
A Statistical appendix

A.1 Introduction

The aim of this appendix is to provide contextual information to aid the interpretation of performance indicators used in the Report. The inclusion of the appendix is partly a response to requests by Report users. A number of respondents to a 1998 survey noted that more needs to be reported on the differences between jurisdictions and how they affect the interpretation placed on data (SRCSSP 1998). Most of the chapters of the Report use the population data from table A.1 when calculating descriptors (such as expenditure per capita) or indicators (such as participation rates for vocational education and training). Financial data (which are expressed in real dollars in the chapters) are deflated by the gross domestic product deflator data from table A.19. The data source for most tables is the Australian Bureau of Statistics.

The appendix has two parts:

- descriptions of the broad characteristics of each jurisdiction; and
- a set of source tables to assist comparison of performance across jurisdictions.

The descriptions of jurisdictions (based on data in the source tables) include the characteristics of age profile, cultural heritage (such as Indigenous status and ethnicity), population distribution, household structures and level of income support.

For some characteristics, the discussion is based on the same indicator across jurisdictions (for example, the proportion of persons of Indigenous origin in the population). For other characteristics, the discussion draws on noteworthy differences (for example, significant differences from the national average).

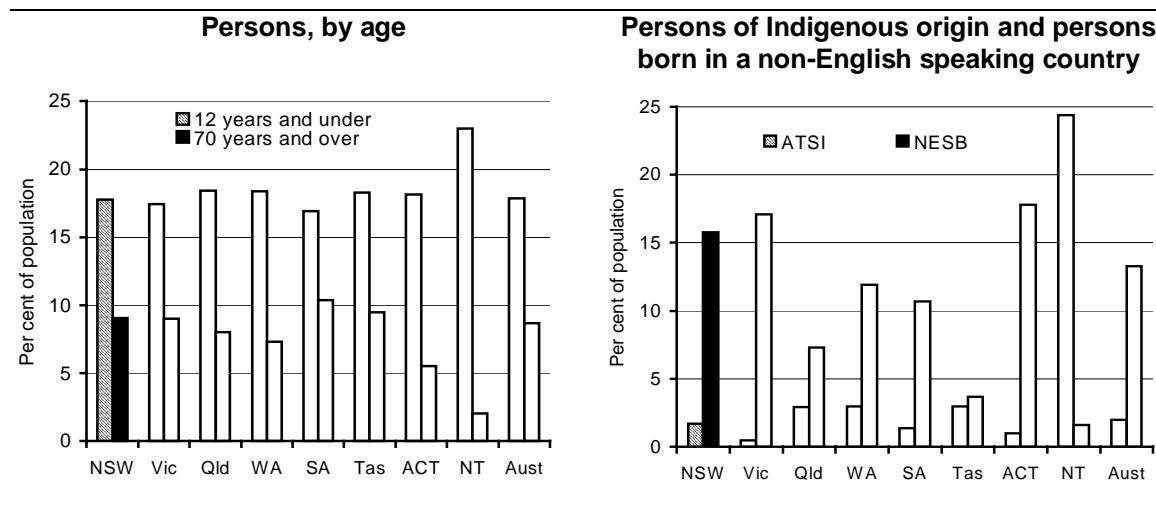
A.2 Profile of New South Wales



The proportion of the NSW population aged 70 years and over (9.1 per cent) was the third highest for all States and Territories, while the proportion aged under 12 years (17.8 per cent) was the third lowest (figure A.1). The average annual increase in the number of persons aged 70 years and over (3.1 per cent) in the five years to 1998–99 was the fourth lowest for all States and Territories (table A.1).

The proportion of persons of Indigenous origin (1.7 per cent) was slightly below the average representation in the Australian population (2.0 per cent). Australian born persons accounted for 73.3 per cent of the NSW population, which was a lower proportion than the national average. The proportion of the population born in non-English speaking countries (15.8 per cent) was the third highest across all States and Territories (figure A.1).

Figure A.1 Persons by age, and by origin and place of birth



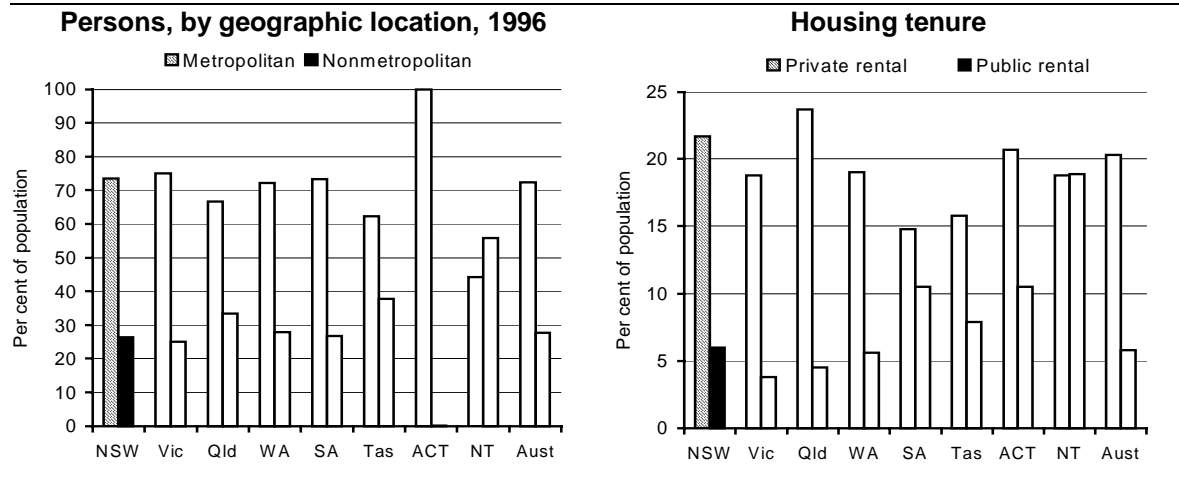
Sources: tables A.1 and A.3.

The proportion of the NSW population who lived in metropolitan areas in 1996 (73.6 per cent) was higher than the national average (72.3 per cent), while the proportion who lived in non-metropolitan areas (26.4 per cent) was lower than the national average (27.7 per cent) (figure A.2).

Of all couples with dependents, the proportion that were both employed (54.3 per cent) was the third lowest for all States and Territories (table A.8). The

proportion of persons in NSW who owned a home (67.7 per cent) was the fourth lowest for all States and Territories (table A.9).

Figure A.2 Persons by geographic location and housing tenure

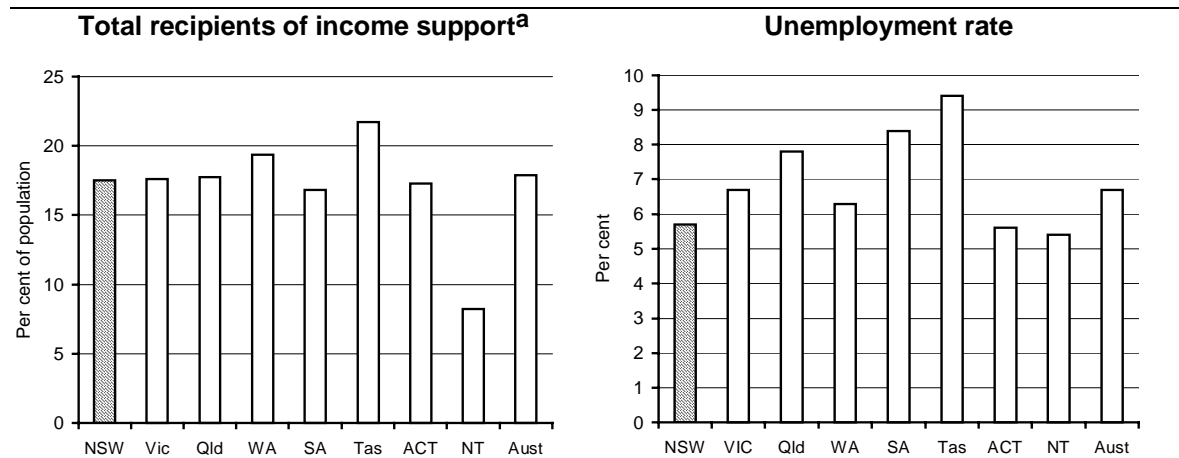


Sources: tables A.7 and A.9.

The proportion of the population that earned \$1–119 a week was the second lowest for all States and Territories (table A.10). The proportion of the population whose income derived from unemployment allowances (3.5 per cent) was lower than the national average (3.8 per cent) (table A.11).

