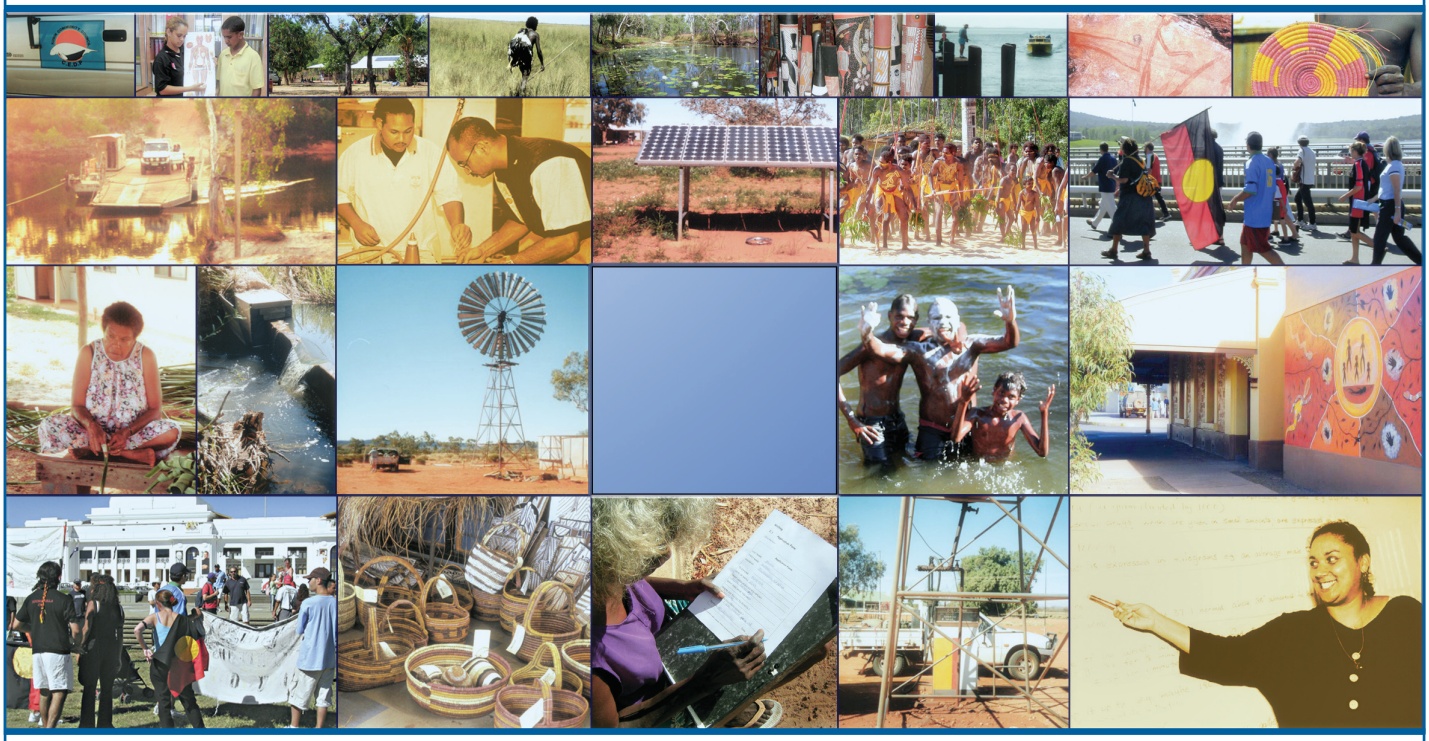
CENTRE FOR ABORIGINAL ECONOMIC POLICY RESEARCH

THE AUSTRALIAN NATIONAL UNIVERSITY

Towards a Gender-Related Index for Indigenous Australians

M. Yap and N. Biddle

CAEPR WORKING PAPER No. 52/2009



ANU COLLEGE OF ARTS & SOCIAL SCIENCES

SERIES NOTE

The Centre for Aboriginal Economic Policy Research (CAEPR) was established at The Australian National University (ANU) in April 1990. From 1990 to 2003 the Centre's main research partner was the Aboriginal and Torres Strait Islander Commission. Since 1 January 1999, CAEPR has operated as a University Centre and is currently funded from a variety of sources including the ANU, Australian Research Council, industry partners, and the Department of Families, Housing, Community Services and Indigenous Affairs.

