



**CHARLES  
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# Research Brief

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## **Recent changes in interstate migration to the Northern Territory: sources and basic demography**

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## RESEARCH AIM

*This research looked at how the age, sex and place of origin of interstate migrants to the Northern Territory has changed since the late 1960s. The aim was to investigate whether changing sources and demographics could help explain the recent (since 2010) high levels of negative net interstate migration (NIM) for the Territory, and provide some insights into what could be done to attract more interstate migrants.*

## KEY FINDINGS

- The NT has historically had a large reliance on migrants from South Australia, but our competitiveness for SA migrants has declined in recent years, as has the number of people leaving SA each year;
- The NT continues to have high proportions of male in-migrants, while nationally women are making up a larger percentage of the flow of interstate migrants;
- While interstate migrants to the NT have become older, there is still a very high reliance on people aged in their 20s, and this market is diminishing;
- Periods of positive NIM (where the NT has attracted more people from interstate than have left the Territory) might be associated with attracting more female migrants, older migrants, and periods of high out-migration from South Australia and Western Australia.

## Background

Interstate migration has been the most variable of the components of change (which also include overseas migration and natural increase) in the Northern Territory population for the past 30 years. In the 28 years between 1986 and the last year of available data (2014), more people left the NT for interstate, than arrived from interstate in 21 years. This includes every year since 2010. This net interstate migration (NIM) deficit ultimately threatens the Territory's prospects for continued growth, and has important implications for our political and economic systems (Wilson et al., 2005). This brief is the first of a series examining how interstate migration patterns have changed over the past several decades, with a view to understanding the key trends and their impacts on the NT. Ultimately the research can shed light on how the NT could more effectively compete in the interstate migration 'market'.

This brief focusses on in-migration patterns, and particularly changing prominence in sources of migrants, age and sex of migrants, and the locations in the NT to which they moved.

## Methods

Some data about interstate migration are available from the 1971 Census (which recorded migration since 1966), and in data that underpin State and Territory population estimates since 1972 (principally Medicare records in more recent times). Data for this brief are drawn from each Census since 1971, and estimates of interstate migration that accompany Australian Bureau of Statistics population estimates (Australian Bureau of Statistics, 2015).

The variables examined include –

- Number of migrants;
- State of origin of migrants;
- Age of migrants (5 year brackets);
- Sex of migrants; and
- Region of residence in the NT - Greater Darwin (including Palmerston and the rural areas), Central Australia (primarily Alice Springs) and the Remainder (dominated by Katherine, Tennant Creek, and East Arnhem).

In addition, the size of each market (age, sex, and state of origin) in the national context and the NT's market share since 1986 are examined.

The results are presented in a series of 'eras' – up to the mid 1970s (when Cyclone Tracy and self-government had substantial impacts on migration flows), the late 1970s and early 1980s (when NIM was consistently positive), and the period since 1986 where five 'eras' can be identified – two of positive NIM and three (including the current era) of negative NIM.

## Results

### Summary of Findings

- Interstate migration to the NT over the past 40 or 45 years has broadly followed a consistent pattern -
  - High proportion of males;
  - High proportion of young adults (aged 15-29 years);
  - Strong link with South Australia;
  - Focus on Darwin.
- Some trends are clear –
  - Ageing of the migrant population;
  - New interstate migrants accounting for a smaller share of the NT’s total population; and
  - Weakening of the link with South Australia, and strengthening of the link with Victoria.
- Some trends are hinted at –
  - Higher proportions of female migrants may be associated with positive NIM eras;
  - Higher proportions of young adult migrants may be associated with negative eras;
  - Sharp decline in attractiveness to South Australian and Western Australian migrants is linked to commencement of negative eras.

### Before Tracy, Before Self-Government

- Between 1966 and 1971 (according to the 1971 Census), 19 460 people moved to the NT from another State or Territory. This represented nearly 23% of the 1971 population.
- Between 1971 and 1978, the NT experienced positive net interstate migration (NIM) every year except 1974, when nearly 18 000 more people left the NT than arrived, largely as a result of Cyclone Tracy at the end of 1974.
- Between 1975 (post-Tracy) and self-government in 1978, there were nearly 52 000 migrants to the NT, making a net contribution of 14 000 new residents.
- South Australia was the largest source of interstate migrants to the NT between 1966 and 1971, both in terms of the number of migrants, and the probability that a migrant would move to the NT (Table 1). Nearly 14% of people who left South Australia between 1966 and 1971 moved to the NT, a rate nearly three times higher than for the next highest source, Queensland.

