

## POPULATION STUDIES

## RESEARCH BRIEF

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# Demographic Change in the Northern Territory 1976-2006

### KEY FINDINGS

- The population of the Northern Territory has aged quite dramatically since 1976, with the key feature being ageing within the workforce aged (15-64 years) population.
- The Northern Territory continues to experience very high sex ratios (106 males per 100 females in 2006), but there is some evidence of changing patterns among young workforce aged people (specifically those aged 25-34 years).
- There has been only a small increase in the percentage of the population identifying as Indigenous, but an increase in the percentage of the population living in Darwin from 45% to 55%.
- Migration rates have generally declined, but the trend since 1986 has been for increased outmigration from the Territory to other parts of Australia. This has been more than offset by high natural increase and high levels of overseas immigration.
- Future research briefs will address why these changes have occurred in the past thirty years, and particularly the relationship between changing age structures and migration patterns.

### RESEARCH AIM

To document changing patterns of mobility and the changing age, sex, and Indigenous composition of the Northern Territory population between 1976 and 2006.

This research brief draws on data from the 1976, 1986, 1996 and 2006 Census of Population and Housing provided by the Australian Bureau of Statistics. The study is part of a program of demographic research funded in part by the Northern Territory Treasury and the Australian Research Council. The research has been conducted by Associate Professor Dean Carson and Megan Brown.



## Background

This research brief analyses data from the 1976, 1986, 1996 and 2006 Census of Population and Housing to describe top level changes in the demographic characteristics of the Northern Territory. Analysis is made mainly at the Northern Territory level except for an analysis of the percentage of the population living in Darwin. Future research briefs will examine regional differences in more detail. The important demographic variables are age (median age and age distribution), sex, Indigenous status, and mobility. Mobility analysis is supplemented by the components of change series provided by the Australian Bureau of Statistics (cat. no. 3105.0.65.001 Australian Historical Population Statistics).

## Methods

The variables used from each Census collection were – age, sex, Indigenous status, place of usual residence on Census night, place of usual residence one year previous to Census night, and place of usual residence five years previous to Census night. Population pyramids (age and sex) were produced for the total population, the Indigenous population, and the non-Indigenous population. ‘Usual residence’ refers to the place lived at, or expected to be lived at, for more than half of the year in question. Statistics used include –

- Median age (age in years such that exactly one half of the population is older and one half is younger)
- Dependency ratios (ratio of people aged less than 15 or greater than 64 to those aged between 15 and 64)
- Sex ratios (number of males for every 100 females in the population)
- Proportion of the population identifying as Indigenous (Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander)
- Proportion of the population with a usual residence in Darwin
- Immigration rate (percentage of the population which moved into the region in the time period of interest)
- Emigration rate (percentage of the population which moved out of the region in the time period of interest)
- Population turnover rate (percentage of the population who moved in or out of the region in the time period of interest)
- Net migration (sum of number of immigrants and number of emigrants during the time period of interest).

The brief also uses information from the ‘components of change’ series to describe the sources of immigrants as either interstate or overseas.

## Results

Figures 1 to 4 are the population pyramids (age and sex) for the Northern Territory as derived from Census data in 1976, 1986, 1996 and 2006.

