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The Demography of Developing Northern Australia

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Introduction

The size of populations and their changing compositions are at the forefront of determining economic development pathways for nations, states, regions and communities. In northern parts of developed nations, populations are relatively small, sparsely distributed (although becoming increasingly urbanised) and subject to rapid and significant changes (Carson et al., 2011). In addition, northern communities, more so than others on a per-capita basis, receive and send out transient non-resident populations including non-resident workers (Brokensha et al., 2013), tourists and mobile indigenous peoples (Carson & Carson, 2014). A growing body of literature has outlined the complexities of population systems in northern developed contexts and the importance of significant diversity in their characteristics, as well as their differences to southern areas (Hornstrom et al., 2015).

LEADING FROM THE NORTH

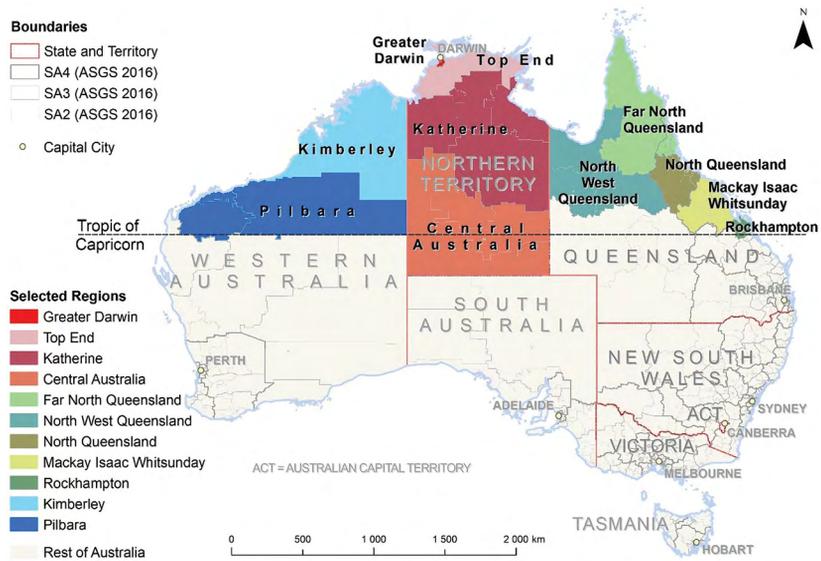


Figure 10.1: Map of Northern Australia as defined in the 2015 white paper.

Source: Constructed by the authors using open-source GIS software and Australian Bureau of Statistics digital boundaries.

In 2015, the Australian Government released its white paper on developing Northern Australia, *Our north, our future: White paper on developing Northern Australia*. The white paper set out policies and initiatives aspiring to deliver further and substantial economic development in and from northern parts of the nation. The policy hinges around five industries that the government feels have the most potential for growth: food and agribusiness; resources and energy; tourism and hospitality; international education; and health care, medical research and aged care (Australian Government, 2015, p. 3). ‘Northern Australia’ was defined in the policy as all areas north of the Tropic of Capricorn with the addition of the Central Australia (desert) area of the jurisdiction of the Northern Territory (NT), incorporating the service centre town of Alice Springs and its surrounding region (see Figure 10.1).

Both the 2015 white paper and its precursors, the *Green paper on developing Northern Australia* (Australian Government, 2014) and *Pivot North: Inquiry into the development of Northern Australia* (Joint Select Committee on Northern Australia, 2014), discussed the significance of population size and changes to population characteristics for determining economic development in the region. In all three documents, Northern Australia’s small population size was identified as a critical barrier and this was reflected in the population-related targets and ambitions inherent in both the green and white papers. Indeed, the *Pivot North* report branded

the north's small population as the 'key impediment to be overcome' (Joint Select Committee on Northern Australia, 2014, p. 109). This focus on increasing the size of the population in Northern Australia is shared with past iterations of Northern Australian development policies, which similarly connected economic growth potential with large increases in population size (Coombs, 1947; Harris, 1992; Carson, 2011).

The specific population-related targets and ambitions in the green paper were:

1. A focus on substantially growing 'urban zones': 'the White Paper will consider options for building on existing key urban zones—such as Darwin, Cairns, Townsville and Karratha—with the aim of substantially increasing their population' (Australian Government, 2014, p. 54).
2. Improve net internal migration flows: 'Greater migration from elsewhere in Australia would help boost population ... The White Paper will explore practical options to remove some of the impediments to internal migration to northern Australia—recognising governments have limited ability to directly affect people's decisions as to where they live and work' (p. 54).
3. Increase international migration: 'the Australian Government is consulting across governments, industry, business and communities on ways migration policy can help increase the availability of skilled and unskilled labour, including in the north' (p. 56).

Population-related ambitions and policies were not so well defined in the white paper, with the focus instead on two main targets. The first was to grow several cities to more than 1 million residents to 'underwrite substantial exports of planning, design, architecture and construction services to the Tropics' (Australian Government, 2015, p. 3). In 2014, the largest city in Northern Australia was Townsville with a population of 192,000. The second target in the white paper was to achieve large absolute growth in the size of the region:

Development will require many more people living in the north. Transformation won't happen if its population inches up by a few hundred thousand over the next 20 years. It would remain a high cost, small scale economy; more of a pilot project than a powerhouse. We need to lay the foundations for rapid population growth and put the north on a trajectory to reach a population of four to five million by 2060. (Australian Government, 2015, p. 4)

In 2014, the population of the region was estimated at 1.3 million residents (authors' calculations based on ABS, 2015).

