

# POPULATION STUDIES RESEARCH BRIEF ISSUE Number 2009036

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## WHY DON'T WOMEN LIKE DARWIN?

### KEY FINDINGS

- Darwin has an estimated sex ratio of about 1.10 (110 males for every 100 females), which is higher than that of regional Northern Territory (1.04), and much higher than that for Australia (0.97);
- Experiences in other developed nations show that cities like Darwin generally have lower sex ratios than the regions around them;
- Women are usually attracted to larger cities in remote areas because they offer continuing education and job opportunities, and provide 'community amenity' important in raising families (particularly with older children);
- Our research suggests that Darwin fails to provide many of the attributes of education, employment and community amenity that women seek;
- The consequences of continuing high sex ratios include greater risk of crime, poor health outcomes, and continuing high population turnover;
- Addressing the issue will require radical changes to approaches to economic and community development.

### RESEARCH AIM

To offer explanations for the unusually high sex ratios (number of males compared to number of females) in Darwin

This research brief draws on data from the Census of Population and Housing provided by the Australian Bureau of Statistics, and from the Northern Territory Population Mobility Survey (TMS) conducted by the Population Studies Group in late 2006. The study is part of a program of demographic research funded in part by the Northern Territory Treasury, the Australian Research Council, and the Northern Territory Research Innovation Fund.

The research has been conducted by  
**Associate Professor  
Dean Carson and  
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### **Background**

A previous Research Brief (2008017) highlighted the unusually high population sex ratio of Northern Territory in comparison with Australia. Based on population estimates derived in part from the 2006 Census of Population and Housing, the Northern Territory has a sex ratio of about 1.06 – or 106 males for every 100 females. The norm for developed nations is somewhere between 0.97 and 1.00 (Australia is 0.97). There are normally slightly more females than males in a population because women have a slightly longer life expectancy. It is not unusual to have high sex ratios in rural and remote areas like the Northern Territory. The north of Europe, northern Russia, and the northern parts of Canada and Alaska all have much higher sex ratios than the more southern parts of those regions. In all these other places, however, sex ratios are lower in the larger cities. This is not the case in the Northern Territory, where Darwin has a sex ratio of about 1.10, compared with 1.04 in regional Northern Territory. Furthermore, the Darwin sex ratio appears to have increased in recent years.

High sex ratios are a problem in human populations (as are very low sex ratios). They are related to high rates of property and personal crime, poor health outcomes, and unstable economic development conditions arising from high rates of population turnover (see research brief 2008025). The aim of this research brief is to consider how the sex ratio in Darwin came to be so unusually high. It concludes with some ideas about how to address the problem.

### **What Women Want**

Several explanations have been offered for why women normally prefer to live in the larger cities in remote areas. The reasons can be summarised into three interrelated factors – education and employment prospects, community amenity, and family formation. Empowerment of women since World War II to engage more fully in higher education and development of careers has been coupled with increasing migration of young women from rural areas to seek new opportunities. These opportunities are normally available in larger cities, particularly those with universities. Movement tends to be to nearby cities, as women often wish to retain ties with family and friends in the rural origins. As a consequence, a pattern of low sex ratios in urban centres and high sex ratios in surrounding regions emerges. Women also move to the cities to seek forms of entertainment and cultural fulfilment. Cities tend to have more galleries and theatres, coffee shops and restaurants and so on. These lifestyle features are often labelled 'community amenity', and include health and social services, parks and places with visual amenity. Women also tend to be more concerned about the opportunities that exist for their own children. Cities are seen as particularly advantageous for older children again because of access to higher education and a variety of employment opportunities.

Places with high sex ratios tend to be those with a continuing focus on 'legacy' industries like fishing, agriculture, and mining. These have traditionally provided more employment for men than for women, but have also become more labour efficient over time, and so have provided less and less employment. Large investment in the infrastructure needed to sustain these industries tends to 'trap' men into patterns of employment and lifestyle (living in mining or construction camps, for example) which exclude women and which create amenity that women do not want. The alternative for women is to move to cities which have more diversified economies and where they can play a role in designing the community amenity. In turn, these cities can become hubs for the redevelopment of regional economies so that regional economic development becomes more diversified and sustainable.