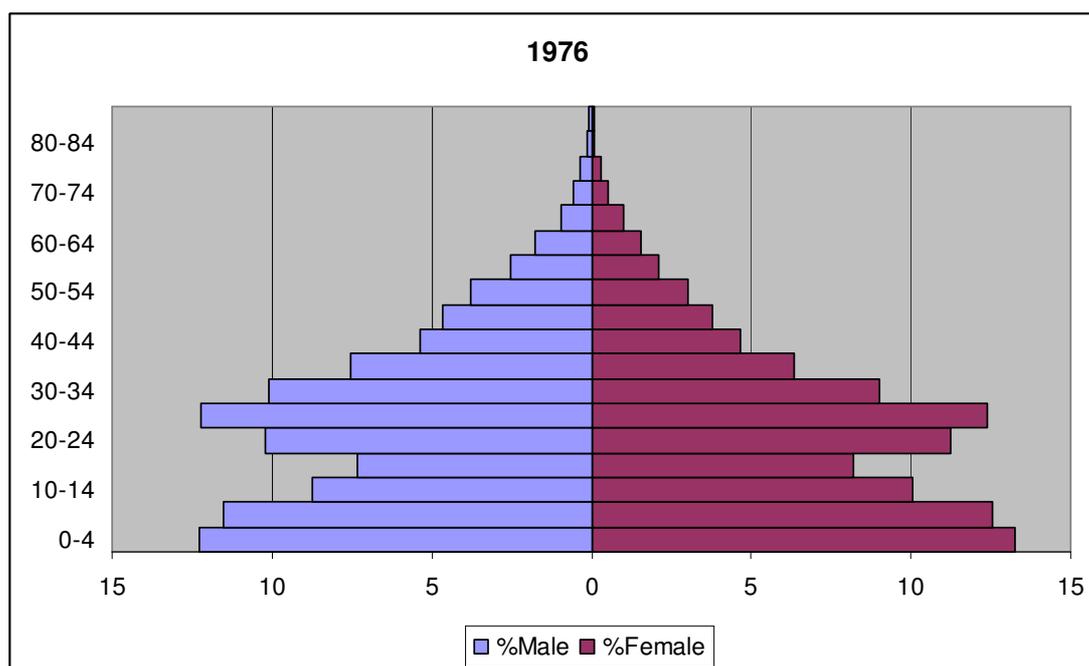


Figure 1: Population Pyramid, Northern Territory 1976

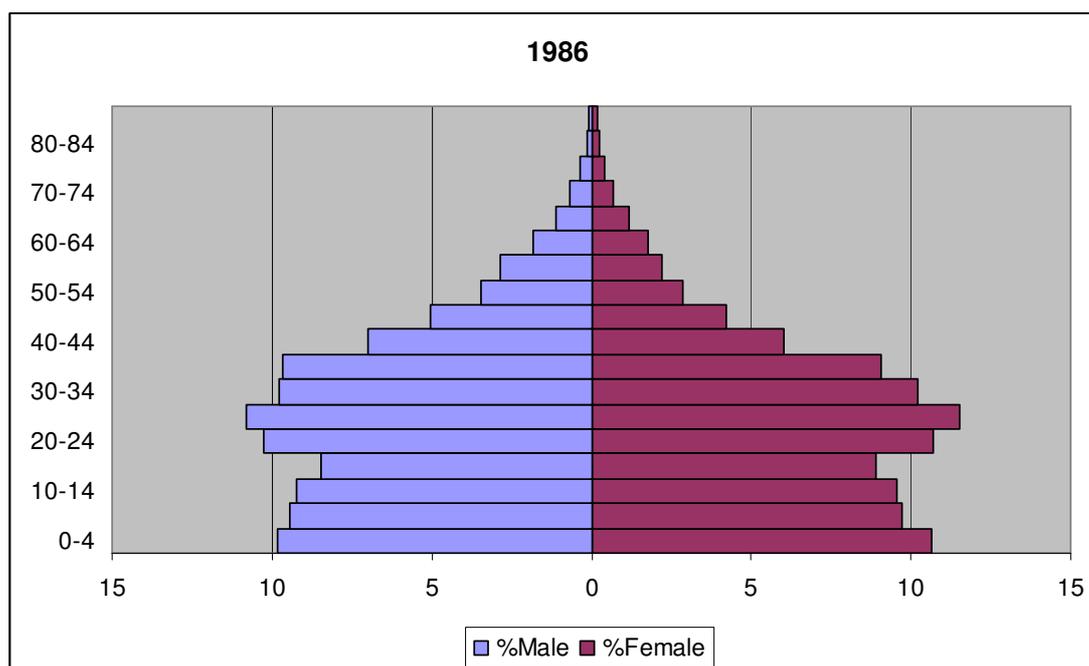


Figure 2: Population Pyramid, Northern Territory 1986

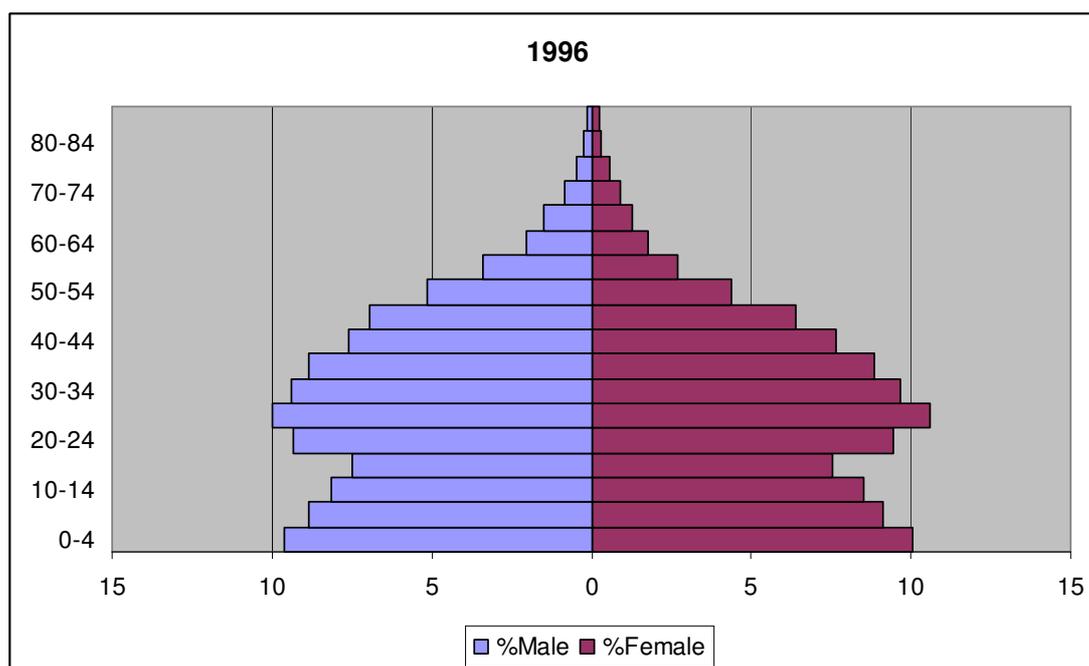


Figure 3: Population Pyramid, Northern Territory 1996

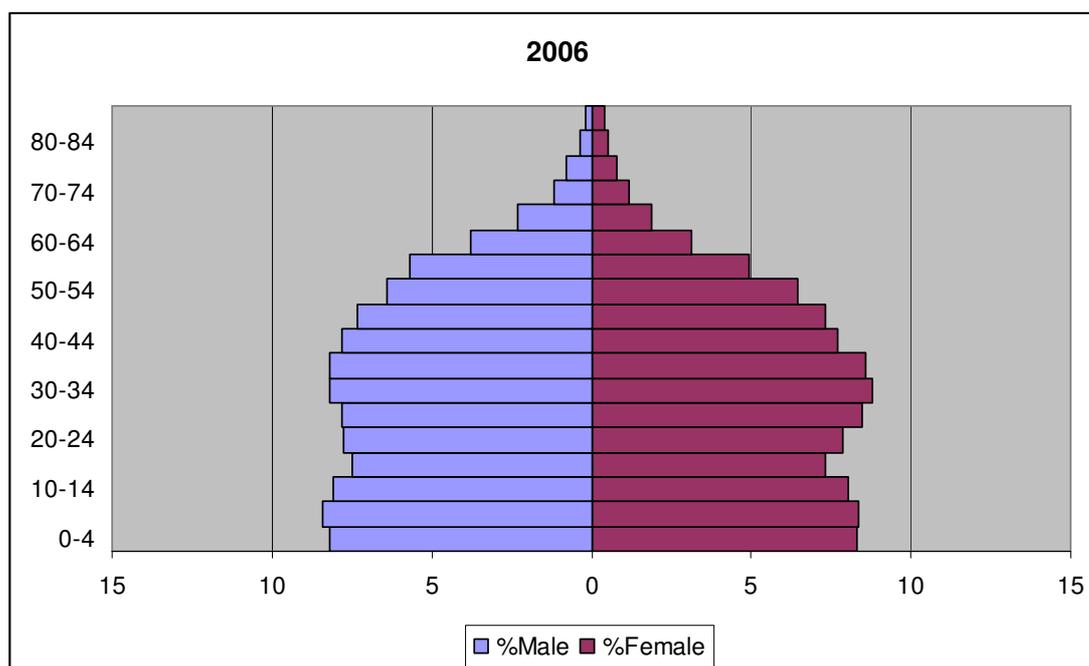


Figure 4: Population Pyramid, Northern Territory 2006

The four population pyramids clearly show a smoothing of the age distribution from 1976 where there were clear peaks in the mid 20's age groups and in the under 15 years age groups, through to 2006 where there were more consistent proportions of the population in each age category under 40 years. The female population has a more prominent 'mode' in the early 30's age groups, and appears to have grown much faster in the older age groups (aged over 70 years) than the male population.

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The population ageing indicated by the pyramids is reflected in the median age which has risen from 25 years in 1976 to 33 years in 2006. The median age has risen largely as a result of a decline in the