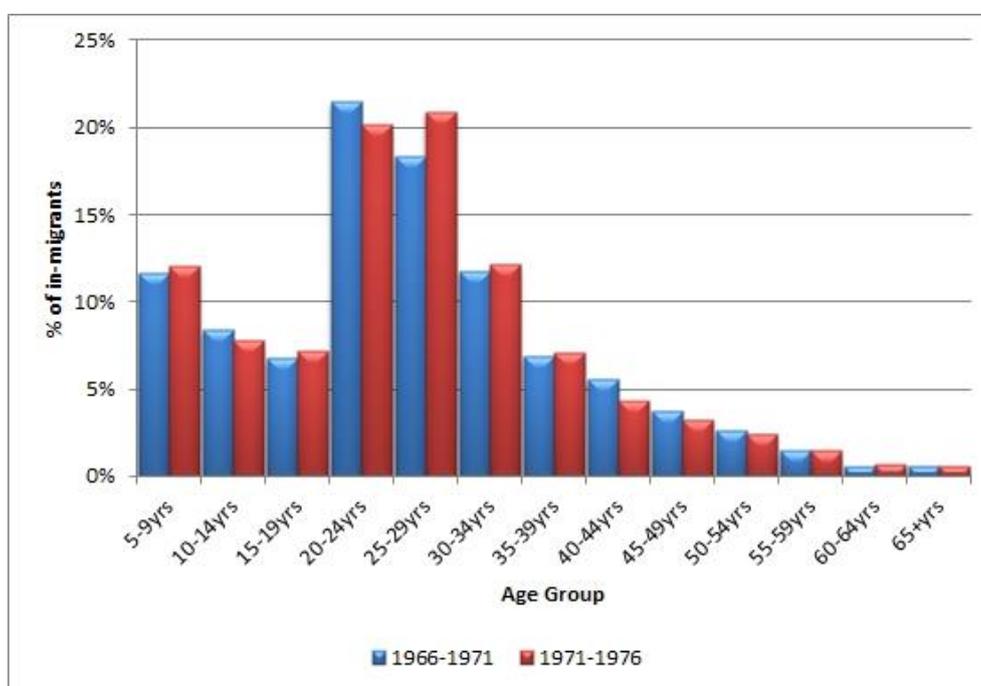
**Table 1:** Sources of migrant to the NT 1966-71 and 1971-76

Source	Migrants to the NT		Migrants to the NT per 10 000 population		Migrants to the NT per 1 000 out-migrants	
	1966-71	1971-76	1966-71	1971-76	1966-71	1971-76
New South Wales	4053	5258	9	11	34	43
Victoria	3143	3636	9	10	34	36

Queensland	4640	4308	25	21	51	31
South Australia	5106	4592	44	37	137	82
Western Australia	1876	2496	18	22	38	41
Tasmania	319	401	8	10	22	21
Australian Capital Territory	323	323	22	16	8	6
Australian interstate migrants	19460	21014	15	16	42	37

- 55% of interstate migrants to the NT between 1966 and 1971 were male.
- Over three quarters of migrants were aged younger than 35 years. Nearly half were aged between 15 and 29 years (Figure 1).

**Figure 1:** Age of interstate migrants to the NT, 1966-71 and 1971-76



- The 1976 Census revealed a similar migration pattern for the period 1971-1976.
  - About 80% of migrants were aged younger than 35 years.
  - About 54% were male.
  - South Australia continued to be the largest (proportionally) source market, but New South Wales provided more migrants in absolute terms.
  - In-migrants were about 22% of the total NT population.

### The end of high net in-migration: 1979-1986

- The 1981 Census recorded migration between 1976 and 1981, and the 1986 Census recorded migration between 1981 and 1986.
- In 1981, the NT had positive NIM of 4500 people. NIM has not exceeded even one-third of that amount since then (Table 2).

