs concluded with 32 participants graduating with a Diploma of Business (Frontline Management) at Charles Darwin University.

Aimed at providing opportunities for Indigenous men and women to gain the knowledge and skills necessary to assist in their ongoing career development and to increase their effectiveness in their current positions, the objectives of the Kigauk and Lookrukin programs are to redress the lack of representation of Indigenous men and women in senior management positions in the NTPS and improve utilisation of government services in the Indigenous community by having a workforce profile that matches the population profile of the Northern Territory.

Following a learning journey that included both academic and action learning elements, 7 Kigauks from the second program and 25 Lookrukins from the pilot program received their qualifications amidst much excitement and sense of achievement.

- ### News and Featu
- Workplace Advocate web
 - Newsroom
 - Statehood
 - Darwin City Waterfront Pr
 - Business & Skilled Migra

Online Services

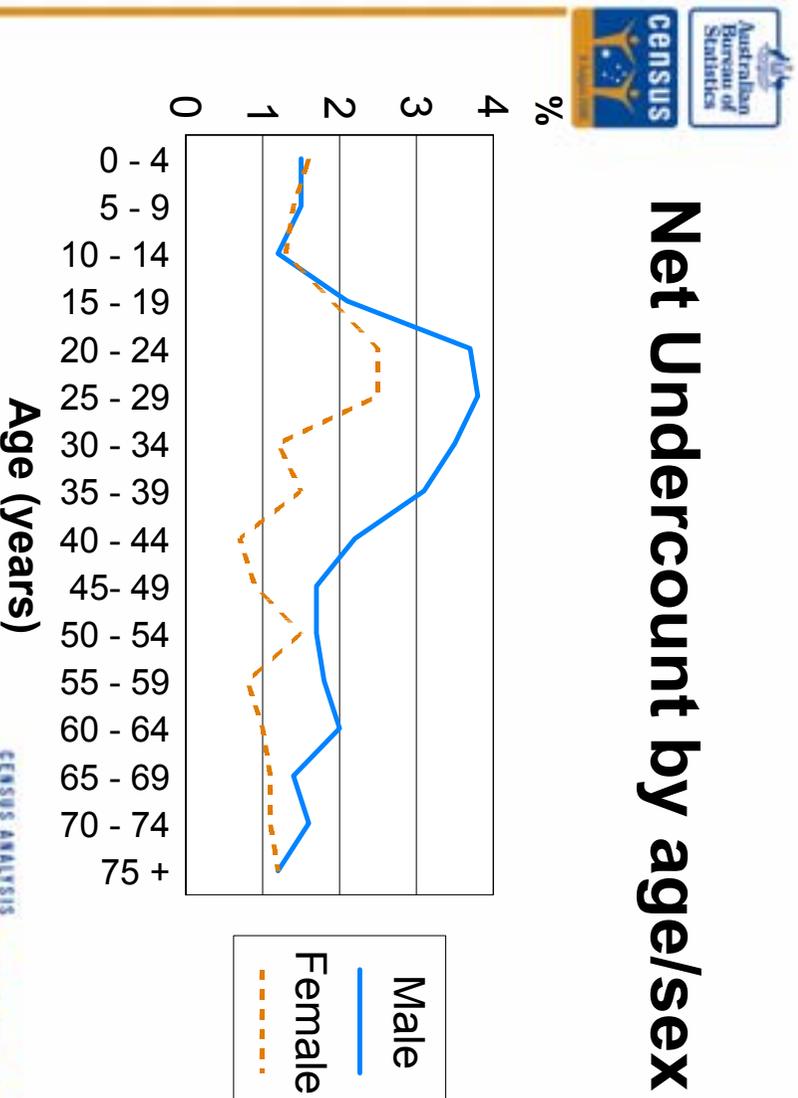
- Government Jobs
- Renew vehicle registration
- Renew driver's licence
- Tender opportunities
- Place Names Register

Key links

- Events Calendar
- Chief Minister and Cabine
- Community Cabinet
- Listen to Parliament
- NT Budget 2005