The average quarterly trend rate of unemployment in NSW at June 2000 (5.7 per cent) was the third lowest for all States and Territories (figure A.3).

Figure A.3 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

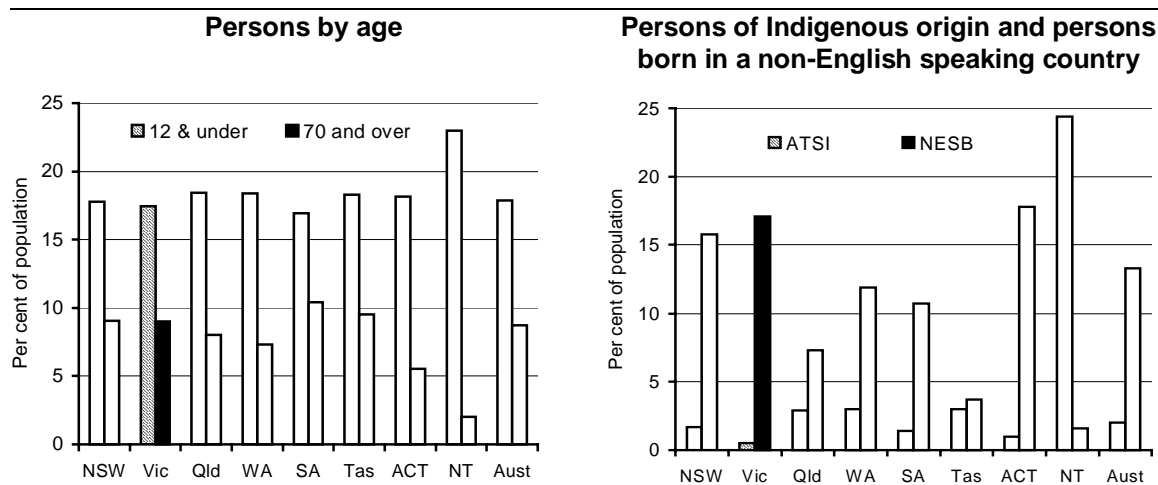
A.3 Profile of Victoria



The proportion of the Victorian population aged 70 years and over (9.0 per cent) was fourth highest for all States and Territories, and the proportion of the population aged 12 years and under (17.4 per cent) was the second lowest (figure A.4). The number of persons in the age category 0–4 years declined in the six years to 1998–99 (table A.1).

Victoria had the lowest proportion of persons of Indigenous origin (0.5 per cent) for all States and Territories, the second lowest proportion of Australian born persons (72.8 per cent) and the second highest proportion of persons born in non-English speaking countries (17.1 per cent) (figure A.4).

Figure A.4 Persons by age, and by origin and place of birth



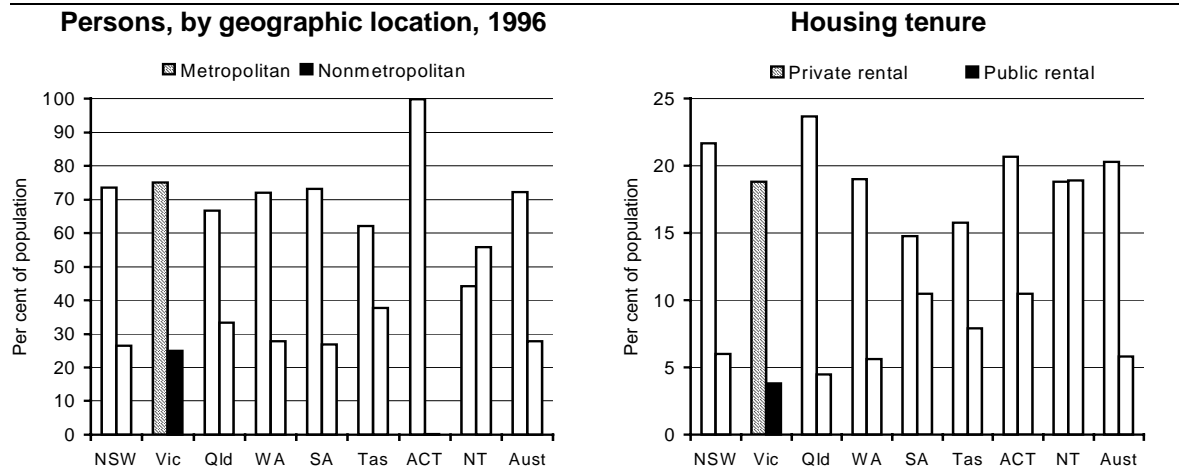
Sources: tables A.1 and A.3.

The proportion of the Victorian population who lived in metropolitan areas in 1996 (75.1 per cent) was higher than the national average (72.3 per cent), while the proportion who lived in non-metropolitan areas (24.9 per cent) was lower than the national average (27.7 per cent) (figure A.5).

Of all families in Victoria, the proportion of couples (both employed) with dependents (55.1 per cent) was the fifth highest for all States and Territories (table A.8). The proportion of one-parent families with dependents and the parent employed (40.9 per cent) was the lowest for all States and Territories. The

proportion of the Victorian population who owned a home (73.6 per cent) was the highest for all States and Territories (table A.9).

Figure A.5 Persons by geographic location and housing tenure

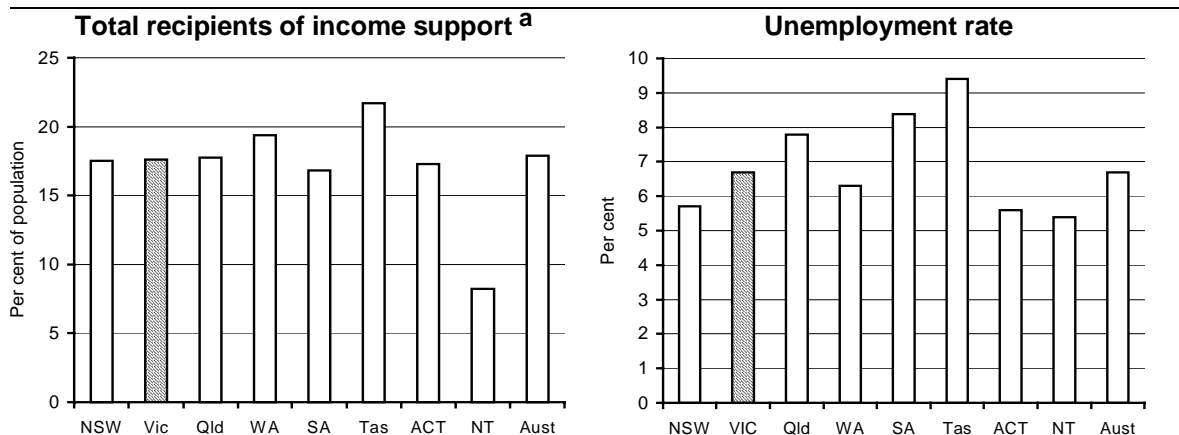


Sources: tables A.7 and A.9.

The proportion of persons who earned \$1–119 a week (9.4 per cent) was the third highest for all States and Territories, as was the proportion of the population who derived income from aged pensions (9.3 per cent) (tables A.10 and A.11). The proportion of the population who derived income from sole parent pensions (1.8 per cent) was the third lowest for all States and Territories (table A.11).

The average quarterly trend rate of unemployment in Victoria at June 2000 (6.7 per cent) was equal fourth highest for all States and Territories (figure A.6).