percentage of people aged under 15 years and an increase in the percentage of people aged between 15 and 64 years. While the percentage of people aged 65 years or more has more than doubled, it still accounted from just 5% of the population in 2006.

Table One: Dependency Ratios 1976-2006

Ratio	1976	1986	1996	2006
Young dependency (%aged <15 years/ % aged 15-64 years)	53	43	39	35
Old dependency (% aged 64+ years/ % aged 15-64 years)	3	4	5	7
Total dependency	56	46	44	42

The young dependency ratio has fallen from 53 to 35, indicating far fewer children compared with the size of the working age population. At the same time, the old dependency ratio has risen from 3 to 7. Overall, the dependency ratio fell from 56 to 42. This tends to indicate that the bulk of population ageing must have occurred within the working age category. In 1976, nearly two thirds of the working age population was aged under 30 years, whereas by 2006, just 45% of the working age population was aged under 30 years. In contrast, in 1976 18% of the working age population was aged 50 years or more, and this had risen to 32% of the working age population by 2006.

The Northern Territory continues to experience high sex ratios. The sex ratio was 120 in 1976, and was still far above the national rate of 97 at 106 in 2006. Sex ratios are variable for the very old (those aged over 70 years), otherwise, 2006 was the first time a low sex ratio (less than 100 males per 100 females) had been recorded in any age group. In that Census, the sex ratio of people aged 25-29 years was 98 and of people aged 30-34 years was 99. Figure 5 shows the age specific sex ratios for each year 1976 (overall sex ratio 120), 1986 (112), 1996 (111) and 2006 (106).

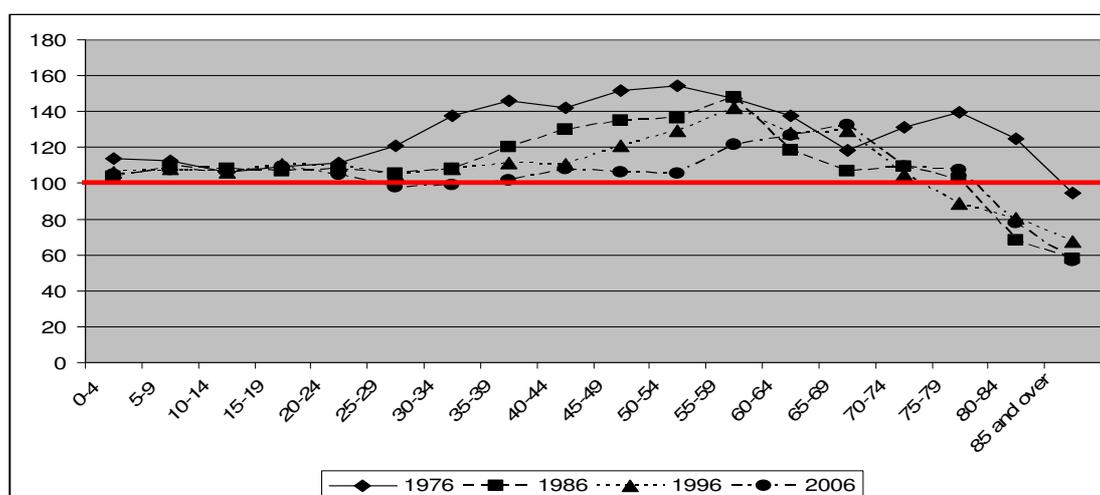


Figure 5: Age Specific Sex Ratios 1976 – 2006

The size of the Indigenous population in the Northern Territory has more than doubled from about 24 000 in 1976 to over 50 000 in 2006. The proportion of the population that is Indigenous has remained relatively constant, however, at 24% in 1976 and 26% in 2006. In contrast, the percentage of the Northern Territory population living in the Greater Darwin region (Darwin, Palmerston and Litchfield) has increased from 45% in 1976 to nearly 55% in 2006.

