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The Northern Territory’s non-resident workforce in 2016  

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RESEARCH AIM

To examine the size and characteristics of the non-resident workforce in the Northern Territory (NT) in 2016, including comparisons with results from the 2011 and 2006 Australian Bureau of Statistics (ABS) Censuses.

While the Northern Institute’s Research Briefs are generally short papers reporting readily digestible summaries of research results on topical issues, this paper is slightly longer and provides more detail than preceding briefs on non-resident workers. This is due to the significance of the issue at the time of writing, which coincides with the winding-up of the large INPEX construction project in Greater Darwin, the handing down of the 2018 NT Government Budget and its measures associated with non-resident workers, and the release of a Final Report of the Scientific Inquiry into Hydraulic Fracturing in the NT. These topics and their relevance are discussed in the course of this paper.

KEY FINDINGS

- There were 8,700 non-resident workers located in the NT at the time of the 2016 Census. This represented a 67% increase over 2011.
- Non-resident workers comprised almost 8% of the NT workforce in 2016, compared to 5.2% in 2011 and 4.5% in 2006.
- The NT continued to have the largest proportion of non-resident workers of all States and Territories (excluding ACT), at 7.9%, followed by New South Wales (NSW) (1.3%), Western Australia (WA) (1.3%), and Queensland (QLD) (1.1%).
- Non-resident workers made up 10% of the total male workforce and 2% of the female workforce in 2016.
- The 2016 non-resident workforce was even more male dominated than in previous years, consisting of 79% males (or 6,920) and 21% (1,790) females. In 2011 nearly 70% were men.
- More than half (56%) of non-resident workers were employed in Greater Darwin (comprising Darwin, Palmerston and Litchfield). Around 60% of these were associated with construction of the INPEX plant.
- In 2016, the industries with the largest numbers of non-resident workers were in construction (2,260), mining (1,430) and professional, scientific and technical services (1,020). There were also increased numbers in public administration and safety (750) and in health care and social assistance (490).
- The industry with the greatest proportion of non-resident workers continued to be mining (38%). However, numbers had more than doubled in both construction (18%) and professional, scientific and technical services (15%) since 2011.
- The largest group of NT non-resident workers said they resided in QLD (40%) followed by WA (19%) and NSW (16%). Approximately 13% came from Victoria (VIC) and 10% from South Australia (SA). Cairns was the individual town sending most workers to the NT (8% of NT non-resident workers).
Background

This paper provides an update on the NT’s non-resident workforce and follows two prior research briefs on the topic (see Brokensha, Taylor, and Carson, 2013; Carson and Taylor, 2012). The absolute size of the non-resident worker population in the NT has grown rapidly to become proportionally much larger than in any other Australian jurisdiction excluding the Australian Capital Territory (ACT). In a number of key industries, including resource extraction, construction, agricultural production and resource processing technology improvements and changing workforce practices are growing the significance of non-resident workforces in northern parts of Australia and elsewhere in the developed ‘north’ (Taylor and Carson, 2017). The non-resident workforce is therefore litmus of the changing and challenging relationships between jobs and population growth in the NT and across northern Australia, where these industries are prominent (Carson et al., 2011; Taylor, 2016).

In its 2018-2019 Budget, the NT Government introduced a number of key ‘More People’ strategies to boost population numbers and tackle low economic growth (NT Government, 2018-2019 Budget). This included ‘local jobs first’ initiatives to encourage businesses to employ locals over non-resident, fly-in fly-out (FIFO) workers and to motivate non-resident workers to become NT residents. Understanding and profiling this component of the workforce will therefore benefit efforts to attract and retain residents and to understand industry development. In this brief we analyse the size, composition and changing scale of the NT’s non-resident workforce evident in 2016 ABS Census data and compare results to 2011 and 2006.

Methods

An NT ‘non-resident’ worker in the context of this paper is somebody usually resident outside of the NT who said they worked in the NT at the time of the Census (Carson & Taylor, 2012). The Census definition of usual residence is that address at which the person had lived or intended to live for a total of six months or more (ABS, 2016).

The content in this brief mimics those based on 2011 and 2006 Census data to ensure comparability of data, trends and analyses. However, due to significant changes made by the ABS to geographical boundaries, particularly at lower geographical levels, direct comparisons are not always possible. Similar changes apply to other variables including industry of employment information, which was affected by a number of changes in collection methods between the 2011 and 2016 Census and is therefore not directly comparable when measuring longitudinal transitions (ABS 2080.0 - Microdata: Australian Census Longitudinal Dataset, 2011-20).