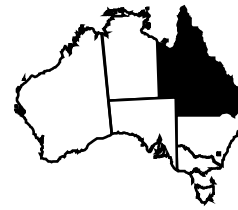
Figure A.6 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

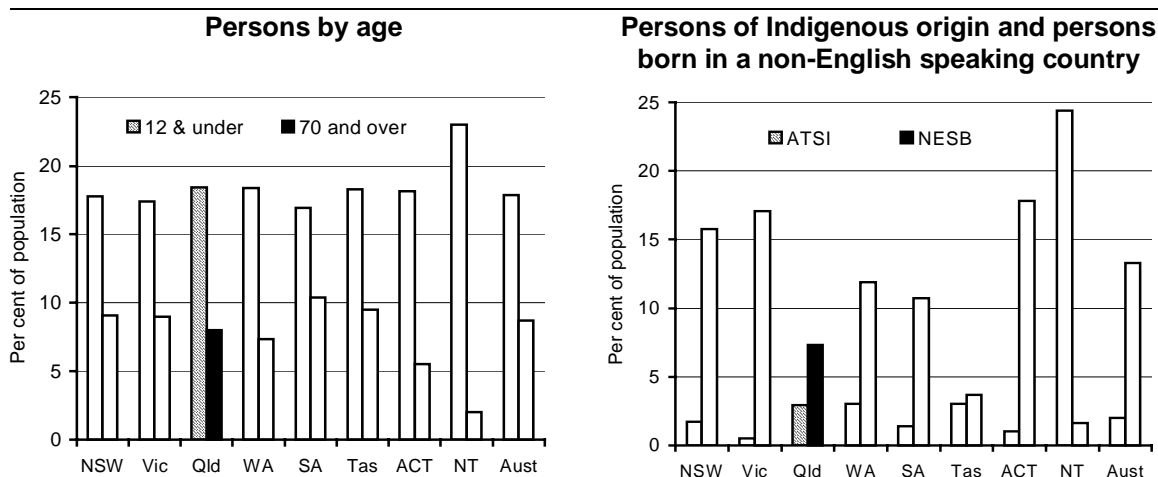
A.4 Profile of Queensland



The population of Queensland was relatively younger than the national average. The proportion of the Queensland population aged 70 years and over (8.0 per cent) was the fourth lowest for all States and Territories (figure A.7). Average annual growth was positive for all age categories in the six years to 1998-99. The average annual growth rate of the 0-4 years age group (1.4 per cent) in this period was the highest for all States and Territories. The growth rate of the population aged 70 years and over (3.7 per cent) was the third highest for all States and Territories over the same period (table A.1).

The proportion of persons of Indigenous origin in the Queensland population (2.9 per cent) was the fourth highest for all States and Territories. Australian born persons represented 79.6 per cent of the Queensland population, which was the second highest proportion for all States and Territories. The proportion of persons born in non-English speaking countries (7.3 per cent) was the third lowest for all States and Territories, while the proportion from other main English speaking countries (9.5 per cent) was the fourth highest (figure A.7).

Figure A.7 **Persons by age, and by origin and place of birth**



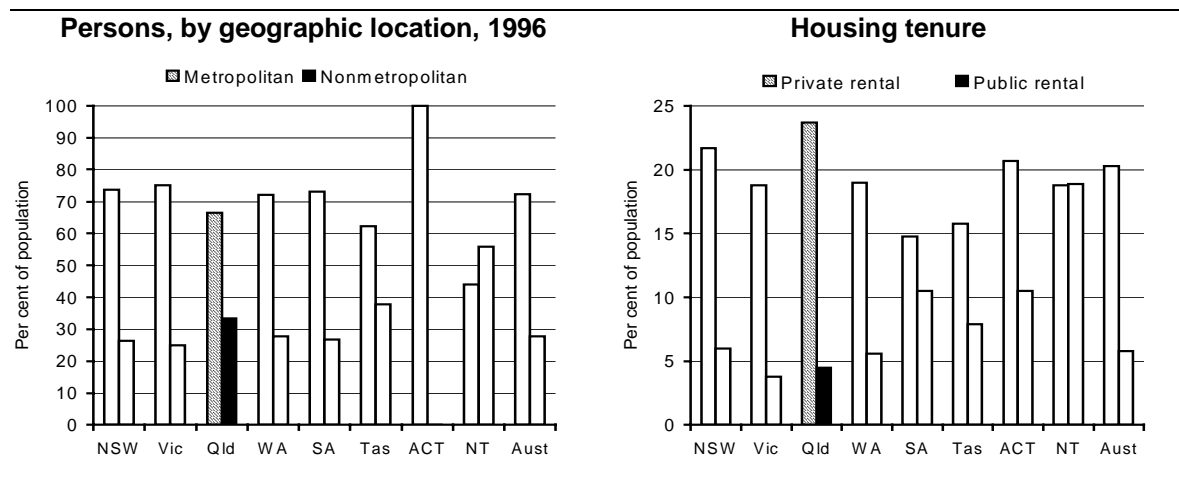
Sources: tables A.1 and A.3.

The proportion of the Queensland population who lived in metropolitan areas in 1996 (66.6 per cent) was lower than the national average (72.3 per cent), while the

proportion who lived in non-metropolitan areas (33.4 per cent) was higher than the national average (27.7 per cent) (figure A.8).

A younger population was reflected in household structure and housing stock. Of all families, the proportion of one-parent families with dependents and the parent employed (45.8 per cent) was marginally higher than the national average (44.0 per cent) (table A.8). The proportion of persons who lived in private rental accommodation (23.7 per cent) was the highest for all States and Territories (figure A.8).

Figure A.8 Persons by geographic location and housing tenure

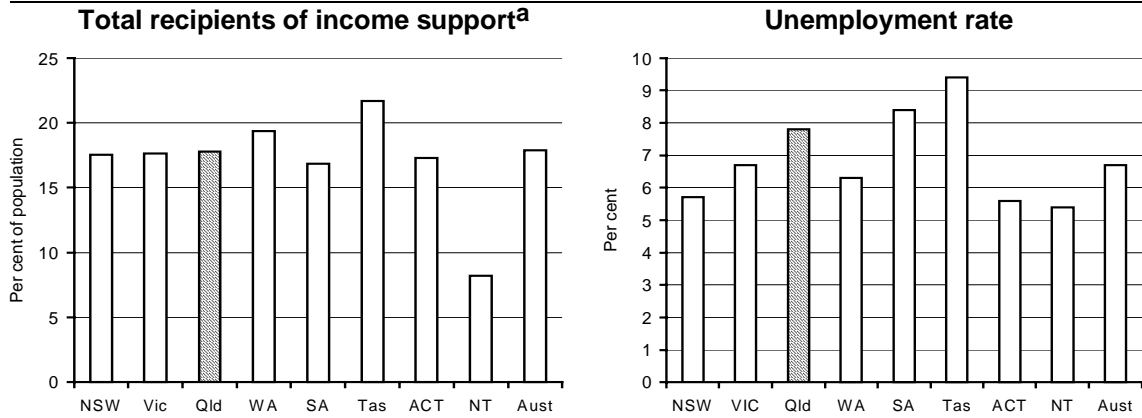


Sources: tables A.7 and A.9.

The proportion of persons who earned \$120–299 a week (33.3 per cent) was the third highest for all States and Territories (table A.10). The proportion who derived income from aged pensions (8.1 per cent) was the third lowest (table A.11).

The average quarterly trend rate of unemployment in Queensland at June 2000 (7.8 per cent) was higher than the national rate (6.7 per cent) (figure A.9).

Figure A.9 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

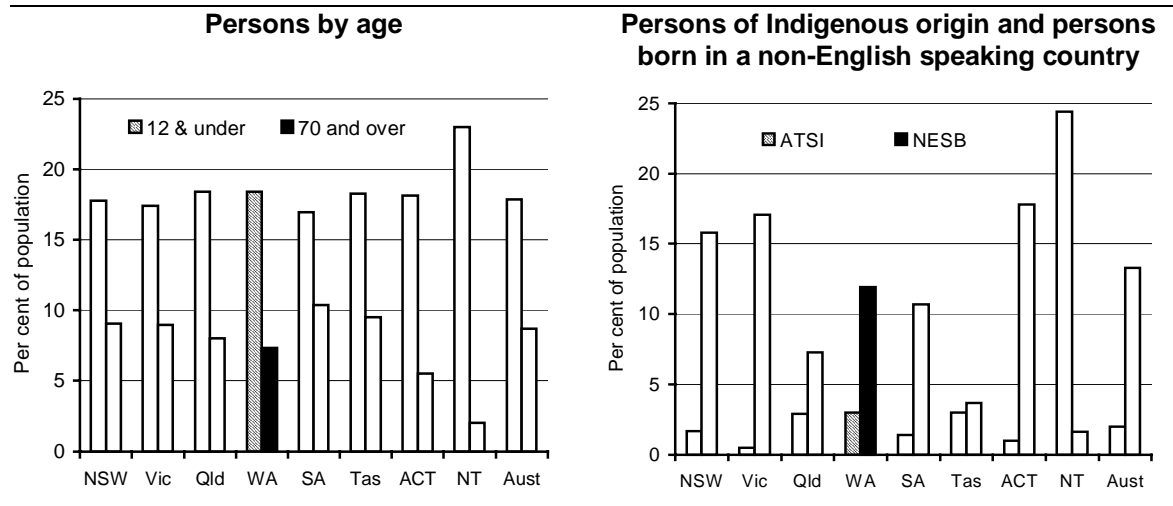
A.5 Profile of Western Australia



The WA population was relatively younger than the national average. The proportion aged 12 years and under (18.4 per cent) was above the national average (17.9 per cent), whereas the proportion aged 70 years and over (7.3 per cent) was the third lowest for all States and Territories (figure A.10).