- In 1986, the NT had negative NIM (1000 people) for the first time on record, with the exception of 1974. Following 1986, there has been negative NIM in 21 of the 28 years until 2014 (and 2015 data will also show net out-migration when they are released).

**Table 2: Sources of migrant to the NT 1976-81 and 1981-86**

Source	Migrants to the NT		Migrants to the NT per 10 000 population		Migrants to the NT per 1 000 out- migrants	
	1976-81	1981-86	1976-81	1981-86	1976-81	1981-86
New South Wales	5123	6416	10	12	31	38
Victoria	4537	4828	12	12	42	40
Queensland	5749	6833	25	26	32	34
South Australia	6473	7423	50	55	125	129
Western Australia	3543	4588	28	33	59	68
Tasmania	666	698	16	16	33	30
Australian Capital Territory	964	833	44	33	24	18
Australia	27055	31619	19	20	42	44

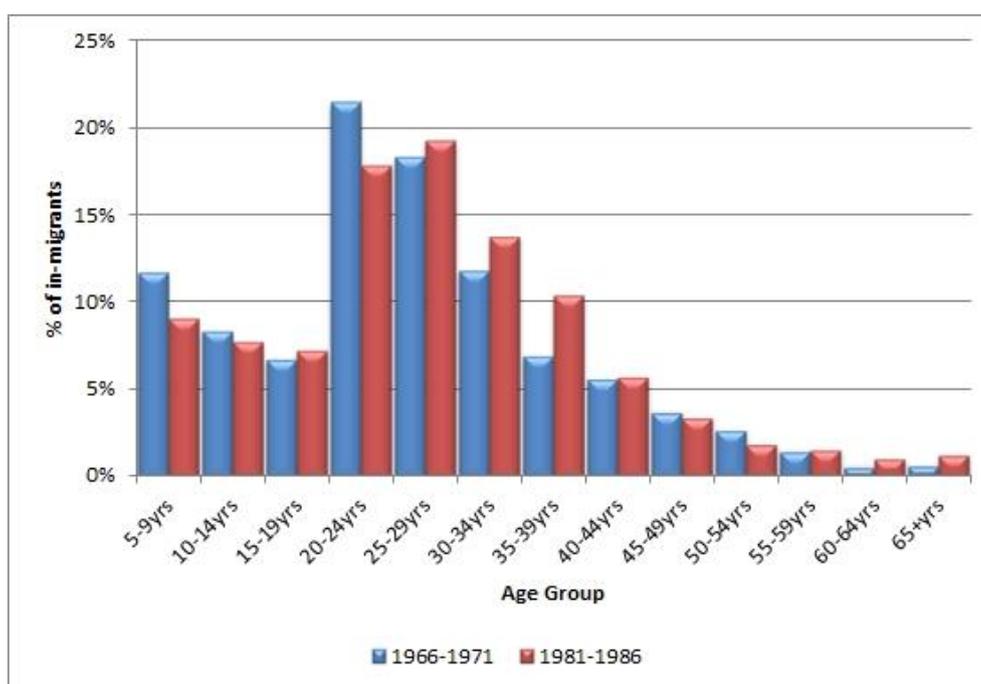
- The patterns revealed in the 1981 and 1986 Census were very similar to the 1971 and 1976 Censuses in terms of age and sex, and broadly the sources of migrants (Table 3).
- In-migrants between 1976 and 1981 were about 22% of the NT population in 1981.
- In-migrants between 1981 and 1986 were about 20% of the NT population in 1986.

**Table 3: Sources of migrant to the NT 1966-71 and 1981-86**

Source	Migrants to the NT per 10 000 population		Migrants to the NT per 1 000 out- migrants	
	1966-1971	1981-86	1966-1971	1981-86
New South Wales	9	12	34	38
Victoria	9	12	34	40
Queensland	25	26	51	34
South Australia	44	55	137	129
Western Australia	18	33	38	68
Tasmania	8	16	22	30
Australian Capital Territory	22	33	8	18
Australia	15	20	42	44

- Over the total period 1971-1986, it is possible Western Australia and the ACT became more important sources of migrants, while Queensland became less important, but these source jurisdictions tended to be volatile during the period as well, so a definitive trend is difficult to identify.
- There is more evidence migrants got older, with higher proportions of migrants in their 30s, and lower proportions aged 5-9 years and 20-24 years between 1981 and 1986 compared with 1966 to 1971 (Figure 2).