CAEPR's principal objective is to undertake high-quality, independent research that will assist in furthering the social and economic development and empowerment of Aboriginal and Torres Strait Islander people throughout Australia. Its aim is to be a world-class centre undertaking research on Indigenous economic development issues that combines academic excellence with policy relevance and realism.

CAEPR is currently Australia's major dedicated research centre focusing on Indigenous economic and social policy from a national perspective. The Centre's publications, which include the CAEPR Working Paper series established in 1999, aim to report on Indigenous circumstance, inform public debate, examine government policy, and influence policy formulation.

Working Papers are often work-in-progress reports and are produced for rapid distribution to enable widespread discussion and comment. They are available in electronic format only for free download from CAEPR's website:

<www.anu.edu.au/caepr/>

Enquiries may be directed to:

The Centre for Aboriginal Economic Policy Research
Hanna Neumann Building #21
The Australian National University
Canberra ACT 0200

Telephone 02–6125 0587
Facsimile 02–6125 9730

Professor Jon Altman
Director, CAEPR
College of Arts & Social Sciences
The Australian National University
March 2009

Cover page images courtesy of the Australian Institute of Aboriginal and Torres Strait Islander Studies and CAEPR staff members.

Ministerial Council for Aboriginal
and Torres Strait Islander Affairs

THE AUSTRALIAN NATIONAL UNIVERSITY

Towards a gender-related index for Indigenous Australians

M. Yap and N. Biddle

Mandy Yap is a Research Officer and Nicholas Biddle is a Research Fellow at the Centre for Aboriginal Economic Policy Research, College of Arts and Social Sciences, The Australian National University.

Centre for Aboriginal Economic Policy Research, Working Paper No. 52/2009

ISSN 1442-3871 ISBN 0 7315 4951 1

ABSTRACT

In the United Nations Development Programme Gender-related Development Index, Australia ranks in the top five across 179 countries, suggesting that women are achieving similar outcomes to men in life expectancy, literacy and earnings at the national level, and that the loss of human development due to gender inequality is minor. However, this does not necessarily hold true for all regions or for all population subgroups. There has been extensive research into the gap between Indigenous and non-Indigenous outcomes but very little of this has adopted a gender perspective. Using 2006 Census data, this paper explores the development of a similar gender-related index as a tool to enable a relative ranking of the performance of Indigenous males and females at the regional level across a set of socioeconomic outcomes at the regional level. The index will provide some insights into whether the national picture is representative of the Indigenous population and whether there are spatial variations at the Indigenous region level. For the set of indicators, the results suggest that Indigenous females are faring better than Indigenous males on a whole and at the region level. This is mainly driven by the higher proportion of Indigenous females completing Year 12 and obtaining degree or higher qualifications.

Keywords: Gender, census, Indigenous socioeconomic outcomes, Indigenous Regions.

CAEPR INDIGENOUS POPULATION PROJECT

This project has its genesis in a CAEPR report commissioned by the Ministerial Council for Aboriginal and Torres Strait Islander Affairs (MCATSIA) in 2005. The aim of the paper (published as CAEPR Discussion Paper No. 283) was to synthesise findings from a wide variety of regional and community-based demographic studies. What emerged was the identification of demographic 'hot spots'—particular Indigenous population dynamics in particular regions that give rise to issues of public policy concern. These trends spatially align with specific categories of place that transcend State and Territory boundaries. The 'hot spots' coalesce around several structural settings including city suburbs, regional towns, town camps, remote Indigenous towns, and outstations, as opposed to the more formal regionalised or jurisdictional spatial configurations that have tended to guide and inform Indigenous policy development.

Recognising that the structural circumstances facing Indigenous populations are locationally dispersed in this way, MCATSIA has established an enhanced research capacity at CAEPR to further explore the dynamics and regional geography of Indigenous population and socioeconomic change.