A number of variables were analysed in line with the preceding briefs: age, sex, Indigenous status, industry of employment, income, usual residence, place of work and the mobility of non-resident workers. The data includes those employed full-time, casually or on a part-time basis. New indicators were also developed for this brief, including the ratio of non-resident to resident workers by industry, the proportion of male and female non-resident workers by industry of employment and country of birth of non-resident workers by usual residence.

Readers should note that the data in this paper are not adjusted for Census counting issues (for example net Census undercount).
Numbers and source regions for NT non-resident workers

The 2016 Census recorded 109,750 people were employed in the NT. Of these, 8,700 (or 8%) worked in the NT but stated they lived elsewhere, compared with 5,200 (or 5%) in the 2011 Census and 3,800 workers (or 4.5%) in 2006. The 2016 numbers were up 67% on 2011 and had more than doubled since 2006. The NT continued to have the largest proportion of non-resident workers of all jurisdictions (excluding ACT which had 13%), at 7.9%, followed by New South Wales (NSW) (1.3%), Western Australia (WA) (1.3%), and Queensland (QLD) (1.1%). Queensland supplied the highest percentage of NT non-resident workers in the 2016 Census (40%), followed by WA (19%) and NSW (16%). Approximately 13% were usual residents in Victoria (VIC) and 10% in South Australia (SA). The major source regions (at the SA4 level) for NT non-resident workers were Cairns (660, or 8% of non-resident NT workers) followed by Perth (390, or 4% of workers). The maps in Figure 1 below show that by proportion source regions were more widespread across Australia in 2011 and more concentrated towards the coastline of Queensland as well as in and around the city of Perth in 2016.

Figure 1: Source regions of NT non-resident workers in 2011 and 2016.

Source: 2011 and 2016 ABS Census using TableBuilder program (ASGS SA4).

Industry of employment, occupations and incomes

The main industries of employment differed for non-resident and resident workers of the NT (Figure 2). For resident workers, public administration and safety (18,210, or 18% of NT resident workers), health care and social assistance (11,260 or 11%) and construction (10,160 or 10%) were prominent. For non-resident workers, unlike the 2011 Census where mining dominated, the construction industry was most prominent in 2016 at approximately 2,260, or 26% of
non-resident workers, up from 14% in 2011 and 20% in 2006. This is likely due to peak employment for the construction of the large ‘INPEX’ gas processing plant near Darwin, which was occurring at the time of the 2016 Census. At its peak the project was purported to have employed up to 8,000 workers, many of whom were non-residents and accommodated at a purpose-built facility just outside of Darwin.

Meanwhile, 1,430 (or 16%) of non-residents were in mining (compared to 17% in 2011, and 12% in 2006) and over 1,000 (or 12%) in professional, scientific and technical services (compared to 4% in 2011, and 5% in 2006). Figure 2b below shows the significant increases in numbers of non-resident workers in the top three industries in 2016. Although ranking proportionally lower due to influxes of workers for the top three industries, there continued to be large numbers of non-resident workers in public administration and safety and in health care and social assistance (9% and 6% of non-resident workers, respectively).

**Figure 2:** Numbers of NT resident and non-resident workers by industry, 2006-2016

*Source: Graphs by authors using 2006-2016 ABS Census data.*
Figure 3 below is a comparison of the last three Censuses showing the proportion of non-resident workers as part of the total workforce for each industry. The industry in which non-resident workers constituted by far the largest proportion of the total industry workforce in 2016 was mining (38%, up from 27% in 2011 and 24% in 2006). The proportion of non-resident workers had more than doubled in both construction (18% in 2016, compared to 8% in 2011 and 12% in 2006) and professional, scientific and technical services (15% in 2016, compared to 6% in 2011 and 4% in 2006). As was the case in earlier years, the agriculture, forestry and fishing industry also had large proportions of non-resident workers (12%, compared to 11% in 2011 and 10% in 2006). A big spike in non-resident workers occurred in the financial and insurance services sector (up to 6%), which may in part be due to the small numbers or restructuring of financial institutions and the sale of the Territory Insurance Office in 2014.

**Figure 3: Non-resident workers as a proportion of the total industry workforce**

*Source: Graph by authors using 2006-2016 ABS Census data.*
Occupations

The occupations with the largest proportions of non-resident workers in 2016 included technicians and trades workers (16% of all workers for this occupation) along with machinery operators and drivers (15%).

While the previous two Census years saw similar distributions of non-resident workers across occupations, there was a substantial increase in technicians and trades workers, constituting 34% in 2016 compared to 23% in 2011 and 29% in 2006 (Figure 4).