**Figure 2:** Age of interstate migrants to the NT, 1966-71 and 1981-86

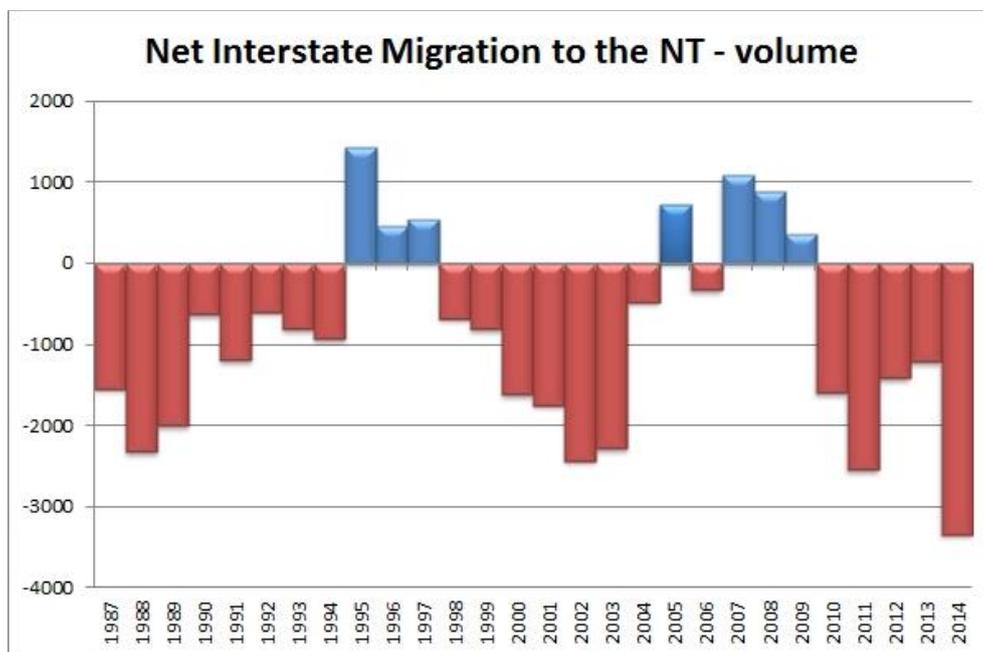


## Characteristics of NT’s declining NIM position

### Eras of migration

- The period since 1986 can be separated into five distinct ‘eras’, with positive NIM occurring in two (1995-1997 and 2005-2009) and negative NIM occurring in three (1987-1994, 1998-2004 and 2010- the present).

**Figure 3:** Net interstate migration (NIM) to the NT, 1986-2014



- Only one year (2006) interrupted any of the five eras.
- Eras of negative NIM tended to be longer (7 years) than those of positive NIM (4 years), and the volumes of losses on average (about 1500 people per year) were more than double the average volumes of gains (about 700 per year).

### Sources of migrants

- While 20% of the NT’s population at the 1986 Census had moved from interstate in the preceding five years, only 17% did so between 1986 and 1991, 16% between 1991 and 1996, and 15% in the three Census periods after that (1996-2001; 2001-2006; and 2006-2011). This is, of course, partly a function of the NT’s larger base population at each point in time, but also an indicator that migration growth has not kept up with population growth.
- In 1987, 27% of the NT’s in-migrants came from Queensland. Queensland remained the most important source State up to and including 2014, when 30% of migrants were from that State.
- The contribution of most other States and the ACT also remained reasonably similar from the start to the end of the period, with the exceptions being Victoria, which went from about 15% of migrants in the early part of the period, to nearly 20% by the mid 2000s, and South Australia, which went from 20% at the start of the period to around 11 or 12% by the end of the period (Table 4).