The proportion of persons of Indigenous origin in the population (3.0 per cent) was the equal second highest for all States and Territories. The proportion of Australian born persons (68.8 per cent) was the lowest for all States and Territories, but the proportion born in other main English speaking countries (15.9 per cent) was the highest. The proportion born in non-English speaking countries was in the middle range (figure A.10).

Figure A.10 Persons by age, and by origin and place of birth



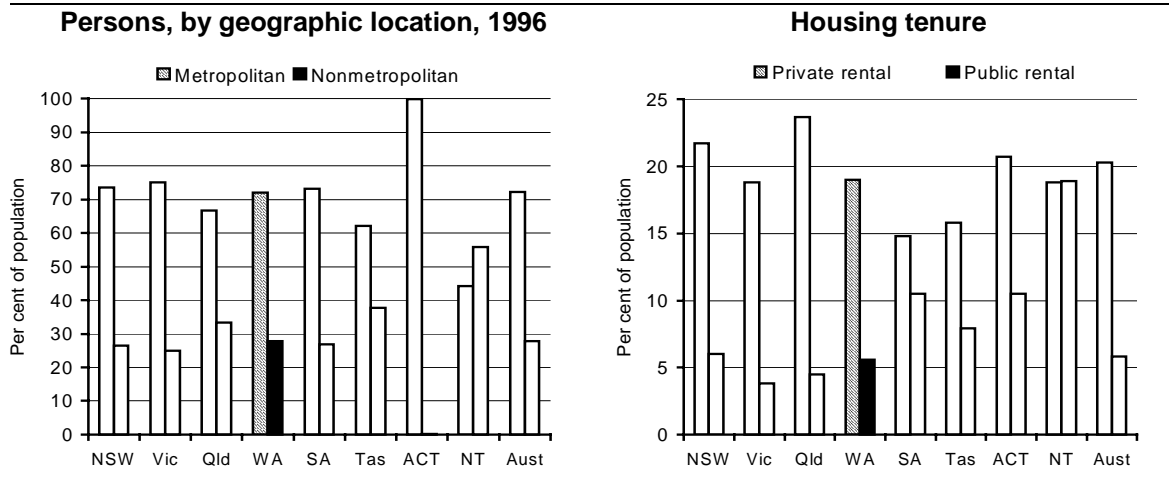
Sources: tables A.1 and A.3.

The proportion of the WA population who lived in metropolitan areas in 1996 (72.1 per cent) was around the same as national average (72.3 per cent), as was the proportion who lived in non-metropolitan areas (27.9 per cent) (figure A.11).

The relatively younger population was reflected in household structure and housing stock. Of all couples with dependents, the proportion who were both employed (55.3 per cent) was the fourth highest for all States and Territories (table A.8). The

proportion of the population who owned a home (69.3 per cent) was also the fourth highest for all States and Territories (table A.9).

Figure A.11 Persons by geographic location and housing tenure

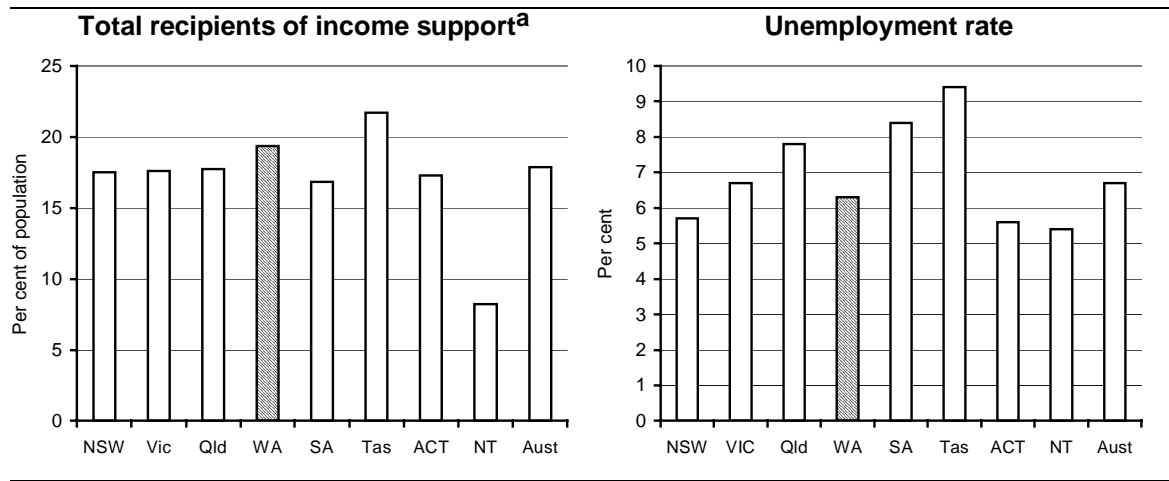


Sources: tables A.7 and A.9.

The proportion of persons who earned \$120–299 a week (30.2 per cent) was the third lowest for all States and Territories (table A.10). The proportion of the population who derived income from aged pensions (8.8 per cent) was the fourth lowest, while the proportion who derived income from unemployment allowances (3.4 per cent) was the lowest (table A.11).

The average quarterly trend rate of unemployment in WA at June 2000 (6.3 per cent) was the fourth lowest for all States and Territories (figure A.12).

Figure A.12 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

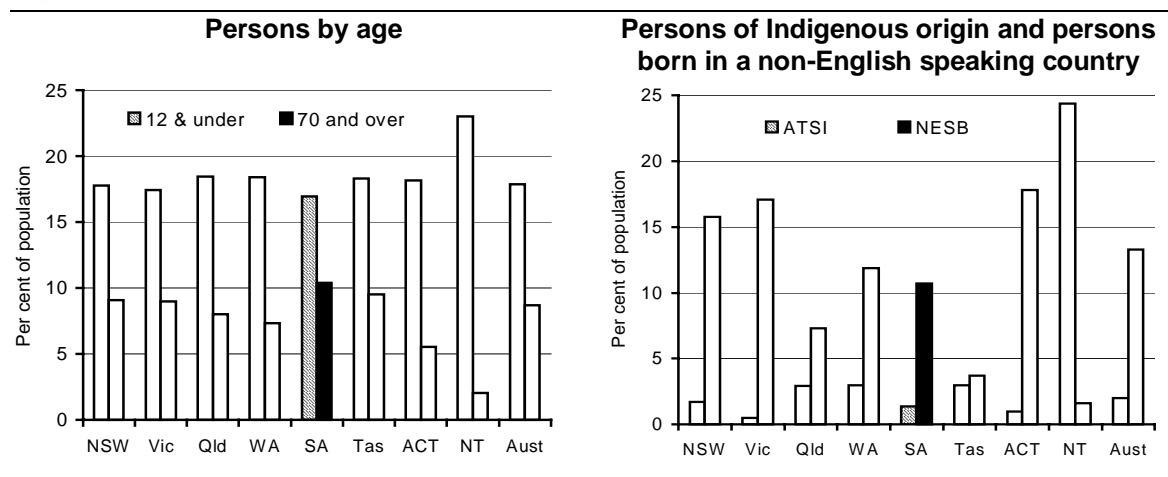
A.6 Profile of South Australia



The SA population was older than the national average. The share of the population aged 0–12 years in SA (16.9 per cent) was the lowest for all States and Territories, whereas the proportion aged 70 years and over (10.4 per cent) exceeded that of all other States and Territories (figure A.13). The average annual growth rate of the SA population (0.5 per cent) was the second lowest for all States and Territories in the six years to 1998-99 (table A.1).

The proportion of persons of Indigenous origin in the SA population (1.4 per cent) was below the national average (2.0 per cent). Australian born persons accounted for 75.7 per cent of the population of SA, which was a higher proportion than the national share of 74.5 per cent. However, the proportion of the population born in a non-English speaking country (10.7 per cent) was below the national proportion for this category (13.3 per cent) (figure A.13).