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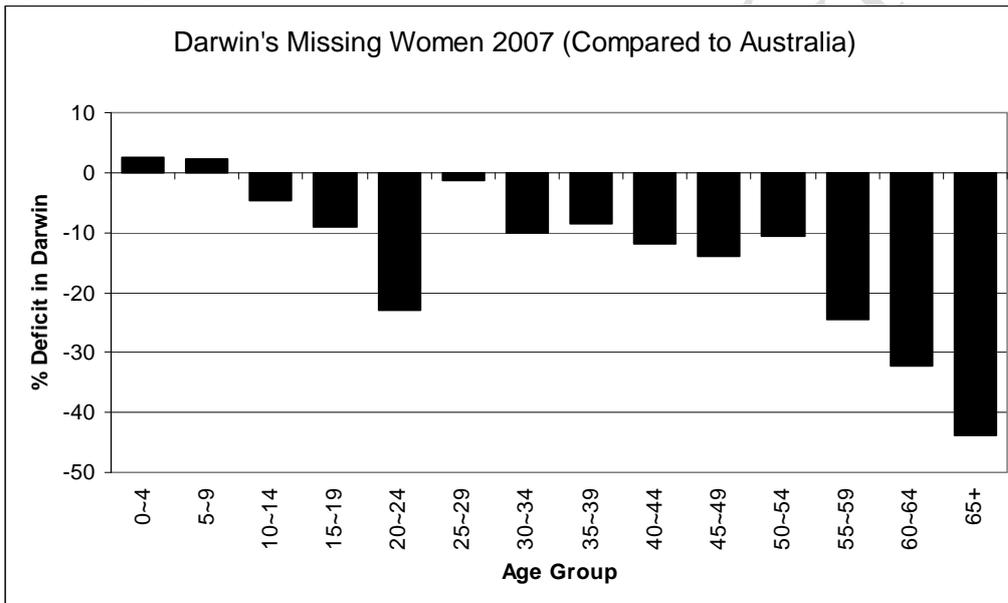
**Data and methods**

The results include a brief statistical analysis of aspects of Darwin's high sex ratio – how sex ratios change with age and according to sector of employment. These data are drawn from the 2006 Census and compare rates in Darwin with the Australian average. We then draw on some results from the Northern Territory Mobility Survey (a telephone survey of 1500 Northern Territorians including over 700 in Darwin) and an analysis of public reaction to the planning of recent community developments such as the Lyons residential estate and construction in the city centre (such as the Convention Centre and Waterfront precinct). We match the characteristics of the public reaction to the theories of education and employment, community amenity, and family formation described above.

**Results**

Figure 1 shows that Darwin has unusually high sex ratios (when compared with Australia) in all age groups, except for among young children. The biggest differences are in the 20-24 year age group, and in the ages 55 years and over.

Figure 1: Age Specific Sex Ratios – Comparison Between Darwin and Australia



Source: Australian Bureau of Statistics Estimated Resident Population, June 2007.

According to the 2006 Census, the largest sectors of employment in Darwin were public administration and defence (20% of the working population), followed by retail trade (10%), construction (8%), accommodation (7%), and transport (5%). Mining, which is the largest contributor to the Northern Territory economy, provided employment for just 1% of the working population. If primarily government sector jobs in health services and education are included with public administration and defence, over 40% of the working population were employed by the public sector in 2006 (the national rate was about 25%).

The construction and transport sectors have high rates of male employment both in Darwin and in Australia generally. In the Darwin construction industry, for example, there were 678 men employed for every 100 women employed. The ratio for Australia was 640 men for every 100 women. In transport, the Darwin ratio was 309 and the

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national ratio was 330. However, the national ratio for employment in public administration and defence was 128, while the Darwin ratio was 148. Australia also had comparatively more women in the retail sector. The Darwin ratios for education, health, and accommodation were similar to the Australian ratios, but there were large proportional declines between 2001 and 2006 in the working population in these sectors in Darwin, while there was growth nationally.

In the Northern Territory Mobility Survey, there were several significant differences in attitudes to aspects of life in Darwin between males and females. Females were significantly less satisfied with crime and public safety issues, shops and restaurants, and the ease of travel to visit family and friends elsewhere (all aspects of community amenity). While men and women had similar levels of satisfaction with higher education, this item was rated as the least satisfactory of all items included in the survey (just 50% of people were satisfied, compared with satisfaction levels around 75% on most other items included in the survey).

In our review of debate around recent development projects in Darwin (publication forthcoming), we noted that concerns were raised about the lack of schools, shops and restaurants factored into new housing developments such as the Lyons residential estate, the general lack of entertainment and recreational facilities located within view of the northern beaches, and the 'crowding out' of long term residents from the city centre by developments focusing on short term visitors and temporary workers.

### **Discussion, Conclusions and Further Research**

A number of explanations for Darwin's unusually high sex ratios are apparent. The specific distortion in sex ratios in the 20-24 year age group reflects an avoidance of Darwin by women making the transition from childhood education to adult education and early career development. This is coupled with a relative absence of women from the major sectors of employment (public administration, construction, transport), and a decline in key sectors of female employment (accommodation and health services). It is also coupled with a general dissatisfaction with the standard of tertiary education. More research needs to be done into this issue, and also how this flows down to perceptions about childhood education.