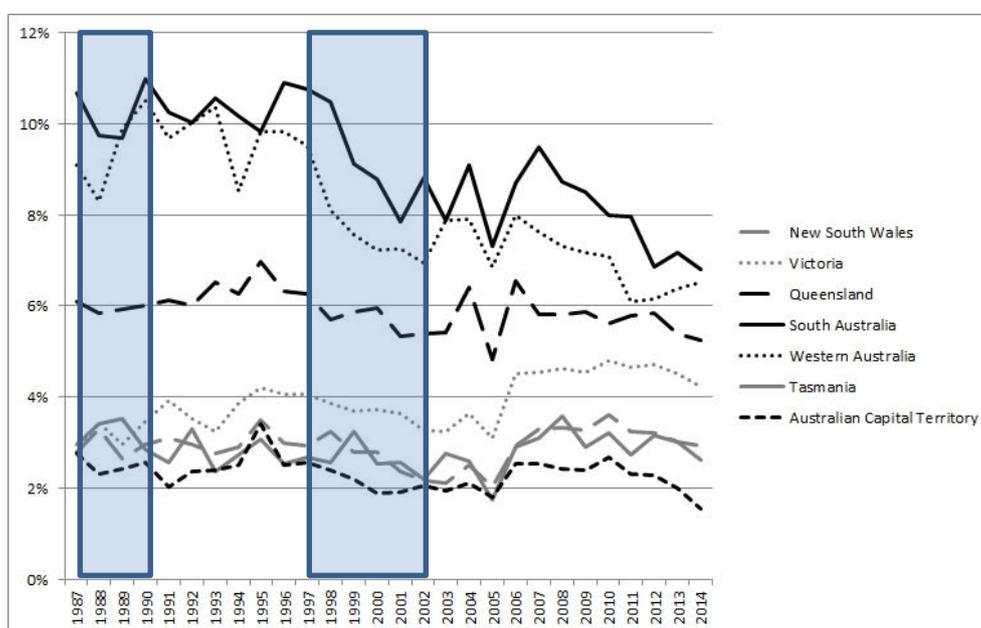
**Table 4:** Percentage of migrants from each State and the ACT, 1987 and 2014

Source	% of Migrants 1987	% of Migrants 2014	Linear trend? (significant (90% probability) if $R^2 > 0.42$ )
New South Wales	18%	19%	
Victoria	14%	19%	0.59

Queensland	27%	30%	0.67
South Australia	20%	12%	0.80
Western Australia	15%	16%	
Tasmania	2%	2%	
Australian Capital Territory	3%	2%	

- In 1987, the NT received 11% of South Australia’s out-migrants and nearly 10% of those from Western Australia. By 2014, NT received slightly less than 7% of the migrants from these States (Figure 4). Migration shares from all other States and the ACT remained similar, although there is some evidence that shares have declined for most States and the ACT since 2010.

**Figure 4:** Percentage of each State’s (and ACT’s) out-migrants who moved to the NT, 1987-2014



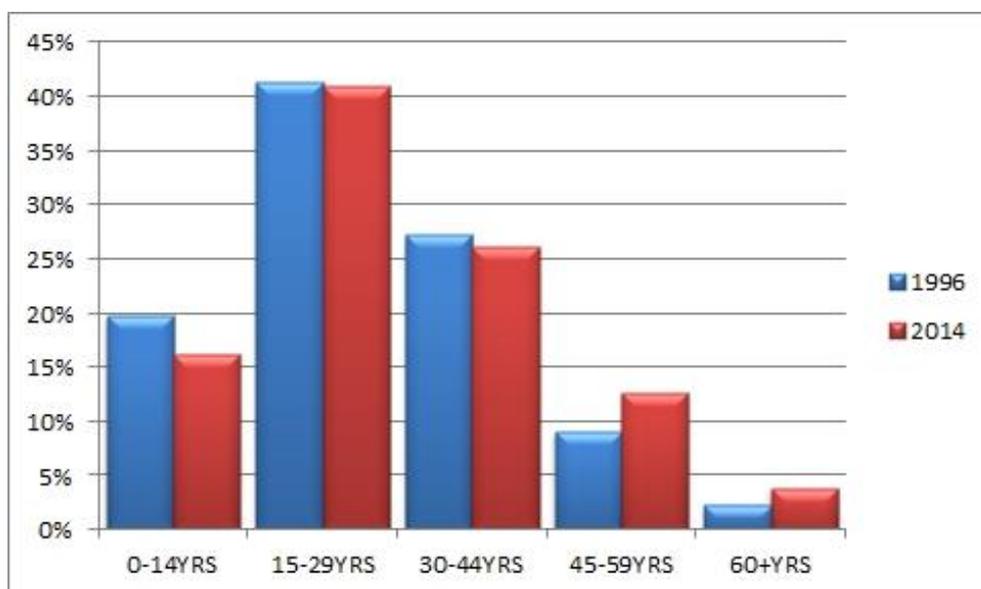
- The two eras of positive NIM saw spikes in the proportion of out-migrants from each State and the ACT coming to the NT, but the post-positive-era declines were sharpest for South Australia and Western Australia.