Figure A.13 Persons by age, and by origin and place of birth



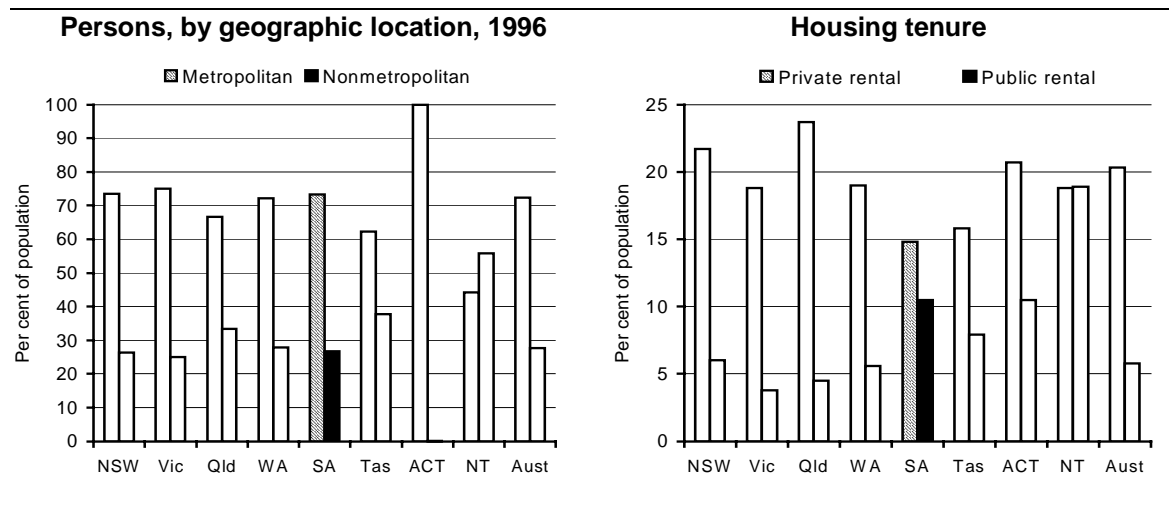
Sources: tables A.1 and A.3.

The proportion of the SA population who lived in metropolitan areas in 1996 (73.2 per cent) was slightly higher than the national average (72.3 per cent), while the proportion who lived in non-metropolitan areas (26.8 per cent) was marginally lower than the national average (27.7 per cent) (figure A.14).

The effect of an older population was reflected in household structure and housing stock. Of all families, the proportion of couples with no dependents (58.1 per cent)

was the highest for all States and Territories. Couples with dependents accounted for 53.7 per cent of all SA families, which was the second lowest representation of this category across all States and Territories (table A.8). The proportion of persons who owned a home (69.9 per cent) was the third highest for all States and Territories, as was the proportion of persons who lived in public rental accommodation (10.5 per cent) (table A.9 and figure A.14).

Figure A.14 Persons by geographic location and housing tenure

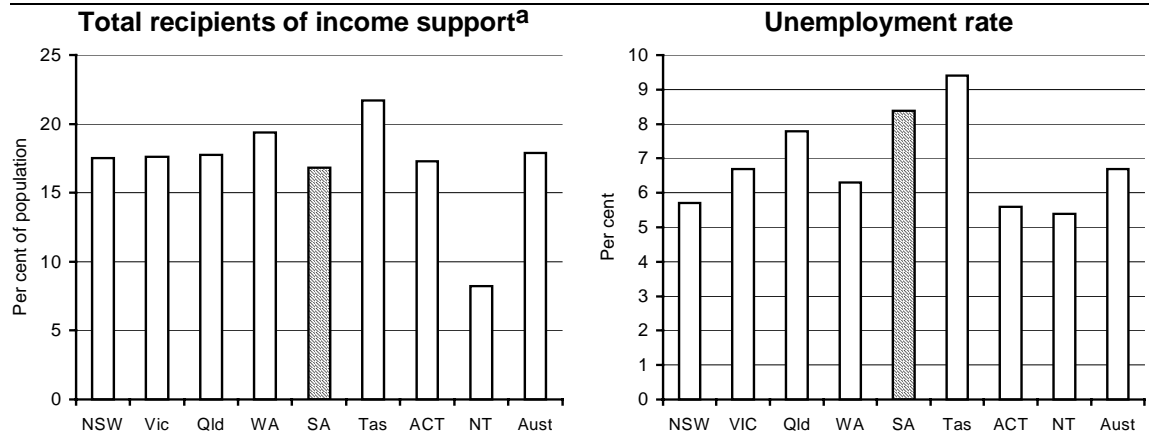


Sources: tables A.7 and A.9.

The proportion of persons who earned \$120–299 a week (36.7 per cent) was the second highest for all States and Territories (table A.10). The proportion who derived income from aged pensions (9.4 per cent) was the second highest for all States and Territories, and the proportion who derived income from disability pensions (3.2 per cent) was also the second highest (table A.11).

The average quarterly trend rate of unemployment in SA at June 2000 (8.4 per cent) was the second highest for all States and Territories (figure A.15).

Figure A.15 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

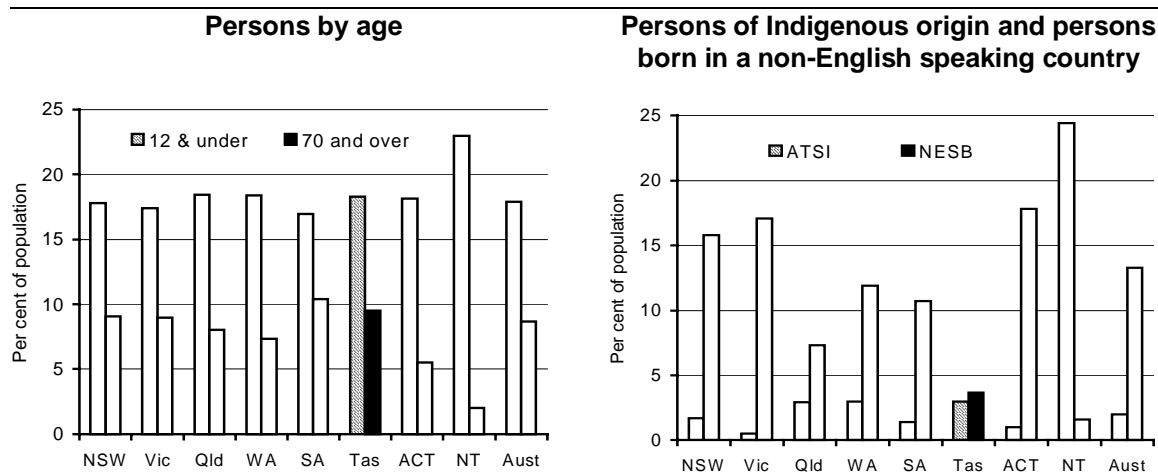
A.7 Profile of Tasmania



The proportion of the Tasmanian population aged 70 years and over (9.5 per cent) was the second highest for all States and Territories (figure A.16). The rate of decline in the Tasmanian population aged 0–4 years (–1.2 per cent) was the largest for all States and Territories in the six years to 1998-99. The average annual growth rate of the Tasmanian population (0.3 per cent) was the lowest for all States and Territories (table A.1).

The proportion of persons of Indigenous origin in the Tasmanian population (3.0 per cent) was the second highest for all States and Territories. Australian born persons in Tasmania represented 86.3 per cent of the population, which was the highest proportion for all States and Territories, while the proportion born in non-English speaking countries (3.7 per cent) was the second lowest (figure A.16).

Figure A.16 Persons by age, and by origin and place of birth

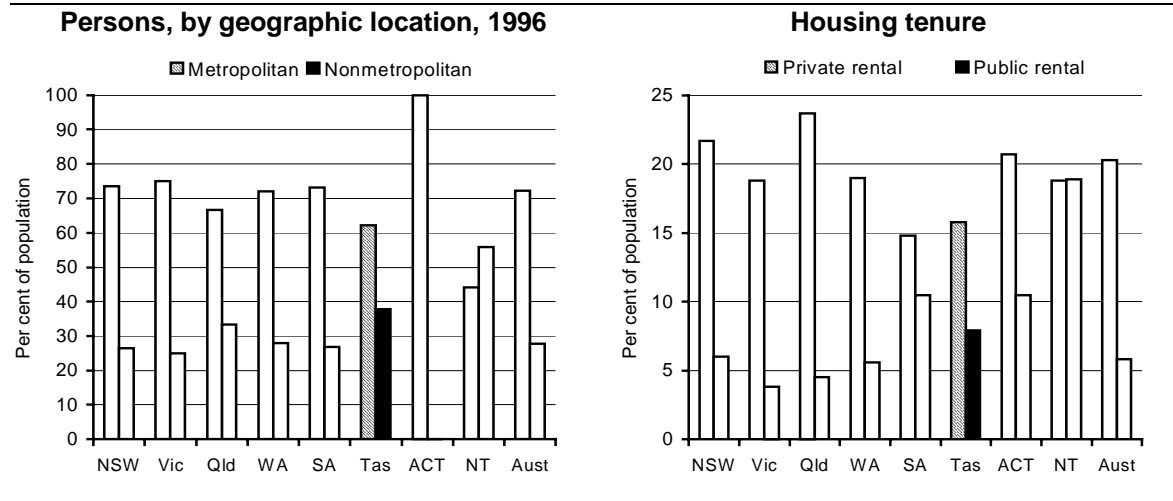


Sources: tables A.1 and A.3.