**Figure 4: Proportion of non-resident workers by occupations in the NT, 2006-2016**

[Graph showing occupation proportions]

*Source: Graph by authors using 2006-2016 ABS Census data.*

Incomes

Non-resident workers were generally in the higher income brackets, with almost 50% earning over $2,000 a week ($104,000 or more per annum) compared to less than 18% of the resident workforce (10% in 2011). This was double the 2011 figure when a quarter of non-resident workers earned over $2,000 a week. Conversely, non-resident workers made up a lower proportion of lower income earners with less than 18% (32% in 2011) earning under $1,000 per week (under $52,000 per annum), compared with 36% of resident workers (47% in 2011). The highest earners were in construction, mining, and professional, scientific and technical services, where large numbers (9%, 5% and 4% of all non-resident workers respectively) earned over $3,000 or more a week ($156,000 or more per annum).

Incomes were lower for female and Indigenous non-resident workers. Compared to the 50% of overall non-resident workers in the higher income brackets, only 17% of female and 35% of Indigenous non-resident workers earned more than $2,000 a week.
Place of work for non-resident workers

Changes in the non-resident workforce over time and across industries (shown in Figures 2 and 3) are given more context by examining the regional distribution of workers within the NT. In 2011, clusters of non-resident workers were spread across the NT. From a broader regional (SA3) perspective, 26% were working in Greater Darwin (Darwin City, Darwin Suburbs, Litchfield and Palmerston), 14% in the Alice Springs region, and 13% in East Arnhem. Although many non-residents worked in Greater Darwin, they only constituted 2% of the total workforce in that region (meaning non-resident workers were actually greatly unrepresented). The maps below (Figure 5) detail the location of non-resident workers at a narrower SA2 level to highlight the concentration of workers within these regions.

Figure 5: Location of NT non-resident workers in 2011 and 2016

By 2016, 54% of Territory non-residents worked in Greater Darwin and also made up 7% of the total workforce in the region. As can be seen in the 2016 map insert of Greater Darwin, there was a high number (over 3,000 or 35% of all NT non-resident workers) in the Litchfield area (almost exclusively in the suburb of Weddell), compared to only 140 in 2011, shifting the concentration of non-resident workers to outside the Darwin city limits and making the proportion of non-resident workers in other regions (13% in Alice Springs and 9% in East Arnhem) seem less significant. Figure 6b below demonstrates, however, that although the proportion of non-resident workers decreased in all regions except Litchfield, absolute numbers increased in all regions.

The Northern Territory's non-resident workforce in 2016

Figure 6: Non-resident workers in NT regions, 2011 to 2016

Source: 2011 and 2016 ABS Census using TableBuilder program (ASGS-SA3).

The 3,000 Litchfield workers can be linked to the INPEX liquefied natural gas (LNG) project, which experienced its peak construction phase during 2016 and coincided with a 33% rise in non-dwelling construction activities in 2016-17 (Northern Territory Economy Quick Facts, March 2017). The Litchfield cohort included 65% of all Territory non-residents employed in construction, 15% of those in mining, and 71% of those in professional, scientific and technical services. Non-resident workers outside of the Darwin region worked predominantly in mining (for example, 500 in East Arnhem and 340 in Alice Springs).

Other characteristics for NT non-resident workers

Indigenous non-resident worker numbers

In 2016 about 3% (or 280 non-resident workers) identified as Indigenous. In absolute numbers this represents an increase from the previous two Censuses (160 Indigenous non-resident workers in 2011 and 120 in 2006), though as a proportion of the total non-resident workforce there was no real change. Indigenous non-resident workers represented just over 2% of the NT’s Indigenous workforce, a slight increase over 2011 (1%). The most common industries of employment for Indigenous non-resident workers were construction (60 workers) and mining (50).

The industries with the highest proportion of non-residents within the Indigenous workforce were in mining (19%), financial and insurance services (9%), information media and telecommunications (9%), construction (8%), and electricity, gas, water and waste services (8%). However, for most industries, the absolute numbers of Indigenous non-resident workers were very low (fewer than 10 workers per industry) and percentages should therefore be viewed with caution.
Gender balance

Compared with the 2011 and 2006 Census, the total non-resident workforce had not only increased in size and as a proportion of the overall workforce, it had also become a more male dominated workforce. Of the NT’s 8,700 non-resident workers in 2016, only 21% or 1,790 were female. This was down substantially from 2011 and 2006, when women comprised about 30% and 25% respectively. This means 10% of the NT’s male workforce resided outside of the NT in 2016 compared with 2% of the female workforce.

Figure 7 gives an overview of gender distribution and worker residence status across industries in 2016. It shows male dominated industries (led by mining and construction) also had high proportions of non-resident workers. The industries with the highest proportion of female non-resident workers were agriculture, forestry and fishing (3.4%), mining (3.1%), and health care and social assistance (2.9%).