### Age and Sex Characteristics

- Males have consistently been around 54% of in-migrants since 1987, with the exception of the period 2002-2005 when they were about 52%, and 2012-2014 when they were nearly 57%.
- There is insufficient evidence to suggest these changes in gender balance precipitated the move from one era to another, although there were slightly more male in-migrants (56% compared to 54%) around 1985-1987 at the start of the NT’s first negative era, but there was no appreciable change around the 1995-1997 positive era or the 1998-2004 negative era.
- Age data have only been readily available on an annual basis since 1996. Since that time, the proportion of interstate in-migrants who were children (aged 0-14 years) has declined and the proportion of older migrants (aged 45-59 years and aged 60 years and over) has increased (Figure 5). Young adult in-

migrants (aged 15-29 years) continue to dominate migration flows, accounting for over 40% of all migrants.

**Figure 5:** Age of in-migrants in 'life stages', 1996 and 2014

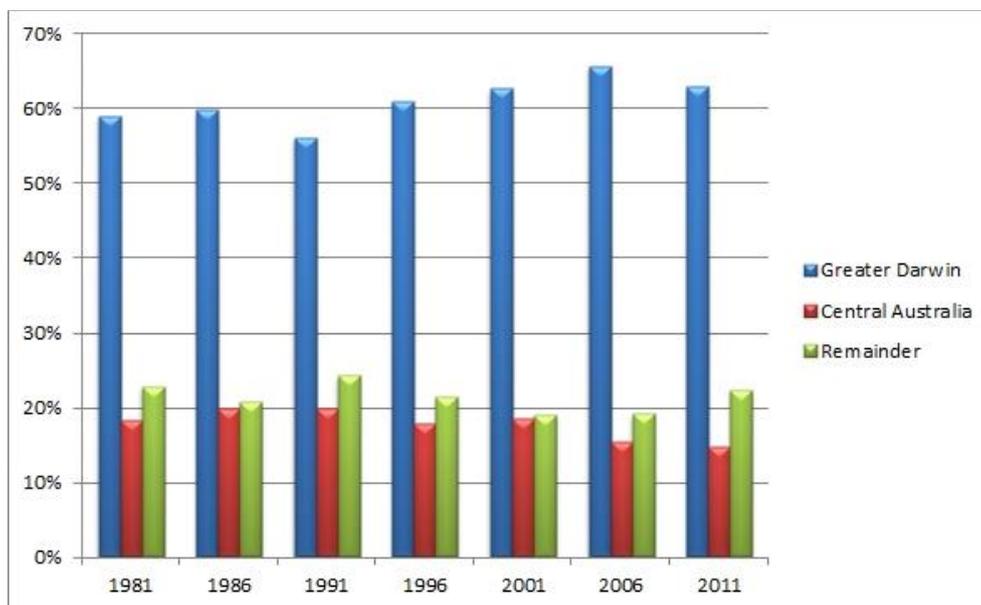


- As with gender balance, there are only tentative suggestions that change in age structure coincided with change in eras. The start of the 1998-2004 negative era was characterised by high levels of young adult (aged 15-29 years) in-migration – around 44%. This was also the case at the start of the 2010-2014 negative era. Conversely, the start of the 2005-2009 positive era saw this age group account for less than 40% of in-migrants. While we do not currently have data for the whole 1995-1997 era, 15-29 year olds were 41% of in-migrants in 1996, then jumping to 44% in 1997 as the positive era came to a close.