The gaps between the white paper's targets and present-day populations are large. While population targets and ambitions are laid out and identified as vital to northern development in both the green and white papers, no research has previously been undertaken to assess the compatibility of the baseline demographic conditions in Northern Australia with the policy's ambitions. For example, there is no research-based review available on the critical issue of who comes, who leaves and who stays in the region. Such knowledge is vital in the context of the opportunities and barriers for growing the population and achieving the population goals embedded in the green and white papers.

This chapter reports on data extracted from the output files from the 2011 and 2016 Australian Censuses and analyses these against the specific population targets and aspirations outlined above. The aims are to identify whether and why current population characteristics might be compatible with the goals of the green and white papers and to assess how they might change, or be induced to change, to meet these. This provides the basis for subsequent commentary on the voracity of the population-related components of the present-day Developing Northern Australia agenda and discussion on what might need to change to help achieve the government's goals.

Northern Australia Population Aspirations

The demographic context in Northern Australia is fundamentally different to southern parts of Australia, with the most obvious difference being the northern population is relatively small and is distributed over sparsely populated areas (although a significant share live in cities in the north). The need to dramatically increase the size of the population in Northern Australia mirrors sentiments in past northern development policies and initiatives (e.g. Coombs, 1947; Harris, 1992). However, in addition to absolute size, the composition of populations is crucial to determining economic development capacity (Carson et al., 2011). In northern areas of developed nations, there are a range of commonalities in relation to population compositions that determine that demographic change does not follow the same trajectories as might be expected elsewhere. One example is the high proportion of indigenous peoples in northern

areas, which in the Australian context at least increases the youthfulness of the overall population's age structure. With a dearth of seniors, this makes for an imbalance of population across age groups (Zeng et al., 2015).

Demographic differences, both within northern regions and compared to elsewhere, mean that normal relationships between population and economy may not apply. For example, during 2015, the NT economy was indicated as booming (with low unemployment and high levels of private investment) at the same time as record numbers of residents were leaving for interstate; some 26,000 in 18 months, or the equivalent to its second-largest city of Alice Springs (see Payer & Taylor, 2015). These examples highlight that associations between population size and economic growth are not linear in northern economies, as they tend to be in the larger urban-focused southern economies (see Carson et al., 2011; Carson, 2011).

Theories on what matters up north for the causes and consequences of population change have begun to emerge from international cross-comparative studies. One theory (Carson et al., 2011) has proposed that the systems of human interaction (demography, economics, social systems, health systems, etc.) are different in sparsely populated areas such as Northern Australia compared to urban or rural zones. These differences can be conveniently described using eight words that start with 'D': detailed, diverse, discontinuous, dynamic, dependent, delicate, distant and disconnected. The tenet is that northern peripheral populations do not 'behave' like others, and demographic change can and does occur along non-standard pathways compared to other geographical areas.

Indeed, the green paper (Australian Government, 2014) identified some of the important differences in the population structure of Northern Australia including:

- high concentrations of population in urban areas (particularly Darwin, Cairns and Townsville)
- great diversity and polarity in the demographic and socioeconomic characteristics of settlements and their residents (especially comparing Indigenous to other residents)
- disparate population growth rates between urban and other areas
- the prevalence of a large number of small and very remote settlements away from coastal zones.

While these characteristics were recognised in the green paper, in the white paper (Australian Government, 2015) they have received no specific attention aside from the target to enact large size increases in the cities of the north and, consequently, for the region as a whole. The white paper population targets raise many questions about why and how such goals might be imperative. Not least is the issue of environmental carrying capacity and the potential for damage to fragile northern ecosystems from the fourfold increase in population outlined as desirable in the white paper. Further, and similar to previous northern development initiatives, there is scarce consideration of the population characteristics that may both differ from pre-existing resident characteristics and be considered as advantageous (in terms of age, gender, skills, education and so on) and for the purpose of facilitating economic growth aspirations. In light of the large differences in the characteristics of populations in the north, the reduction in granularity around population aspirations evident in the white paper (compared to the green paper) is interesting. While it may be reflective of limited understanding in policy circles about how populations in the north can contribute to harnessing opportunities for economic development, the rollout of white paper initiatives must be informed by knowledge of baseline demographic conditions and understanding about how these might change under future development scenarios.

Sources and Data and their Application to the Research

The analyses in this chapter are primarily based on tables designed and extracted by the authors from the 2011 and 2016 Australian Censuses, as well as from ABS and Department of Immigration and Border Protection (2014) materials. 'Northern Australia' is defined as in the green and white papers (see Figure 10.1 above) as the area to the north of the Tropic of Capricorn but also including the Alice Springs region of the NT, in recognition of its importance for servicing surrounding communities and industry (Australian Government, 2014). In the present study, we replicated the definition in the green paper by developing a custom geographic area based on Statistical Areas Level 2 units to specify and extract customised Census tables using the ABS software Table Builder. The boundary of Northern Australia extends across parts of the states of

Queensland and Western Australia and encompasses the whole of the NT. Areas straddling both Northern and Southern Australia were allocated based on where the majority of their resident population was located.