The proportion of the Tasmanian population who lived in metropolitan areas in 1996 (62.2 per cent) was the second lowest for all States and Territories, with the national average at 72.3 per cent. The proportion living in non-metropolitan areas of Tasmania was 37.8 per cent, compared with the national average of 27.7 per cent (figure A.17).

The effect of an ageing population was reflected in household structure and housing stock. Of all families, the proportion of couples with no dependents (52.7 per cent) was the second highest for all States and Territories (table A.8). The proportion of persons who owned a home (71.8 per cent) was also the second highest for all States and Territories (table A.9).

Figure A.17 Persons by geographic location and housing tenure

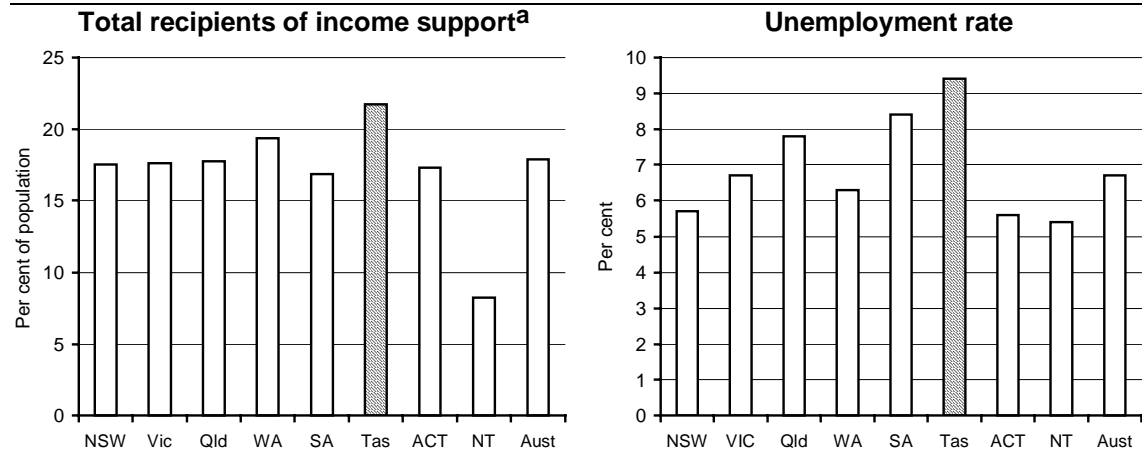


Sources: tables A.7 and A.9.

The proportion of persons in Tasmania who earned \$120–299 a week (37.4 per cent) was the highest for all States and Territories (table A.10). The proportion who derived income from aged pensions (9.8 per cent) was the highest for all States and Territories, as was the proportion who derived income from unemployment allowances (5.2 per cent). The proportion who derived income from sole parent pensions (2.4 per cent) was third highest for all States and Territories. The proportion who derived income from disability pensions (4.2 per cent) was the highest for all States and Territories (table A.11).

The average quarterly trend rate of unemployment in Tasmania at June 2000 (9.4 per cent) was the highest for all States and Territories (figure A.18).

Figure A.18 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

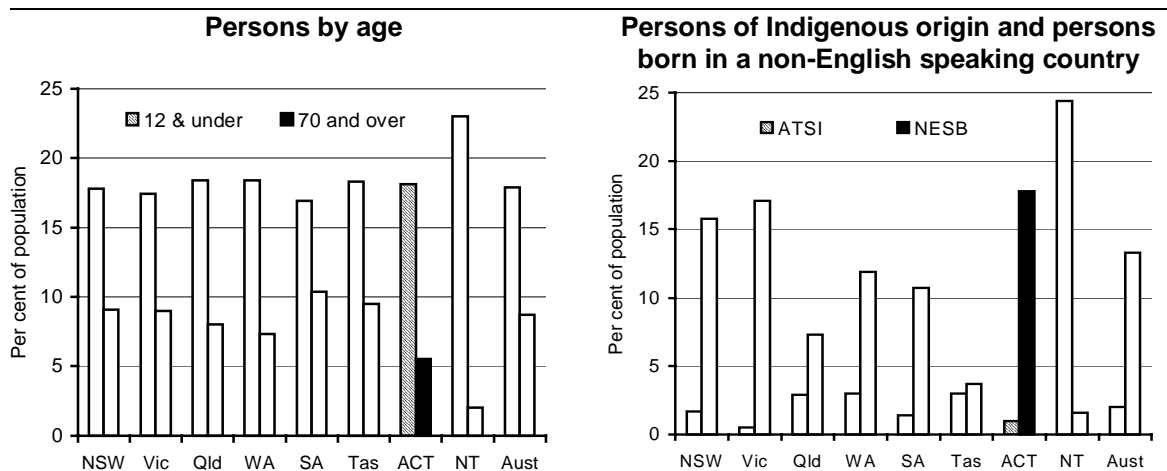
A.8 Profile of the Australian Capital Territory



The proportion of the ACT population aged 70 years and over (5.5 per cent) was the second lowest for all States and Territories (figure A.19). The average annual increase in this age group (6.2 per cent) was the highest for all States and Territories in the six years to 1998-99, while the rate of decline in the population aged 0-4 years (-0.1 per cent) was the equal third largest (table A.1).

The proportion of persons of Indigenous origin (1.0 per cent) in the ACT was the second lowest for all States and Territories, while the proportion born in non-English speaking countries (17.8 per cent) was the highest (figure A.19).

Figure A.19 Persons by age, and by origin and place of birth

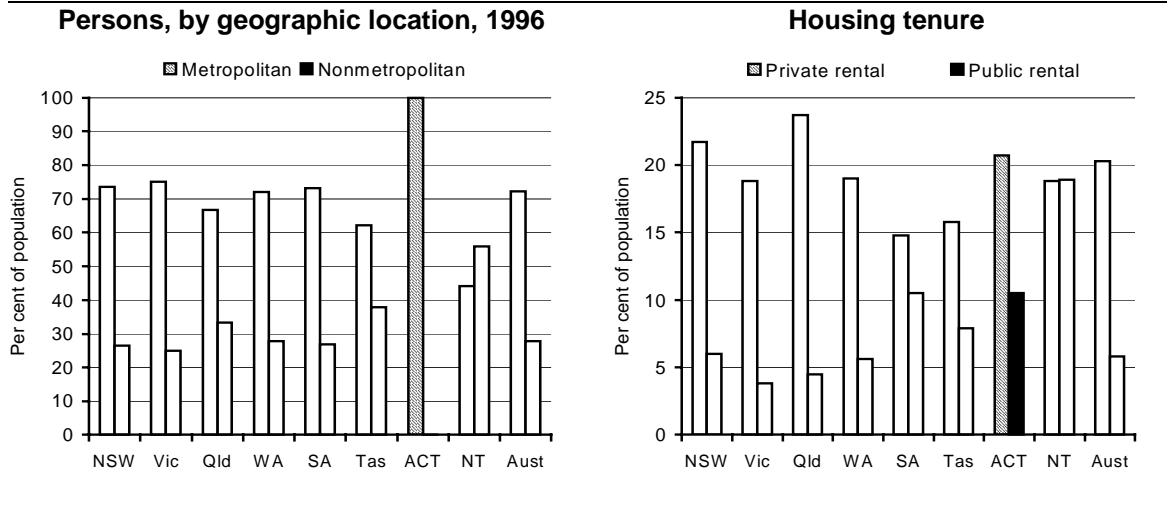


Sources: tables A.1 and A.3.