Table Two shows that overall one year mobility of the Northern Territory population has declined since 1976. Much of this decline can be accounted for by the increasing size of the population over that time. While the population doubled between 1976 and 2006, the number of moves in and out of the Territory in the year preceding each Census increased by just 34%. Annual population turnover has consequently declined in percentage terms from over one third of the population in 1976 to less than one quarter of the population in 2006.

Table Two: One Year Migration Rates (%), Northern Territory, 1976-2006

	1976	1986	1996	2006
<b>Immigration</b>	25.55	13.15	12.41	9.90
<b>Emigration</b>	10.81	13.56	12.15	11.52
<b>Population Turnover</b>	36.36	26.71	24.56	21.42
<b>Net Migration</b>	14.74	-0.41	0.26	-1.62

Table Three repeats the analysis, but for population movements over five years (1971-76, 1981-86 and so on). The Table shows that immigration rates (percentage of the population moving in to the Northern Territory) have declined, but that emigration rates (percentage of people moving out of the Northern Territory) have increased from about 24% in 1971-6 to nearly 30% in 2001-6. Population turnover over a five year period has remained above 50%.

Table Three: Five Year Migration Rates (%), Northern Territory, 1976-2006

	1976	1986	1996	2006
<b>Immigration</b>	37.05	37.92	28.03	24.06
<b>Emigration</b>	23.90	22.01	28.31	29.75
<b>Population Turnover</b>	60.95	59.93	56.34	53.81
<b>Net Migration</b>	13.14	15.91	-0.28	-5.69

The five year migration rates indicate a pattern of negative net interstate migration since 1991. In this time, the Northern Territory population has experienced high levels of overall growth (nearly 2% per annum). According to the ABS historical time series collection (cat. no. 3105.0.65.001 Australian Historical Population Statistics), net interstate migration to the Northern Territory was positive only four times between 1986 and 2006. During this time, population growth resulted from natural increase (accounting for over 110% of population growth) and increased overseas immigration (accounting for 27% of population growth). This means that interstate migration alone would have resulted in population decline of about 40% between 1986 and 2006. In contrast, in the period 1976-1986, interstate migration alone grew the population by nearly 30%.

## Comments

The analysis of Census data between 1976 and 2006 shows that the Northern Territory population is getting older, less male, marginally more Indigenous, more urbanised, and less mobile. This top line data hides a great deal of complexity, some of which has been revealed here and other aspects of which are discussed in future research briefs. For example, the ageing population observed over that time can largely be attributed to an ageing workforce rather than substantial increases in the number of post-working age Territorians (while there has been a large percentage increase in retirees, the population started from a low base in 1976). While sex ratios are declining, the analysis is influenced by low sex ratios in unexpected age groups (25-34 year olds) and the increasing elderly population where low sex ratios are expected. While migration rates have declined, the nature of migration has changed dramatically. The Northern Territory has become a net exporter of people to other parts of Australia, and consequently more reliant on overseas immigration for migration based population growth.

The top line analysis suggests important questions to be addressed in future research briefs –

- What are the age specific migration patterns of Northern Territory residents?
- How have changing migration patterns affected sex ratios?
- How are migration patterns of Indigenous people changing?
- What are the differences in migration patterns between Darwin residents and those in the rest of the Northern Territory?
- How much of the observed interstate emigration can be accounted for by overseas immigrants arriving in the Northern Territory and then moving to somewhere else in Australia?
- What factors contribute to the Northern Territory gaining or losing population to the rest of Australia?
- How will workforce demography in the Northern Territory over the next thirty years given the currently ageing workforce and high levels of natural increase?