The green paper identifies the cities of Townsville, Cairns, Darwin, Mackay, Rockhampton, Gladstone and Karratha as the key urban areas (or 'zones' as they are labelled) in Northern Australia. Interestingly, while the geographic scope of the policy includes Alice Springs (which is larger than Karratha), this city is not mentioned in the context of growth in the urban zones of the north. Our analysis of urban versus other populations and socioeconomic change in Northern Australia incorporates those cities defined as 'Significant Urban Areas' by the ABS in its publication *Regional population growth* (various editions): Townsville, Cairns, Darwin, Rockhampton, Mackay, Alice Springs, Mount Isa, Port Hedland, Yeppoon, Broome, Karratha and Emerald.

Findings

The first part of the results section presents the baseline demographic and socioeconomic indicators for the region. The section then analyses and comments on the population targets in the white paper before analysis of the three key population aspirations identified in the green paper (substantially increasing the population of urban zones in Northern Australia, improving internal migration flows, and increasing international migration and retention of international migrants).

Baseline Demographic and Socioeconomic Indicators for Northern Australia

Northern Australia comprised approximately 41 per cent of Australia's national land area, but only 5 per cent (1.1 million residents) of the total Australian population in 2016. This proportion was consistent with five years prior (see Table 10.1). Overall, Northern Australia population growth from 2011–16 was 4.1 per cent (compared to 8.5 per cent elsewhere). For the purpose of this study, the Estimated Resident Population figures (ERPs) were used to account for the net population undercount (see ABS, 2016). The overseas-born population living in the north grew by 12.9 per cent, such that their representation in the population increased from 16 per cent to 17 per cent (compared to 29 per cent in the rest of Australia by

2016). The Indigenous population in Northern Australia grew by 7.3 per cent, but the proportion of Indigenous people living in the north fell by 3 per cent. The ratio of men per 100 women (known as the gender ratio) decreased from 107 to 105, but remained the same in the rest of Australia (at 97 men per 100 women).

Table 10.1: Baseline demographic indicators for Northern Australia.

Indicator	2011	2016	Change
Population of Northern Australia (ERPs)	1,101,504	1,146,909	4.1% increase
Population elsewhere (ERPs)	21,238,520	23,043,998	8.5% increase
Residents of Northern Australia born overseas (%)	16%	17%	12.9% increase
Australians living in Northern Australia (%)	5%	5%	2.9% increase
Indigenous people living in Northern Australia (%)	28%	25%	7.3% increase
Males per 100 females in Northern Australia (rest of Australia)	107 (97)	105 (97)	-2 men per 100 women (no change)

Note: ERPs = Estimated Resident Population figures.

Source: Authors' calculations extrapolated from ABS Table Builder software.

The resident population's age structure in Northern Australia differs from the rest of Australia, with a much younger population evident in the former. Some 21 per cent of the population were aged less than 15 years in 2016 compared to 19 per cent in the rest of Australia, while for the Indigenous population in Northern Australia this was 33 per cent compared to 19 per cent for other residents. Indigenous residents constituted 14 per cent of the population (around 160,000 residents) in 2016 (see Figure 10.2). Conversely, seniors were under-represented in Northern Australia, with 11 per cent of the population aged 65 years and over compared to 16 per cent in the rest of Australia in 2016. A 'bubble' in the age structure for Northern Australia is evident at 25–34 years, with a higher proportion evident in subsequent working ages up to 55 years.

The top 10 industries for employment in Northern Australia are shown in Figure 10.3. These accounted for 77 per cent of employment compared to 70 per cent for the top 10 industries in the rest of Australia (signifying a greater reliance on fewer industries). Mining and public administration and Safety (including defence) were more prominent in the north.

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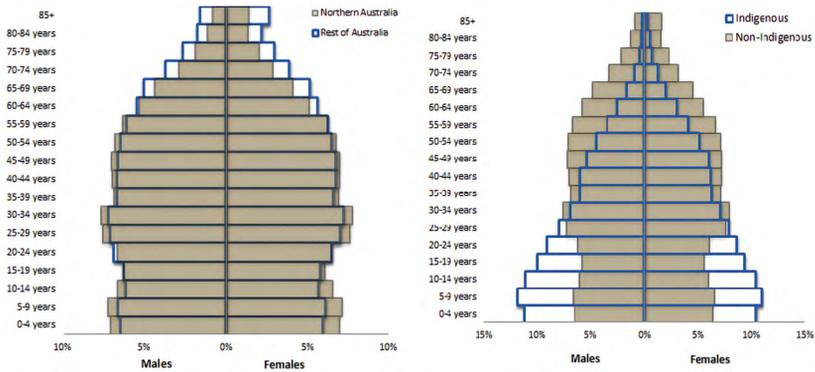


Figure 10.2: Age-sex structures in 2016 for Northern Australia and the rest of Australia (left) and for Northern Australian Indigenous and non-Indigenous residents (right).

Source: Authors' calculations extrapolated from ABS Table Builder software.

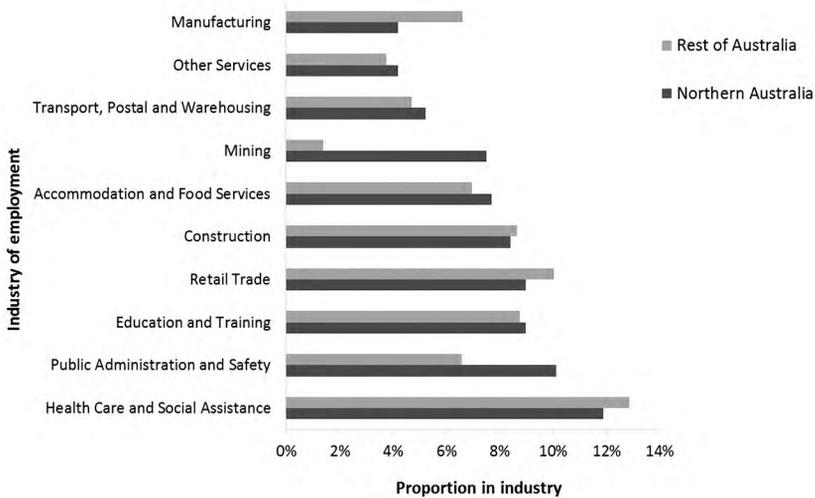


Figure 10.3: Industry of employment in 2016 for Northern Australia and the rest of Australia.