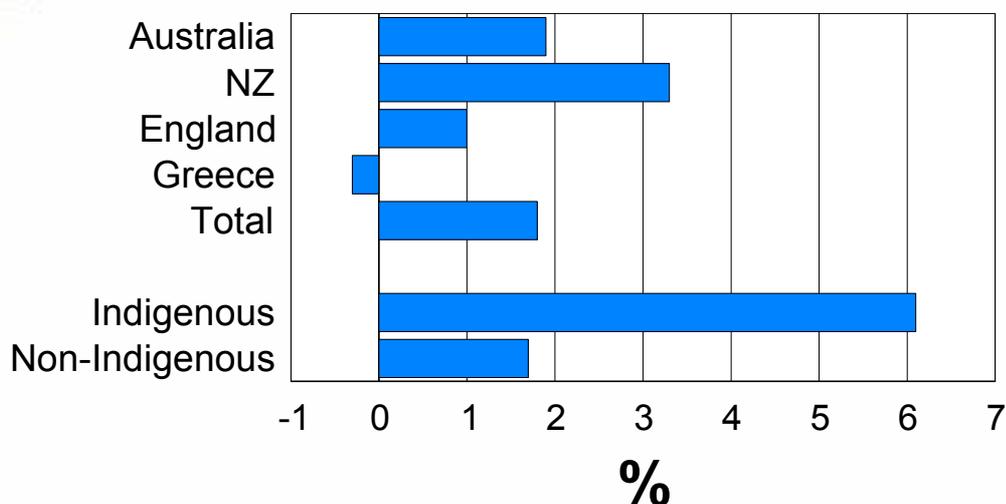


Net Undercount by age/sex





Net undercount, 2001



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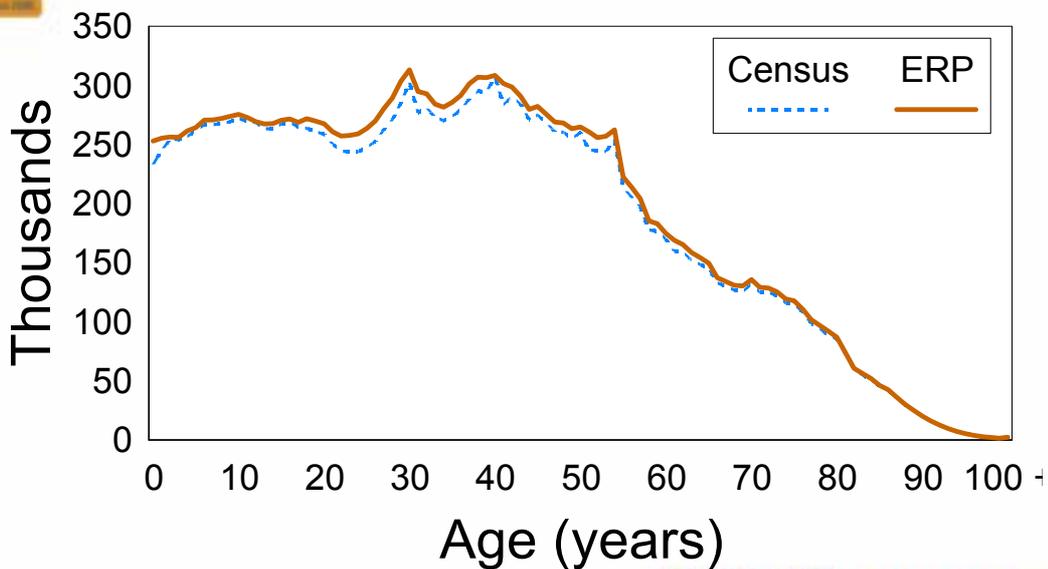
Fine detail - demographic adjustments

- Evaluation of initial ERPs for
 - ▶ internal consistency (age/sex)
 - e.g. age heaping
 - ▶ comparison with other demographic data,
 - cohort size and sex ratios
 - ▶ correction for Census 'vandals'
 - ▶ other checks
- 2006: Date of Birth included
 - ▶ improved age for aged persons and young babies

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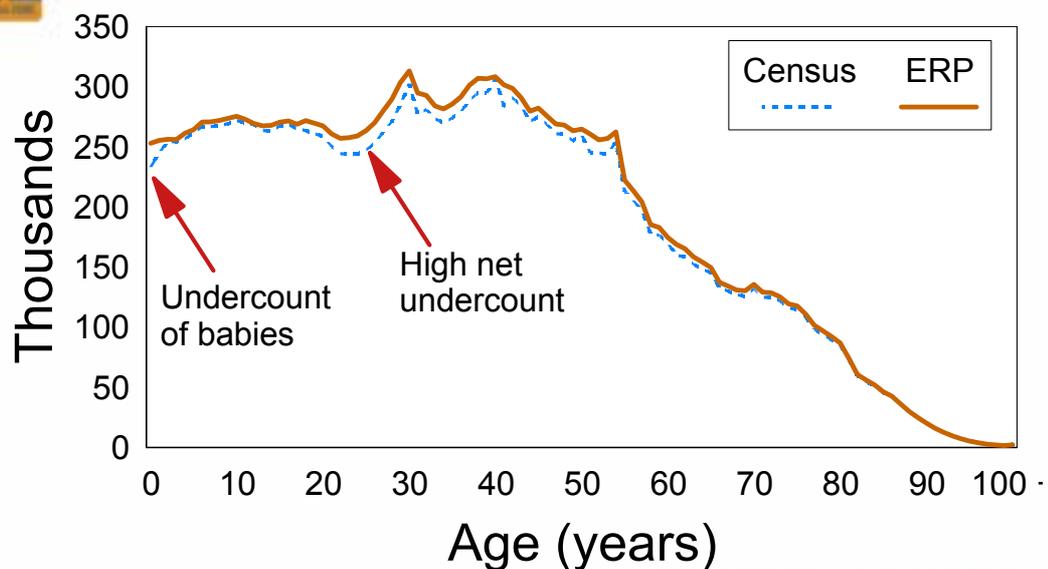
2001 Census counts vs 30 June 2001 ERP, Aust.