This research activity commenced in late 2007 and is constructed around four discrete yet overlapping projects:

- a detailed regional analysis of relative and absolute change in Indigenous social indicators
- an assessment of social and spatial mobility among Indigenous metropolitan populations
- case-study analyses of multiple disadvantage in select city neighbourhoods and regional centres
- the development of conceptual and methodological approaches to the measurement of temporary short-term mobility.

Working Papers related to these projects are co-badged with MCATSIA and released as part of the CAEPR Working Paper Series. It should be noted that the views expressed in these publications are those of the researcher/s and do not necessarily represent the views of MCATSIA as a whole, or the views of individual jurisdictions.

ACKNOWLEDGMENTS

An earlier version of this paper was presented at the Australian Population Association Conference in Alice Springs and we thank participants at the conference for their useful feedback. The authors are especially indebted to Anne Daly, Janet Hunt and Boyd Hunter for helpful insights and comments on an earlier draft. A number of organisations and individuals provided helpful feedback on an early draft of this work including officers of the Standing Committee for Aboriginal and Torres Strait Islander Affairs (SCATSIA) and the Productivity Commission. The authors are especially grateful to Gillian Cosgrove for her detailed proofing and layout, and Hilary Bek, Geoff Buchanan and John Hughes for expert editorial assistance.

CONTENTS

Executive summary v
Introduction 1
Data and geography 4
Demography 4
Fertility 6
National differences in employment and education 8
A Gender-Related Index for Indigenous Australians 10
GRIFIA: Methodology 10
GRIFIA: Constructing the indices 12
GRIFIA: Ranking regions 15
Summary, implications and further work 16
Notes 18
References 19
Appendix 1 22

FIGURES

Fig. 1. Indigenous Region structure, 2006 2
Fig. 2. Pooled ranking for Indigenous males by quartile, 2006 14
Fig. 3. Pooled ranking for Indigenous females by quartile, 2006 14

TABLES

Table 1. Ratio of Indigenous and non-Indigenous males to females for Indigenous Regions, 2006 ... 3
Table 2. Ratio of males to females by age group for Indigenous Regions, 2006 5
Table 3. Average number of children ever born by age of Indigenous andnon-Indigenous females for Indigenous Regions, 2006 7
Table 4. National difference in education and employment participation between males and females by Indigenous status, 2006 8
Table 5. Variables used to construct the GRIFIA 11
Table 6. Loadings and eigenvalues for the GRIFIA 12
Table 7. Relative and absolute ranking for Indigenous outcomes across Indigenous Regions (GRIFIA), 2006 13
Table A1. Indigenous and non-Indigenous unemployment rates for Indigenous Regions, by gender, 2006 22
Table A2. Indigenous and non-Indigenous labour force participation ratios for Indigenous Regions, by gender, 2006 23
Table A3. Indigenous full-time and private sector employment to population percentages for Indigenous Regions, by gender, 2006 24

continued over page

TABLES *continued*

Table A4. Indigenous and non Indigenous employment to population percentages for Indigenous Regions, by gender, 2006 25
Table A5. Indigenous individual weekly income for Indigenous Region,by gender, 2006 26
Table A6. Indigenous and non-Indigenous completion of Year 12 for Indigenous Regions, by gender, 2006 27
Table A7. Indigenous and non-Indigenous population with degree qualifications and higher for Indigenous Regions, by gender, 2006 28
Table A8. Indigenous and non-Indigenous population without non-school qualifications for Indigenous Regions, by gender, 2006 29
Table A9. Indigenous and non-Indigenous working as managers for Indigenous Regions, by gender, 2006 30
Table A10. Indigenous and non-Indigenous working as managers and professionals for Indigenous Regions, by gender, 2006 31
Table A11. Variations between Indigenous Regions for relative index (male) 32
Table A12. Variations between Indigenous Regions for relative index (female) 33

EXECUTIVE SUMMARY

1. Much of the statistical research on Indigenous Australians focuses on socioeconomic outcomes relative to the non-Indigenous population. However, understanding the disparities within the Indigenous population is equally important for designing evidence-based policy that will lead to sustainable improvement in outcomes. One such source of variation is gender.