Source: Authors' calculations extrapolated from ABS Table Builder software.

Incomes in Northern Australia were higher on average than those in the rest of Australia in 2016, with the exception of Indigenous residents. Despite their relatively low incomes, 16 per cent of Indigenous residents earned \$1,000 a week or more, while 37 per cent of Northern Australia residents overall earned \$1,000 a week or more compared to 33 per cent for the rest of Australia (see Figure 10.4). While mining is a prominent

northern industry, it was only the seventh-largest employer in the north in 2016. Substantial discussion and debate on the practice of fly-in/fly-out (non-resident) workers across the north has transpired, in particular for large resource-based projects. Nevertheless, non-resident workers were prominent in other industries in the north in 2016, including in the public administration and safety and health care and social assistance industries. The number of non-resident workers in Northern Australia grew by around 40 per cent from 2006–11. Around two-thirds of these were males. The trend of rapid growth in non-resident workers continued during the 2011–16 period. For example, in the NT, non-resident worker numbers increased by 65 per cent (compared to a 35 per cent increase in the rest of Australia) during the 2006–11 period.

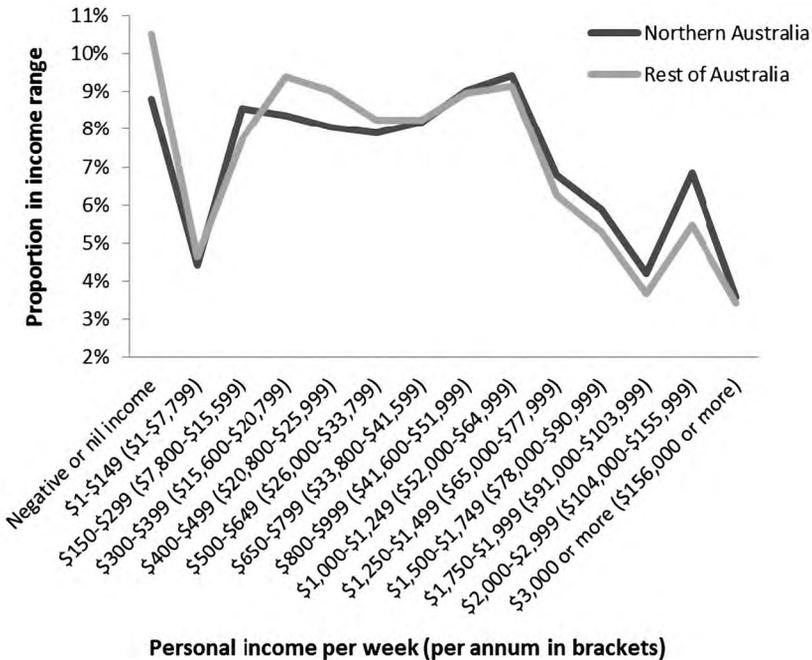


Figure 10.4: Income distributions in 2016 for Northern Australia and the rest of Australia.

Source: Authors’ calculations extrapolated from ABS Table Builder software.

Over half of Indigenous residents in the north were not in the labour force in 2016 compared to 28 per cent for non-Indigenous people (see Table 10.2). The Indigenous unemployment rate was three times higher than that of non-Indigenous people. Educational data on

individuals' highest post-school level of qualifications are an indicator of the overall level of skills in the community. For those with a post-school qualification, a smaller proportion of Indigenous people held a bachelor level or higher qualification in both Northern Australia and the rest of Australia (12 per cent and 19 per cent respectively) compared to non-Indigenous people in 2016. A far higher proportion of Indigenous people in Northern and Southern Australia hold certificate-level qualifications (see Figure 10.5).

Table 10.2: Labour status in 2016 for Northern Australia and the rest of Australia.

	Northern Australia		Rest of Australia	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Employed	36%	68%	47%	60%
Unemployed	12%	4%	9%	4%
Not in the labour force	52%	28%	44%	35%

Source: Authors' calculations extrapolated from ABS Table Builder software.

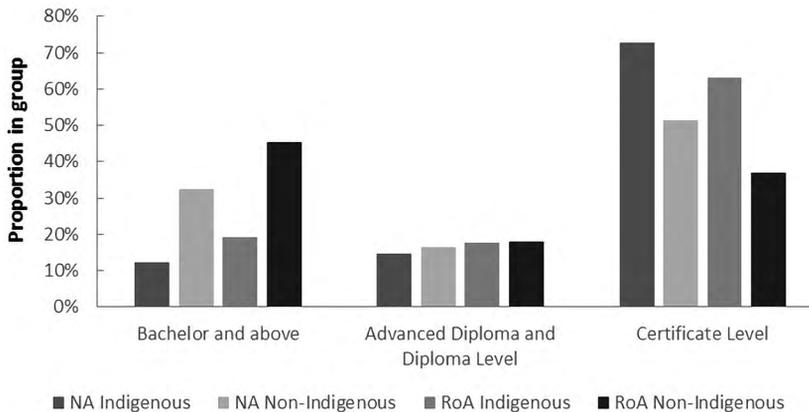


Figure 10.5: Highest level of post-school qualifications in 2016 by Indigenous status for Northern Australia (NA) and the rest of Australia (RoA).