## Destinations within the NT

- Data from the seven Census since 1981 show the destinations of in-migrants to the NT for the preceding five years. In broad terms, 1981 and 1986 data correspond to the initial positive era, and 1996 and 2006 data correspond to the two more recent positive eras.
- Changes in geographical units used over time mean consistent analysis can only readily be done comparing Greater Darwin (including Palmerston and the rural areas), Central Australia (primarily Alice Springs) and the remainder of the NT (dominated by Katherine, Tennant Creek, and East Arnhem).
- Overall, there has been a small increase in the proportion of interstate migrants going to Darwin (from about 59% between 1976 and 1981 to over 60% in the past two Census periods), primarily at the expense of Central Australia (Figure 6).

**Figure 6:** Percentage of in-migrants moving to NT regions, 1981-2011



- Figure 6 demonstrates that the Census that occurred during net positive eras (1981 and 1986, 1996, 2006) aren't specifically distinguishable from those that occurred during net negative eras (1991, 2001 and 2011).

## Conclusions and further research

### NT Against the Tide?

- The NT's evolving in-migration patterns must be set within the context of demographic change occurring in the rest of Australia. The NT's capacity to maintain past patterns (particularly those associated with positive eras) is greatly influenced by what is happening across Australia in terms of the age, sex and sources of all interstate migrants.
- For example, annual rates of interstate migration across the rest of Australia have declined from about 21 persons per 1000 in the late 1980s, to 15 persons per 1000 in this decade. The NT is therefore competing in a declining market.
- Not only does South Australia (NT's historical main market) have a lower proportion of the national population (now 7%, compared with 9% in 1987), it has a lower proportion of the population of interstate migrants (now 8%, compared with 10%), and had fewer actual migrants (less than 25 000 per year) between 2009 and 2014 than in any previous five year period (where there were typically in excess of 30 000).
- The proportion of all interstate migrants who were male, declined from around 53% in the mid 1980s to 51% by the middle of the 2000s. There have been some exceptions to this trend, including slightly higher male migration since about 2011 (52%). Nevertheless, the NT continues to rely on high (and perhaps increasing) levels of male interstate migration, while nationally female migration is proportionally increasing.

- Nationally, the proportion of interstate migrants aged 15-29 years (NT's key market) has declined from 37% to 35%. The NT's competitive advantage with this group has also declined, with the NT share being nearly 8% higher than the national profile in 1997, to 6% higher in 2014.
- Growth has occurred in the 40-59 years and 60+ years age groups. The NT has been able to lift its share of these older migrant markets, and is now receiving the national average for 40-59 year olds (13%).
- In summary, the NT may be going 'against the tide' in terms of its source markets and male bias, and continuing to have a strong reliance on the declining young adult market. What is really critical is not just the NT is operating in proportionally declining markets, but the actual volumes of key markets have declined; and our competitiveness in these markets has declined.
- Looking just at the markets since 1997 –

**Table 5:** Number of interstate migrants within Australia in NT's major 'markets', 1997 and 2014.

	<b>1997</b>	<b>2014</b>	<b>Decline</b>
<b>South Australian out-migrants</b>	31666 (11% to NT)	24640 (7% to NT)	22%
<b>Male interstate migrants</b>	188292 (5% to NT)	175187 (4% to NT)	7%
<b>15-29 year old interstate migrants</b>	136737 (6% to NT)	117115 (5% to NT)	14%

## A New Environment for Interstate Migration?

There are a number of national factors at play which could see even further challenges to the NT's traditional key markets. The challenges are particularly acute because evidence from the 2006 NT Mobility Survey jointly conducted by Charles Darwin University and Northern Territory Treasury suggests interstate in-migration is driven almost entirely by employment, while out-migration is driven by a balance between work, family and social considerations.