Nearly all of the ACT population lived in metropolitan areas in 1996 (99.9 per cent), compared with 72.3 per cent of the national population (figure A.20).

Of all families in the ACT, the proportion who were couples (both employed) with dependents (62.3 per cent) was the highest for all States and Territories (table A.8). Of all one-parent families with dependents, the proportion with the parent employed, (61.0 per cent) was the highest for all States and Territories. The proportion of households who owned a home (65.7 per cent) was the second lowest for all States and Territories, while the proportion who lived in private rental accommodation (20.7 per cent) was the third highest (table A.9 and figure A.20).

Figure A.23 Persons by geographic location and housing tenure

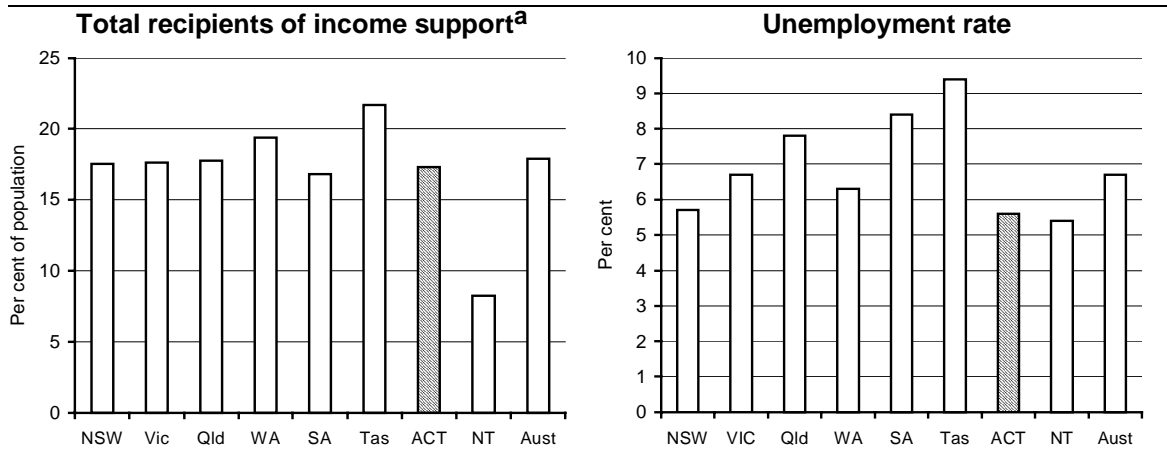


Sources: tables A.7 and A.9.

The proportion of persons in the ACT population who earned \$120–299 a week (21.7 per cent) was the lowest for all States and Territories (table A.10). The proportion who derived income from aged pensions (1.7 per cent) was the lowest for all States and Territories, and the proportions who derived income from unemployment allowances (3.5 per cent), disability pensions (1.5 per cent) and sole parent pensions (1.6 per cent) were the lowest (table A.11).

The average quarterly trend rate of unemployment in the ACT at June 2000 (5.6 per cent) was the second lowest for all States and Territories (figure A.21).

Figure A.21 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

A.9 Profile of the Northern Territory

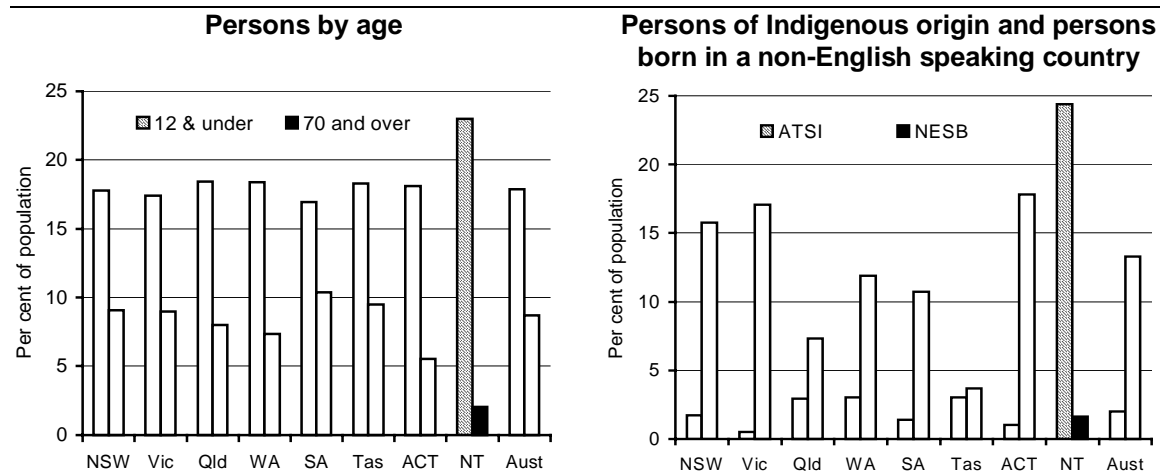


All categories of the NT population increased during the period 1992-93 to 1998-99. The proportion of the NT population aged 0–17 years (30.8 per cent) was the highest for all States and Territories, while the proportion aged 70 years and over (2.0 per cent) was the lowest (figure A.22). Nationally, this later group averaged 8.7 per cent of the population. Average annual growth in the number of persons aged 65–69 years (3.0 per cent) across the six years to 1998-99 was the second highest for all States and Territories. This was also the case for the growth in the group aged 70 years and over (5.4 per cent). The average annual growth rate for the group aged 80 years and over was equal highest (7.3 per cent) for all States and Territories. In the same period, the NT average annual growth rate in persons aged 0–4 years (0.7 per cent) was the second highest for all States and Territories (table A.1).

The proportion of persons of Indigenous origin in the population (24.4 per cent) was the highest for all States and Territories and higher than the national average (2.0 per cent).¹ The proportion of persons from other main English speaking countries (13.6 per cent) was the second highest for all States and Territories, while the proportion from non-English speaking countries (1.6 per cent) was the lowest (figure A.22).

¹ The NT have indicated that the proportion of persons in the NT that are Indigenous is approximately 28.5 per cent; those born in other main English speaking countries is 7.2 per cent; and the proportion of persons born overseas in non-English speaking countries is 7.9 per cent.

Figure A.22 Persons by age, and by origin and place of birth

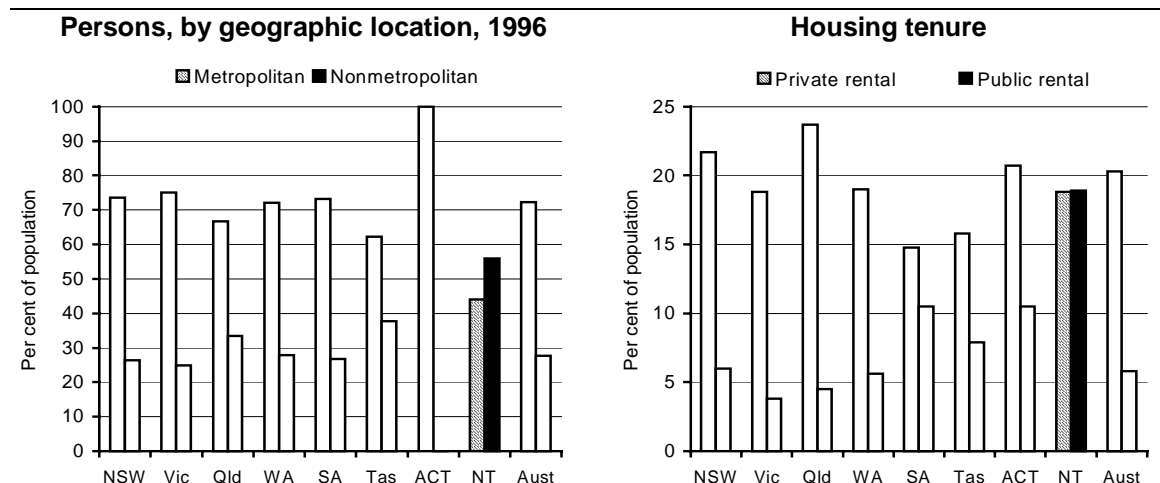


Sources: tables A.1 and A.3.

The proportion of the NT population who lived in metropolitan areas (44.1 per cent) was the lowest for all States and Territories, while the proportion who lived in non-metropolitan areas (55.9 per cent) was the highest (figure A.23).

The proportion of parents employed in one-parent families with dependents (53.6 per cent) was the second highest for all States and Territories (table A.8). The proportion of the NT population who owned a home (45.1 per cent) was the lowest for all States and Territories (table A.9).