Source: Authors' calculations extrapolated from ABS Table Builder software.

As a measure of Northern Australia's capacity to develop the industrial and services sectors, improving internet uptake rates is an important precursor and, indeed, a number of green paper submissions identified a lack of information and communications technology infrastructure as a

barrier. In 2011, 21 per cent of households in Northern Australia did not have any form of internet connection, compared to 14 per cent in the rest of Australia. Of those households in the north who had a connection in 2011, less had broadband connections compared to the rest of Australia (71 per cent compared to 80 per cent respectively).

Analysis of the White Paper's Population Targets

The white paper (Australian Government, 2015) articulates the dual targets for Northern Australia of having several cities of more than 1 million residents and a total population of between 4 and 5 million residents by 2060. Table 10.3 shows the estimated 2019 population for the larger northern cities and towns, with the right-most column showing the additional annual population growth required between 2020 and 2060 for each to reach a population of 1 million. Although the additional growth rates required for some cities (notably Cairns, Townsville and Greater Darwin) may appear to be low and achievable, in reality, accomplishing these year on year is highly unlikely. This is because the average annual growth rates during the decade leading up to 2014 were well above long-term averages, in part due to residual effects from the national mining boom. Growth rates are anticipated to be well below these peaks in the near future. For example, the 10-year average growth rate for Greater Darwin (from 2004–14) was 2.8 per cent, slightly above the average from 1991–2014 (2.7 per cent). To achieve 1 million residents by 2060, the city would need to grow twice as fast (by 4.6 per cent per annum). The second factor to consider in assessing the likelihood of achieving the population targets is that just one year of below-target growth will require growth rates in subsequent years to be higher still to effect a growth catch up.

For Northern Australia as a whole to reach 4.5 million residents (halfway between 4 and 5 million), additional population growth of 3.2 per cent per annum will be required. While this rate may not appear particularly high, achieving this would require a large transformation in the growth dynamics of the region. Not least, almost all of the growth in the region has been in the major centres, with the rest of the region in stagnation or decline. Consequently, cities would require growth rates over and above those shown in Table 10.3 to compensate for low growth elsewhere. The following sections discuss some of the reasons for these findings by way of examining the population targets and aspirations documented in the green paper.

Table 10.3: Population estimates and growth rates required to achieve the 2015 white paper's population targets.

City	2019 Population estimate	Target population	Difference	Additional p.a. growth needed based on 10-year average growth (2009–19)	Additional p.a. growth needed based on two-year average growth (2017–19)	Annual growth p.a. needed (2020–60)
Alice Springs	26,390	1,000,000	973,610	9.6%	9.3%	9.0%
Broome	14,371	1,000,000	985,629	9.4%	11.1%	10.6%
Cairns	163,350	1,000,000	836,650	2.9%	3.4%	4.4%
Darwin	147,255	1,000,000	852,745	2.9%	5.2%	4.7%
Karratha	17,102	1,000,000	982,898	9.3%	8.2%	10.2%
Mackay	116,763	1,000,000	883,237	4.8%	5.2%	5.2%
Port Hedland	4,472	1,000,000	995,528	13.3%	13.9%	13.7%
Rockhampton	119,590	1,000,000	880,410	4.3%	4.7%	5.2%
Townsville	195,084	1,000,000	804,916	2.7%	3.4%	4.0%
Northern Australia	1,204,043	4,500,000	3,295,957	2.4%	2.9%	3.2%

Source: Authors' calculations extrapolated from ABS Table Builder software and ABS.Stat (Beta). Population targets drawn from Australian Government (2015).

Analysis of the Green Paper's Population Targets and Ambitions

This section analyses the demographic and socioeconomic characteristics of Northern Australia pertinent to assessing the challenges and opportunities associated with the three broad population-related ambitions outlined in the green paper (Australian Government, 2014).

Significantly Growing Northern Australia's Urban Zones

In 2016, the urban zones of Northern Australia (as defined above) accounted for 62 per cent of the population. The urban-based population grew by 6.6 per cent from 2011–16, compared to just 1.8 per cent for the rest of the region. Indigenous residents also increasingly gravitated towards urban zones, increasing by 11.6 per cent in those places over the five-year period (see Table 10.4).

Table 10.4: Demographic indicators for urban zones in Northern Australia and rest of the region in 2011 and 2016.

Indicators	2011		2016	
	Urban zones	Rest of the region	Urban zones	Rest of the region
Population share of the region	61.3%	38.7%	62.4%	37.6%
Indigenous share of the region	36.4%	63.6%	37.9%	62.1%
Indigenous proportion in population	9.0%	24.6%	9.4%	26.1%
Proportion born overseas	18.0%	11.8%	19.9%	12.3%
Men per 100 women	102.9	113.1	101.3	111.2
Under 15	21.6%	22.1%	20.9%	22.3%
Over 65	8.9%	10.2%	10.8%	12.7%
Dependency ratio	30.5%	32.3%	31.7%	35.0%

Source: Authors' calculations extrapolated from ABS Table Builder software.