1. We can expect the interstate migrant population to age in two ways
  - a. 'Younger' migrants will continue to become older as a result of extended transition from school to work through higher rates of attendance at university and post-secondary training, and longer periods of time attending post-secondary institutions;
  - b. The overall workforce will continue to age for at least the next two or three decades as a result of general population ageing.
2. We might expect the volume and share of young adult migrants to further decline as difficulties in entering and staying in both the labour and housing markets increases reliance on family and social support, and increases the risk associated with leaving the location of intended long-term residence (the risk of missing out on increasingly infrequent opportunities).
3. We can expect women to continue to increase as a share of interstate (employment driven) migrants because of the increasing engagement of women in a wider variety of jobs, and the increasing demand for service sector jobs that are traditionally associated with women.

4. At the same time, we might expect the volume of women migrants to (continue to) decline because of attachment to family and social environments in the origin location.

These latter three factors in particular suggest the NT will continue to struggle to sustain its interstate migration market even if labour market conditions here are superior to those in other places. The NT is unlikely to be seen as a long term residential location by many migrants, meaning the risks of leaving family and social support (which increasingly assists with housing, employment and child care as well as emotional support) may be seen as outweighing the rewards of a (temporary) better job. This is a substantial change from patterns of behaviour during the 1980s, 1990s and even early 2000s, when moving to relatively distant locations for better jobs not only provided short term rewards, but helped position younger workers for accelerated careers on their return to their place of origin.

The nature of the labour market in the NT has also experienced substantial change over the past 20 years –

- Many more of the NT's key jobs, including many public service and public service related jobs (in the health and education sectors, for example), have come to be filled by (often temporary) international migrants. The strategies and incentives needed to successfully recruit these are quite different to those needed to recruit interstate migrants.
- Many NT jobs have become relocated to other parts of Australia. The practice of FIFO or long distance commuting is not limited to the resources sector, with the 2006 Census recording nearly 1000 people working in the public sector who said their place of work was the NT but who lived elsewhere in Australia. There were nearly 4000 such workers in the private sector as well. The total number of non-resident workers nearly doubled between the 2006 and 2011 Census.

In summary, the age and gender patterns of interstate migration may be expected to continue to develop against what has traditionally been the NT's market profile. While the NT has had some success in adapting to age changes, it is still reliant on key groups which low growth potential in the short and medium term. The ability to use 'better jobs' as an attractor to compensate for a precarious market position is threatened both by the changing relationships between work and family/social life for younger workers, and the increasing separation of place of work from place of residence.

## Further Research

There are seven priority areas identified for further research –

1. Following on from the discussion about the importance of employment as a driver of migration to the NT, an analysis will be made of how the NT labour market has changed over the past 15 or 20 years in terms of the type of jobs taken up by migrants (sector, occupation, employer, job level, qualifications). This will provide insights into what markets might be fostered by employment changes (such as the increase in older working age migrants) and what markets might be 'crowded out';
2. Following on from the discussion about the relationship between conditions in the NT (particularly around 'better jobs') and the relative risks of moving from the place of origin to the NT, analysis will be made of how changes in NT and national economic conditions have corresponded with the different NIM 'eras' observed since 1986. This will provide insights into the sorts of conditions that stimulate and hinder migration flows, and reveal the extent to which NT conditions play a role;
3. The changes in eras and in migrant characteristics (such as the substantial 'swing' in female migration rates observed in the early 2000s) will be mapped against specific events (political/policy, economic,

social) that occurred in the NT to further assess the extent to which local conditions and potentially locally actions can make a difference to migration flows;

4. Following on from the discussion about the increasing importance of Darwin as a destination, and decreasing importance of Central Australia, an extended analysis will be made of the different characteristics of migrants to different parts of the NT. This will provide insights into whether different strategies might be appropriate for different destinations;
5. All of this analysis will be repeated for interstate migration out of the NT and net interstate migration in order to make an assessment of the extent to which failure to in-migrate or excessive out-migration contribute to the 'problem' of NT's declining interstate migration position;
6. A research plan will be prepared for analysing the results of the 2016 Census (data due late 2017) in order to model the prospects for a 'turn around' in the current interstate migration deficit; and
7. A comparison will be made between these patterns observed in the NT, and patterns observed in similar 'remote' jurisdictions in other parts of the world (specifically Canada and Sweden, but potentially also Alaska and other parts of the European northern periphery). This will provide insights into the extent to which the NT's characteristics are typical of such places, and to identify cases where alternative approaches to stimulating interstate migration have emerged.

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