The distortion in sex ratios among older Darwin residents reflects a failure to retain women as they approach retirement, as their children approach higher education, and as they make the transition to caring for ageing parents and new grandchildren. Younger and older women are less satisfied with the direction of community development in Darwin, and with the absence of community amenity particularly in the suburbs.

One of the reasons for high sex ratios in Darwin is the low levels of intra-state migration that exist in the Northern Territory and have been reported elsewhere (Research brief forthcoming). While nearly two thirds of all residential moves made in other States in Australia occur within the state (so, for example, women from regional New South Wales move to Sydney for higher education), less than 20% of moves by Northern Territory residents occur from one part of the Territory to another. So if women leave regional Northern Territory for education, employment or family reasons, they do not move to Darwin, but to Brisbane, Adelaide, Sydney or Perth. This is different to the pattern observed in other remote regions, and suggests something unusual about the relationship between Darwin and regional Northern Territory.

The corollary to the question "why don't women like Darwin?" may well be "why do men like Darwin so much?", however the data on migration patterns presented elsewhere

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(Research Brief 2008025) suggests that men do not spend much time in Darwin either. Darwin's population turnover rates are the highest in Australia, reflecting a very mobile population, particularly in the two age groups where more women are 'missing' - early career and pre-retirement. These are very important ages for family formation – seeking partners (ages 20s and 30s) and reuniting with ageing parents, and with children and grandchildren (ages 50s and 60s) – as well as for economic development. So the issue of high sex ratios is not just one of the associated crime and health factors, but of economic development. If men do like Darwin so much that they keep women away, that is as much of a problem as women not liking Darwin enough.

To address the problem of high sex ratios in Darwin, radical change is needed across all three areas – education/employment, community amenity, and family formation. Redesign of the role of Charles Darwin University may be a key. Economic diversification, and particularly finding ways to reinvigorate development of services sectors such as tourism, health, knowledge and creative industries is essential. Unlike new projects in construction in particular, and unlike expansion of the public service, creating an economic environment that meets the aspirations of women takes time and is often focused on small scale developments. The irony is that such developments tend to contribute to a greater sense of community and longer term economic growth than 'major projects' alone. Beyond the economic is the greater expense and risk of redesigning Darwin as a living space. The focus needs to shift from provision of housing to provision of community amenity. This is difficult in times of rapid population growth and housing shortage, but is necessary to sustain that growth in the medium to long term and to reduce the extraordinarily high population turnover rates that Darwin currently experiences (among women AND men).

Addressing the family formation issues is in part about addressing the education/employment and community amenity issues. Beyond that, issues of access (to grandparents and social networks, to health services, to recreation and cultural opportunities) and the quality of childhood education have been flagged in our current research, but require further investigation.

On that note, this is obviously a topic that extends well beyond the capacity for summary in a short research brief. Related issues include –

- Demographic implications of patterns of economic development;
- The prospects for tourism development and amenity migration;
- Female employment in the public sector;
- The capacity for Darwin to house older workers and retirees;
- The appropriate design of community amenity in a tropical city;
- The relationship between Darwin and regional Northern Territory;
- The design of education services (particularly higher education) in Darwin.

The Northern Territory Government "2030" master plan alludes to some of these challenges. Research is required to inform decision making and to reduce the risk of entering into radical change. Our current research program allows us to provide broad background to these issues. Our research briefs and more extensive publications will do so, but the challenge is to expand the program to allow for more detailed investigation.

# **Why Women Don't Like Darwin?**

## **An update based on 2011 Census data**

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The Northern Institute | Faculty of Law, Education, Business and Arts

## Introduction

This document updates the original 2008 research brief “Why Don’t Women Like Darwin?” (2009 No.36 - [access here](#)) based on 2011 Census data. The intention is to provide the reader with a short summary on new or significantly modified findings.