There were 101 men for every 100 women in Northern Australian urban zones in 2016 compared to 111 per 100 in the rest of the region. This male bias in the population increased for both areas from 2011–16, especially for the rest of the region. Meanwhile, urban zones featured a larger and increasing share of overseas-born migrants in the population, at 20 per cent in 2016 compared to 12 per cent in the rest of the region. The proportion of the population under 15 years of age was around 21–22 per cent across the north and remained consistent from 2011–16. However, the proportion aged 65 years and over grew in both the urban zones and remainder of Northern Australia from 2011–16.

Improve Net Internal Migration Flows between the North and the Rest of Australia

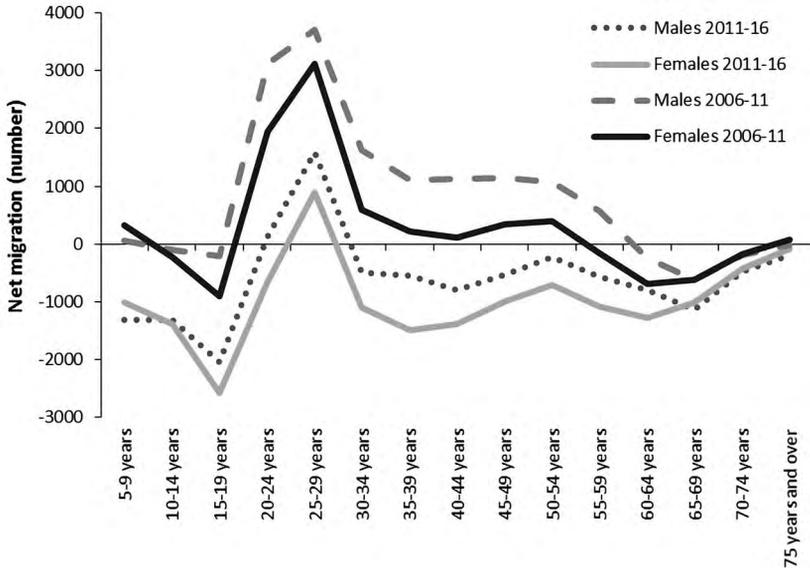


Figure 10.6: Net migration for Northern Australia and the rest of Australia by age and gender from 2006–2011 and 2011–2016.

Source: Authors' calculations extrapolated from ABS Table Builder software.

Critical to improving net interstate flows for Northern Australia is knowledge about who comes and who leaves through interstate migration. Overall, net interstate migration to Northern Australia from 2006–11 was 16,500 persons, with three-quarters attributable to the non-urban areas of the north. Growth in urban areas was driven by international migration, natural increase and internal migration within the region (to urban zones from other areas within Northern Australia). However, from 2011–16, Northern Australia suffered a net loss of 23,000 residents, of which 62 per cent (14,200) were females. Losses were particularly notable for those aged less than 20 years, including babies and toddlers, those in their final years of high school and those commencing university. The north failed to retain mid-career women and men, and although early career net migration was positive (for those in their 20s) for both genders, the extent of the net contribution was relatively small, especially for females. Figure 10.6 shows the difference in net migration between Northern Australia and the rest of Australia in 2006–11 and 2011–16.

A much greater number of males and females aged in their 20s migrated to Northern Australia in 2006–11 compared to 2011–16. The broad shapes of the in- and out-migration profiles are similar for men and women.

The gender differences in net interstate migration also validate the progression of the region towards a greater male bias, with nine extra men per 100 women moving into the region but fewer men per 100 women moving out.

Examining the reasons for people migrating out of Northern Australia assists to identify strategies for improving overall internal migration flows between the north and south of Australia. Census data provide some indications on factors associated with leaving. Those employed in the public administration and safety and education and training sectors were more likely to have left, as were those who were unemployed. Those not participating in the labour force were more likely to have stayed. Although no region-wide research on the motivations and triggers for leaving Northern Australia for interstate are available, research specifically for the NT provides some clues. A 2006 survey of people who had left the NT identified financial incentives, improvements to health services, career opportunities and housing subsidies as the main incentives that might attract them back as residents (Cunningham & Beneforti, 2008). Likewise, a large survey of NT seniors reported that those considering leaving the NT identified the cost of living (and particularly housing) as a motivator for leaving, as well as the desire to be closer to family (Zeng et al., 2015). However, none of these data incorporate full accounts of movements in and out of the region as they preclude non-resident workers who grew markedly in size from 2006–11 (e.g. by 35 per cent in the NT).

Increased International Migrant Numbers in the North

Earlier analysis in this chapter shows that international migration is increasingly important for population growth in Northern Australia. Census data suggest there are significant structural and compositional differences between international migrants to the north and those in the rest of Australia, as well as between those who arrived to the north between 2011 and 2016 (the new arrivals) and longer-term overseas-born residents of the north (who arrived prior to 2011). Not least, the proportion of overseas-born residents in the population of Northern Australia remains significantly below the rest of Australia, at 17 per cent

compared to 29 per cent respectively. This suggests a potential to increase numbers in the north. However, realising increased shares of international migrants will depend on policies targeted towards a complex range of issues, aside from those associated with visas and the use of skilled workers from overseas. These include redressing existing internal distributions of international migrants within Australia, which have long been heavily skewed towards the capital cities and their surrounding urban areas. In Queensland, for example, around 70 per cent of international arrivals settle in Brisbane or on the Gold Coast. In Western Australia, around 90 per cent settle in Perth. In the NT, 75 per cent of recent migrants settle in Darwin or Palmerston (Taylor, 2018). Northern jurisdictions have attracted a low per cent of recent migrants to the individual states or territory. Outside of the large population centres in the north this is lower still.