**Figure 7: Residence status and gender of workers by industry (%)**

Source: Graph by authors; 2016 ABS Census data extracted using TableBuilder program.
Internal migration of non-resident workers

In 2016, most NT non-resident workers resided in the same jurisdiction elsewhere in Australia as five years ago in 2011. However, a substantial number of non-resident workers had previously been NT residents, with 608 workers (or 7%) stating they had lived in the NT in 2011 but residing elsewhere in 2016 (including 233 in QLD, 111 in SA, 98 in VIC and 82 in NSW). The modal age group of these workers was 40-49 years, and 62% were male and 37% female. The largest occupational group for former NT residents was professionals (27%), followed by technicians and trades workers (17%), managers (13%) and machinery operators and drivers (12%). Almost 20% worked in public administration and safety, 108 or 18% in mining, 72 or 12% in education and training, 65 or 11% in construction and 51 or 8% in health care and social assistance.

Country of birth of non-resident workers

26% of non-resident workers in the 2016 Census were born overseas. This is an increase from previous Census years (20% of non-resident workers were overseas born in 2011 and 2006). In all three Census years, WA sent the highest proportion of overseas born non-resident workers to the NT (43% of WA non-resident workers were overseas-born in 2016, 29% in 2011 and 28% in 2006), while in absolute numbers QLD continued to be the jurisdiction that sent the highest numbers of overseas born workers to the NT (800 or 9% of all non-resident workers in 2016, 370 or 7% in 2011, and 260 or 7% in 2006).

NT residents working elsewhere

About 1,660 Territory residents, or just under 2% of all NT residents, said they worked elsewhere in Australia in 2016. Most of these were employed in WA (about 450), QLD (390) and NSW (370). NT residents working elsewhere mainly worked in public administration and safety (390 workers or 23%), construction (200 or 12%) and mining (160 or 9%). Prominent occupations were technicians and trade workers (22%), professionals (19%) and community and personal service workers (15%).

Summary & Conclusions

In this brief we have compared and contrasted the numbers, growth, percent, key industries, regions and characteristics of NT non-resident workers, based on 2006, 2011 and 2016 Census data. Non-resident workers have increased significantly in the NT, with 8,700 in 2016 representing a 65% increase since 2011 and more than twice as many workers since 2006. Non-resident workers comprised almost 8% of the NT workforce in 2016, again an increase compared to 5.2% in 2011 and 4.5% in 2006. The NT therefore continued to have the largest proportion of non-resident workers across all jurisdictions (excluding the ACT which draws workers from the surrounding NSW areas), and the non-resident workforce was even more male dominated than in previous years. More than half (56%) were employed in Greater Darwin, with around 60% of these associated with construction of the LNG plant in the Litchfield region. The mining industry continued to have the largest proportion (38%) of non-resident workers, but was overtaken by construction as the industry with the highest absolute numbers in 2016 (2,260 workers).
Growth in the numbers, size and male composition of the non-resident workforce shown in this paper reflect declining local employment and local economic impacts from major projects like the construction of the giant INPEX plant. A recent report to the NT Government in 2017 suggested “...workforce practices for large projects have changed and the proportion of locally sourced labour on the construction of projects is diminishing.” (Taylor and Carson 2017, p. 50), with impacts for population attraction and retention. Earlier research (Taylor and Winter, 2013; Taylor and Carson, 2014) had already anticipated the NT’s very high numbers of non-resident workers and considered possible social and economic outcomes, both during and at the end of the construction period. The NT, and Greater Darwin area in particular, will likely experience the impact of these outcomes over the next few years. The 2018-2019 NT Government Budget has addressed the issue by investing in a number of financial initiatives aimed at decreasing the numbers of non-resident workers and supporting local workers, business and communities (NT Budget 2018-19, Fact sheet ‘Our Priorities: More People’).

In April 2018, the NT Government announced the controversial decision to lift a moratorium on hydraulic fracturing (fracking). This was in response to the release of a Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory which noted potentially adverse social impacts on local communities, stemming from expectations that any onshore shale gas industry will follow a ‘boom and bust’ trajectory. These included rapid regional population increases, additional pressure on service provision and infrastructure, and an influx of non-resident and FIFO workers (especially where these were employed in preference to local workers (Final Report 2018, p. 26). The report included several recommendations to help mitigate these concerns by developing and utilising local skills to benefit local communities.

While the scale of the development of the fracking industry, other mining ventures and ‘big projects’ are still unclear at this early stage, future research should continue to track the characteristics and numbers of non-resident workers to evaluate the success of Budget measures, fracking recommendations and the extent to which local benefits are derived. Changes to numbers and characteristics of non-resident workers will be one indicator against which such evaluations can be made.
References