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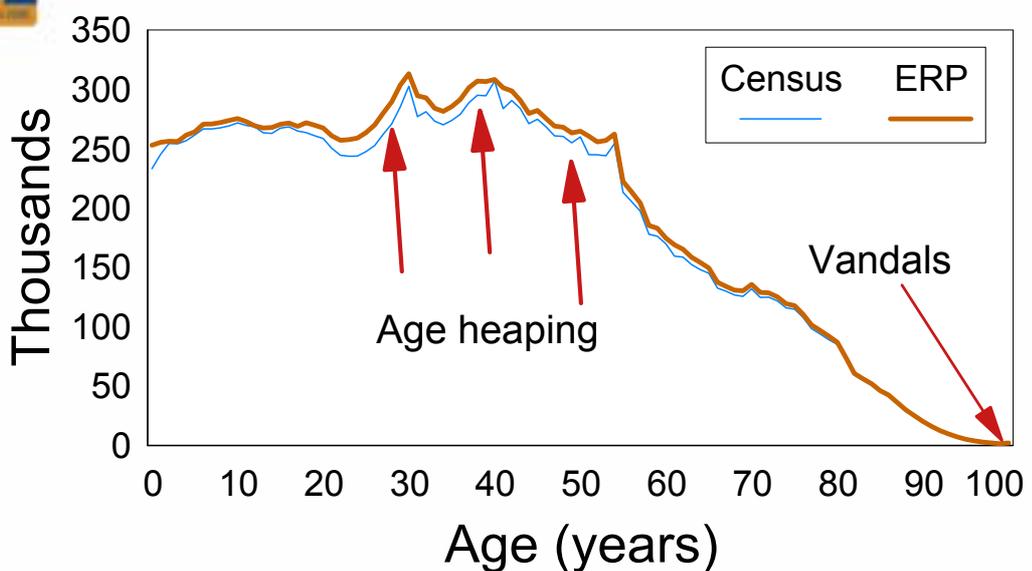
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2001 Census counts vs 30 June 2001 ERP, Aust.



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Small areas below State/Territory level

- Similar process to National and State/Territory process
- Indigenous status adjusted for not stated responses
- SLA level net undercount estimates derived synthetically-
 - state/territory,
 - capital city/balance of state,
 - national age/sex, and
 - national Indigenous/ non-Indigenous

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Small areas below State/Territory level

- Constrained to state and territory totals
- Statistical Local Area and Indigenous/non-Indigenous counts compiled concurrently
- Non-specific usual residence responses distributed (e.g. insufficient address information to identify SLA of usual residence.)
- Sample of passenger cards coded to SLA.

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Summary

- Population estimates
 - ▶ Better as a measure of population
 - size, structure (age x sex), geographic distribution
 - ▶ available for intercensal periods
 - ▶ also available by country of birth, marital status
- Census
 - ▶ detailed statistics
 - small population groups
 - detailed characteristics
 - ▶ five yearly

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Key ABS publications

- Australian Demographic Statistics (cat. no. 3101.0)
 - quarterly population totals
 - final 2001 Census edition on conference CD-ROM
- Information Paper: Census of Population and Housing, Data Quality - Undercount, Australia 2001 (cat. no. 2940.0)
 - available on conference CD-ROM
- Population by Age and Sex, Australian States and Territories (cat. no. 3201.0)
 - Age distribution for 30 June
- Regional Population Growth (cat. no. 3218.0)
 - sub-state areas

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Other references

- Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2009 (cat. no. 3238.0) & data cubes available
- Article: "Population figures for state grants - an historical perspective", Year Book Australia, 2005 (cat. no. 1301.0)
- Information Paper: Determining Seats in the House of Representatives - Legislative Requirements for Provision of ABS Statistics, 2005 (cat. no. 3107.0.55.002)

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