This analysis highlights some of the challenges inherent in encouraging new overseas migrants to settle and remain in sparsely populated northern regions. While state- and territory-specific migration programs encourage international migration to regional and remote areas (e.g. the Regional Skilled Migration Program), only a small portion of migrants choose to do so.

A further barrier to more substantial international migration flows to the north is attracting and retaining women. The gender ratio for overseas-born in the north in 2016 was 106 men per 100 women (much higher than for Australia-born residents at 95 men per 100 females), and migration flows to and from the region show females contributing at three times the rate on a net basis. The scale of the female deficit in the north is revealed in Figure 10.7, showing the 'missing' females in the north compared to the rest of Australia, broken down by overseas-born females and others. There are large deficits of overseas-born females aged 5–9 years and 60 years onwards. For non-migrants, deficits increase at a constant over the ages and peak from the age of 60 years onwards. A dearth of (non-Indigenous) women hampers the attraction and retention of more women who may be discouraged to move north or encouraged to move south by either a lack of females or more males than females in the populations of the most remote areas.

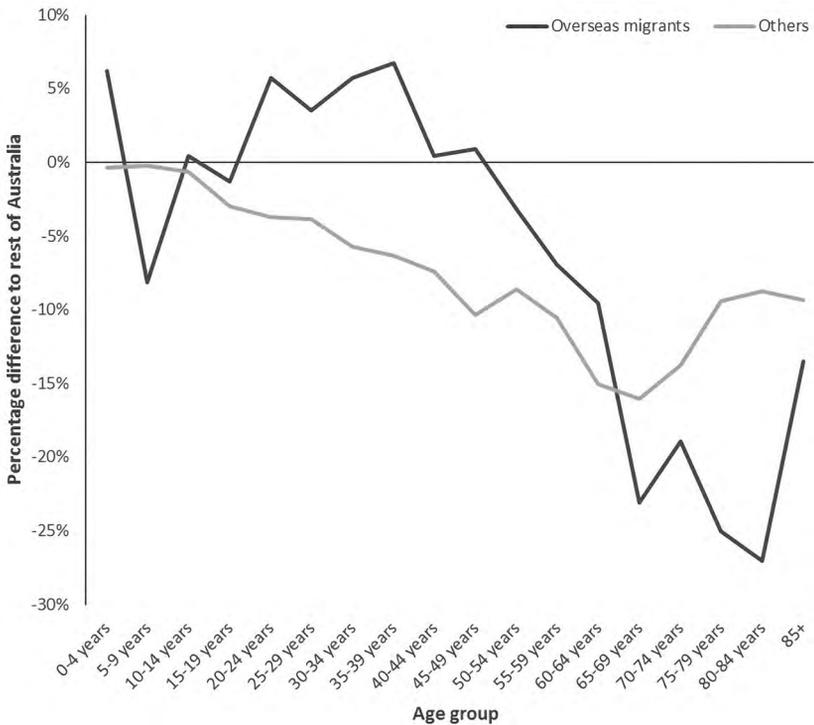


Figure 10.7: The ‘missing’ women of Northern Australia by age group in 2016.

Note: These calculations show the per cent difference in the number of women per 100 men between Northern Australia and the rest of Australia.

Source: Authors’ calculations extrapolated from ABS Table Builder software.

Discussion and Conclusions

Much of the analysis presented in this chapter involves comparisons and contrasts at a range of geographic and demographic levels: Northern Australia compared to the rest of Australia, urban areas in the north compared to others, overseas-born compared to others, and so on. These are just some of the breakdowns for which significant differences in the demographic and economic make-up across the region and between the region and elsewhere can be observed. There are also, of course, substantive intra-regional and cross-border differences warranting further research. For example, some areas like the Pilbara are in the midst of a significant downturn as the price of iron ore has plummeted, while the

economy of the NT is purportedly booming from large resource projects but at the same time has lost record numbers of residents through net negative interstate migration from 2013–14 (Payer & Taylor, 2015).

These sorts of intra-regional differences in population systems and in the inter-relationships between population and economy are acknowledged to some extent in the green and white papers; however, there is little credence given to the importance of such differences for economic and population growth. Population systems in the north are relatively discrete, having been built and maintained around specific economic, strategic and other functions, which may well be temporary and certainly reinforce the sorts of population imbalances common across northern jurisdictions. Discrete areas of economic activity and population settlements themselves are largely poorly integrated when it comes to internal transport and flows of labour and capital (Carson, 2011).

What is common across the region is an increasing dependence on externally sourced capital and labour. Such conditions make the challenge of developing from within difficult and engender circumstances under which divergences in population and socioeconomic conditions between sub-groups, for example, between urban and non-urban residents or educated and less educated residents, can be expected to maintain and grow (Taylor et al., 2011). These sorts of challenges are longstanding for northern peripheral areas:

Taking the structure and functioning of the Arctic regional economies and the degree of economic dependence as a point of departure ... The fundamental problem is still the dependency Arctic regions have on their mother economies in the south. (Winther, 2010, p. 1)

The loss of university entrants to southern regions also emphasises the brain drain and loss of future innovation capacity from established migration patterns.