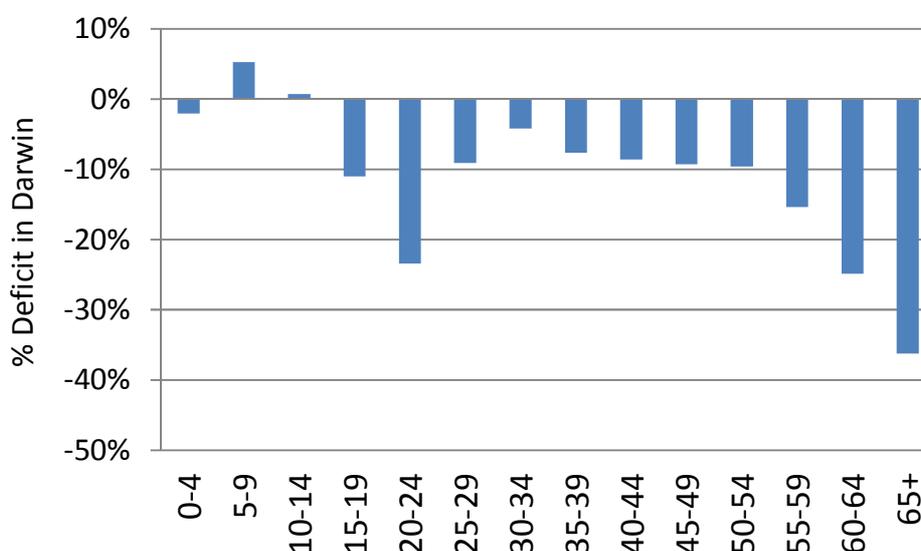
### Updated sex ratios:

- In 2011 there were 121,500 males and 109,900 females in the NT which corresponds to a sex ratio of 111 (111 males for every 100 females), an increase from 2006 (106) and 2001 (110).
- In comparison, the sex ratio for Australia in 2011 was 99, up from 2006 (97) and 2001 (98). In 2011 males outnumber females only in the NT and Western Australia (101).
- In Greater Darwin there were 62,900 males and 57,700 females, a sex ratio of 109, down from 110 in 2006.

### Updated Figure 1:

The updated Figure 1 shows that Darwin still has unusually high sex ratios (when compared with Australia) in all age groups, except among children (5-9 years). In 2006 this exception was found for children 0-4 years and 5-9 years. This means that the sex ratio of young children (0-4) in Darwin has changed and was about as high as the Australian average in 2011. As in 2006, the biggest differences are in the 20-24 year age group, and in the ages 55 years and over.

**Figure 1: Darwin’s ‘missing’ women 2011 (compared to Australia)**



### Undated employment sector:

According to the 2011 Census, the largest sector of employment in Darwin was public administration and defence (22% of the working population, a slight increase from 2006), followed by research and education (13%, slight decrease from 2006), retail trade (9%, slight decrease), construction (9%, slight increase), accommodation (6%, slight increase), and transport (5%, stable). Mining provided employment for only 2% of the working population of Darwin, an increase from 1% in 2006 (Table 1).

The construction and transport sectors have high rates of male employment both in Darwin and in Australia generally, although all these sectors experienced slight decreases in this ratio in Darwin. In the Darwin construction industry, for example, in 2011 there were 640 men employed

for every 100 women employed, down from 678 men for every 100 women (Table 1). The ratio for Australia increased slightly to 656 men for every 100 women, up from 600 men for every 100 women. In the transport industry, the Darwin ratio was 309 and the national ratio was 330. The ratio for employment in public administration and defence was 128 in 2011, closing the gap on the national ratio of 117 in this sector. This is mainly due to a 22% increase of the share of women employed in the public administration sector while the defence sector remained male dominated. The sex ratios in the retail and accommodation sectors are still similar to national ratios and still indicating that these sectors employ more women than men. The research and education sector employs more women in Darwin than nation-wide, with only a slight change in sex ratios between 2006 and 2011.

Table 1: Percentage of people employed in sector in Darwin in out of the total working population in Darwin (%) and sex ratios in different employment sectors in Darwin and Australian-wide – comparison between 2006 and 2011

Employment sector:	%		Sex ratio Darwin		Sex ratio Australia	
	2006	2011	2006	2011	2006	2011
	20	22	148	128	128	117
Public administration and safety / defence						
<i>Defence</i>			507	578	367	347
<i>Public administration</i>			71	55	91	81
<i>Public Order &amp; Safety (Police)</i>			227	184	235	220
Professional, Scientific and Technical Services & Education and Training	14	13	56	57	71	73
Retail trade	10	9	79	76	75	73
Construction	8	9	678	600	640	656
Accommodation	7	6	71	74	76	78
Transport	5	5	309	301	330	331
Mining	1	2	526	441	565	473

### Concluding remark:

Where to for women in Darwin's workforce? While Darwin continues to be attractive for male employment, the share of jobs in the key sectors providing jobs for women (education, accommodation and retail) have all declined since the last census in 2006. However there have been some minor improvements in some of the male-dominated sectors. There are 30% more women, for instance, in public administration and defence than six years ago and construction, transport and mining all now have a higher percentage of women in their workforces. So while traditional employment options may be declining, opportunities are increasing for women prepared to work in the industries that men have always dominated.