Figure A.23 Persons by geographic location and housing tenure



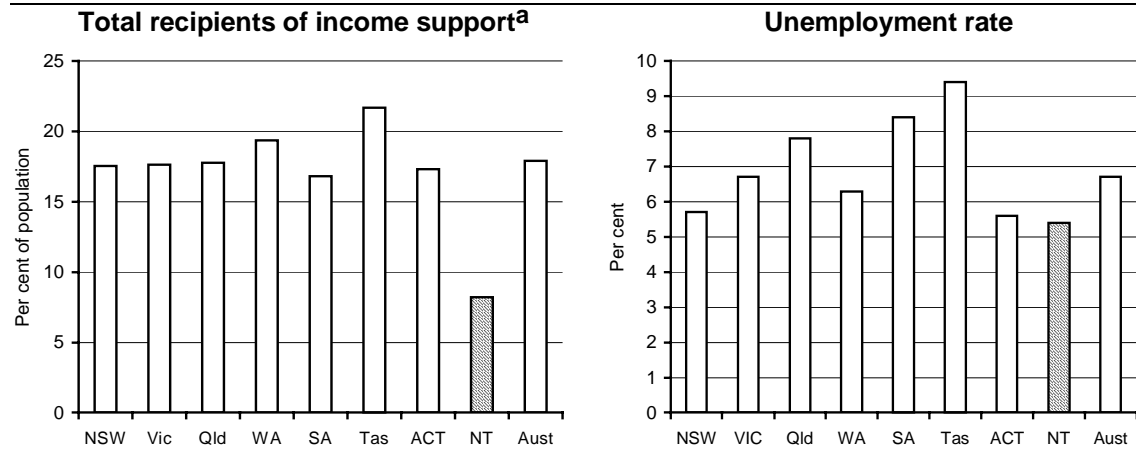
Sources: tables A.7 and A.9.

The proportion of the NT population who earned \$120–299 a week (27.2 per cent) was the second lowest for all States and Territories (table A.10). The proportion who derived income from unemployment allowances (4.4 per cent) was the second

highest for all States and Territories, and the proportion of sole parent pensioners (2.7 per cent) was the highest (table A.11).

The average quarterly trend rate of unemployment in the NT at June 2000 (5.4 per cent) was the lowest for all States and Territories (figure A.24).

Figure A.24 Persons receiving income support, and unemployment rate



^a Aged pensioners, unemployment allowees, disability support pensioners and sole parent pensioners.

Sources: tables A.11 and A.15.

A.10 List of tables

Table A.1	Persons, by age, 1998-99
Table A.2	Population
Table A.3	Persons, by Indigenous origin, August 1996
Table A.4	Projections of the Indigenous population
Table A.5	Persons, by country of birth, August 1996
Table A.6	Persons, by geographic location, August 1991
Table A.7	Persons, by geographic location, August 1996
Table A.8	Household structure, August 1999
Table A.9	Proportion of households by housing type, August 1996
Table A.10	Persons aged 15 years and over, by weekly individual income, August 1996
Table A.11	Income support, June 1999
Table A.12	Persons with a disability, 1998
Table A.13	Persons, by age of leaving school, August 1996
Table A.14	Persons aged 15 years and over, by highest level of post-school educational qualification, August 1996
Table A.15	Unemployment rate
Table A.16	Employed persons
Table A.17	Workforce participation rate
Table A.18	Real gross State product
Table A.19	Gross domestic product deflators

A.11 Tables

The source tables for the Statistical Appendix are provided on the CD-ROM enclosed with the Report. The files are provided in Microsoft Excel 97 format as \Publications\Reports\2001\Attach_stat_app.xls and in Adobe PDF format as \Publications\Reports\2001\Attach_stat_app.pdf

Supporting tables are identified in references throughout this chapter by an 'A' suffix (for example, table A.3 is table 3 in the electronic files). They may be subject to revision. The most up-to-date versions of these files can be found on the Commission's Review web page (www.pc.gov.au/service/gsp/2001/). Users without Internet access can contact the Secretariat to obtain up-to-date versions of the tables (the details can be found on the inside front cover of the Report).

A.12 Reliability of estimates

Outcome and quality indicators are reported from client and community perception surveys for a number of services covered in this Report. Police services use the Population Survey Monitor, for example, to obtain an indication of the level of satisfaction within the community for the services that police agencies provide.

The presence of sampling error — that is, the error that occurs by chance because the data were only obtained from a sample and not the entire population — implies that the reported responses may not be indicative of the true responses. This section describes in detail some of the issues for drawing inferences from survey data (ABS 1999).

Standard error

The standard error (SE) is one measure of the variability that occurs as a result of surveying a sample of the population.

There are two chances in three (67 per cent) that a survey estimate is within one standard error of the figure that would have been obtained if the population had been included, and about nineteen chances in twenty (95 per cent) that it is within approximately two standard errors. The true value of x lies within:

$$x - 1.96 SE(x) \quad \text{and} \quad x + 1.96 SE(x)$$

where x is the estimate (for example, the number of persons responding either ‘satisfied’ or ‘very satisfied’). The standard error of an estimate can be obtained from either the tables reporting the estimates and relative standard errors or the relative standard error tables produced at the end of each of the relevant attachments. Linear interpolation needs to be used to calculate the standard errors of estimates falling between the sizes of estimates listed in these tables.

Relative standard error

The standard error can be expressed as a proportion of the estimate — known as the relative standard error (RSE). The relative standard error is determined by dividing the standard error of the estimate $SE(x)$ by the estimate x and expressing it as a percentage. That is:

$$RSE(x) = \frac{SE(x)}{x}$$

If 4.3 million persons in NSW were estimated to be satisfied with a service, and the standard error is approximately $\pm 34,100$ persons, for example, then the $RSE(x)$ would be equal to 0.0078, or 0.78 per cent. The relative standard error is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred as a result of sampling.

Proportions and percentages formed from the ratio of two estimates are also subject to sampling error, for example, as when estimating the proportion of a population that is 'satisfied' or 'very satisfied' with a service. The size of the error depends on the accuracy of both the numerator (the estimated number of persons responding 'satisfied' or 'very satisfied') and the denominator (the estimated size of the population). The formula of a proportion is:

$$RSE(x_1/X) = \sqrt{[RSE(x_1)]^2 - [RSE(X)]^2}$$

where x_1 is estimated as the number of persons from jurisdiction x responding 'satisfied' or 'very satisfied' and X is estimated population of jurisdiction x .

Testing for statistical differences

The chance that an estimate falls within a certain range of the true value is known as the *confidence* of the estimate. For any particular survey, there is a tradeoff between the confidence of the estimate and the range of error (in terms of standard errors) attached to the estimate. The appropriate level of reliability chosen depends on the purpose of obtaining the estimate. The lower the level of confidence required, the more precise the estimate will be.

Confidence intervals — that is, the value ranges within which estimates are likely to fall — can be used to test whether the reported proportions between two jurisdictions are different. When comparing proportions, if the confidence intervals for the jurisdictions overlap, then there can be little confidence that the estimated proportions differ from each other.

Imagine, for example, that 60 per cent of NSW clients respond being 'satisfied' or 'very satisfied' with a service, and that 58 per cent of Queensland clients report being 'satisfied' or 'very satisfied'. The 95 per cent confidence interval for NSW is estimated to be ± 3.2 per cent and that for Queensland is estimated to be ± 1.5 per cent. This implies a 56.8 – 62.3 per cent confidence interval for NSW clients and a 56.5 – 59.5 per cent confidence range for Queensland clients. The two ranges

overlap, so there is little confidence at the 95 per cent level that there is a difference between them.

Mathematically, the estimated response will lie within the 95 per cent confidence interval:

$$\left(\frac{x_1}{X} - \frac{y_1}{Y}\right) - 1.96\sqrt{RSE(x_1/X)\frac{x_1}{X} + RSE(y_1/Y)\frac{y_1}{Y}} \quad \text{and}$$

$$\left(\frac{x_1}{X} - \frac{y_1}{Y}\right) + 1.96\sqrt{RSE(x_1/X)\frac{x_1}{X} + RSE(y_1/Y)\frac{y_1}{Y}}$$

where x_1 , X , y_1 and Y represent the estimated number of respondents and estimated populations of jurisdictions x and y respectively. If none of the values in this interval is zero, then it is possible to conclude that the difference between jurisdiction x 's response and jurisdiction y 's response is statistically significant.