Several indications are apparent of a growing divide in the north between employed, educated and affluent residents (and non-residents), whose migratory patterns align with continuing such lifestyles, and a relatively non-migratory, under-educated and low-income cohort. The latter includes, but certainly is not limited to, many Indigenous residents in the north. Current approaches and articulations for northern development may identify these issues, but they provide very little in the way of direct

suggestions on avoiding or rectifying the potential for a stuck underclass to continue to emerge and grow. Conversely, population aspirations articulated in the green paper may actually enhance the worrying trend towards a further male bias, a highly mobile high-income class and discrete geographical areas where boom-and-bust cycles attract and then repel increasing numbers of affluent men (Taylor & Carson, 2014). The Pilbara in Western Australia and Nhulunbuy in the NT (both areas suffered significant out-migration when resource-based industries were curtailed) are prime examples where the critical question is ‘who is left?’ after those who have the means to leave have done so.

The focus on urban growth, interstate migration and growing overseas migrant numbers in the green paper says little about how the north might grow from within. Urban zones are already far outstripping ‘the rest’, the number of international migrants is growing significantly (especially the skilled intake) and interstate migration flows are supporting the types of economic activities that might lead to further growth. This leaves the impression of both unrealistic targets in the white paper (as the short section in this chapter on the likelihood of reaching these shows) and an extemporaneous incorporation of the population ambitions embedded in the green paper. While the latter certainly incorporates some relatively sophisticated thinking on issues of population change and growth, the approach is timid in terms of broaching the difficulties of encouraging growth from within. The current iteration of developing the north, therefore, continues the focus on securing growth from externally sourced labour and capital and on sending goods and services overseas—notably to Chinese markets, which are portrayed in both documents as ready and waiting to consume our goods and services in large volumes.

One solution to generating long-term growth from within may be readily apparent from the analysis in this chapter, but also exceedingly difficult: attract and retain more women. The difficulties in achieving this were laconically laid out by Carson and Schmallegger in their 2009 article titled ‘Why don’t women like Darwin?’. In summary, northern peripheries are subject to a degree of demographic lock-in from legacy industries that are highly male preferred (e.g. fishing, agriculture and mining). Such industries ‘trap’ men into patterns of employment that, although changing in line with technological and workforce practices, contribute to a social atmosphere that is not favoured by women. Conversely, large cities

'down south' offer better education and career prospects, more favourable community amenities and are closer and more connected to locations of family members for support with children and finances.

The exploration of the baseline data here might also lead us to question whether and why a much bigger population in the north is inherently desirable, particularly if it is at the expense of a more appropriate population composition or the pristine and unique cultural and landscape environments. The tenet of present and past enquiries and reports on the potential of the region is that bigger is best, and this philosophy negates the importance and influence of the complexity and diversity of population systems in the north. A great array of settlement types, sizes, growth rates, ethnic compositions and workforce profiles (to name a few population characteristics) are found in Northern Australia. It is unrealistic to anticipate that growing the overall population size (in the white paper a fourfold increase was targeted) will deliver the required demographic and economic outcomes for up-scaled economic development. A more nuanced approach to understanding populations is preferable, with economic policies and investments informed by comprehensive scenario modelling using population projections to ascertain likely population outcomes.

Two further and poignant demographic issues are apparent for Northern Australia's development. First, and in line with global trends in developed nations, its population will age in the near future, although the onset of significant ageing is taking place a generation later than in the rest of Australia (Zeng et al., 2015). Population ageing in the north will be profoundly different due to the influence of rapid ageing in the Indigenous population. In the NT, for example, above 5 per cent growth per annum (although from a small base) is projected for Indigenous residents aged 65 years or more in the next 25 years (Zeng et al., 2015). Residents in very remote areas will require specific health and other services to facilitate ageing in place, likely to be the preferred choice for most seniors.

Second, the spatial distribution of Aboriginal and Torres Strait Islander people in Australia has undergone accelerated and dramatic changes in recent decades, with increasing proportions living in major Australian cities and a lower proportion living in the north (Taylor & Bell, 2013). Since World War II, for example, the Indigenous share in states and territories located wholly outside of Northern Australia (i.e. New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory) more than doubled from 21 per cent to 48 per cent (ABS,

2014). More recently, the Indigenous share in Northern Australia declined from 28 per cent to 25 per cent from 2011–16. Despite absolute growth, the share living in the north has declined. From 1981–2006, for example, the Indigenous population of the NT grew by 85 per cent, but its share of the national Indigenous population (which grew by 185 per cent) fell from 18 per cent to 12 per cent, then to 10 per cent in 2011 (Taylor & Bell, 2013). This has affected finances for Northern Australia by changing the distribution of GST revenues to the states and territories and, consequently, the capacity for individual governments to address Indigenous outcomes in northern jurisdictions.

On the whole, the demography of Northern Australia features a range of population and settlement characteristics that are highly related to past pathways for economic development and the role of the region in national and strategic agendas (e.g. as strategically important militarily). These present a range of challenges and opportunities. An increasing focus on international migrants and non-resident workers creates opportunities around education and tourism-related services. The number of intergenerational families is growing, helping to balance out the heavy losses of residents in pre- and early retirement ages and providing social and financial capital to communities despite population ageing. However, the increasing male bias in the Northern Australian population signifies ongoing demographic and social imbalance in communities. To achieve the targets in the white paper will require a very big Australia. Past policies promoting a large population have received significant public backlash and it is interesting that the government has chosen to incorporate such targets, which are perhaps at best aspirational. Most importantly, the rollout of initiatives under the Developing Northern Australia agenda should incorporate sound demographic research, using projections and other forms of modelling, to plot the interplay between population change and economic development.

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