2. This paper contributes to existing research in two ways. Firstly, through an analysis of the gender differences in education, employment and income of the Indigenous population at the national level. Secondly, through the development of a gender-related index as a tool to enable the relative ranking of Indigenous males and females at the Indigenous Region level, based on their measured socioeconomic outcomes.

3. In most Indigenous Regions, there are fewer Indigenous males than Indigenous females. For the non-Indigenous population on the other hand, there are more males than females in most non-capital city Regions.

4. Generally, Indigenous women tend to have more children (2.12 per woman) than non-Indigenous women (1.93 per woman). This higher Indigenous fertility rate is largely driven by the high fertility rates of younger Indigenous women, with those aged 15–24 having four times as many children on average compared to non-Indigenous women in the same age group.

5. Nationally, Indigenous and non-Indigenous females are more likely to have completed Year 12 compared to their male counterparts. However, the extent of that gender difference is substantially larger in the Indigenous compared to the non-Indigenous population, with a male-to-female ratio of 0.88 in the former but only 0.98 in the latter. Indigenous females are also more likely to have degree qualifications than Indigenous males.

6. Despite males having lower education outcomes, both Indigenous and non-Indigenous males are more likely to be participating in the labour force. Indigenous males are also more likely to be working in private sector employment and in full-time employment than Indigenous females. Indigenous males who are in the labour force, however, are slightly more likely to be unemployed than Indigenous females.

7. Indigenous males are more likely to be employed as managers. There are, however, more Indigenous females employed as professionals.

8. There is very little difference in the relative ranking of Indigenous males compared to Indigenous females in capital city Regions. The Regions where Indigenous males rank relatively poorly compared to Indigenous females are Ceduna, Kununurra, Broome and Alice Springs. At the other end of the spectrum, Indigenous males are faring relatively well in Mount Isa, Dubbo and non-metropolitan Victoria.

9. When Indigenous males and females are combined in a single pooled ranking, Indigenous males were ranked lower than Indigenous females in eight out of the 37 Indigenous Regions. The magnitude of that difference ranges from Indigenous males being ranked 20 places (out of 74) higher in South Hedland to Indigenous females being ranked 26 places higher in Broome.

10. The major limitation of the analysis in this paper is that the ranking holds true only for the set of variables used to create the index. If a different set of variables were included, a different picture is likely to emerge. In the recently released Human Rights and Equal Opportunity Commission report on

gender equality, two significant issues facing Indigenous women were family violence and the need for Indigenous female leadership to enable community support and strengthening (HREOC 2008). There are other factors not captured in the census such as life expectancy, imprisonment rates, incidence of domestic violence, suicide rates and substance abuse rates, which are equally important when planning policies for addressing Indigenous disadvantage. Further work will involve extending the index to cover as many of these factors as possible.

INTRODUCTION

In many developing countries, gender disparity in the achievement of education and employment outcomes tends to hinder economic growth and improvements in socioeconomic outcomes of the population (World Bank 2003). The recognition of the role that gender can play in development policy is evident through the third Millennium Development Goal, which is explicitly focused on promoting gender equality and empowering women in particular in terms of education attainment. The importance of considering gender has also led the United Nations Development Programme (UNDP) to extend its Human Development Index (HDI) to better capture the gender dimension of development through its Gender-related Development Index (GDI). The UNDP produces the HDI and GDI for 177 countries in their annual reporting of human development to rank countries based on achievements in life expectancy, adult literacy, school enrolments and earnings, with the latter noting differences in gender achievements across the components.

In 2008, an HDI score of 0.962 placed Australia third amongst the 177 countries considered. Australia also ranked second based on the GDI score (UNDP 2008). This suggests that relative to other countries and at the national level, women are achieving similar outcomes to men, at least in the three components that are used to construct the index. However, the HDI and GDI scores mask large disparities within countries that go beyond gender-related disparities. Similar to New Zealand, Canada and the United States, Australia has a high ranking on the HDI, yet an Indigenous population with a substantially lower life expectancy, lower literacy and enrolment rates and lower employment. Cooke et al. (2007) calculated an HDI score for Indigenous Australians for 2000–01, and estimated a gap of 0.184 in favour of the non-Indigenous population. Indeed, the HDI score for Indigenous Australians would give the population a rank of 103, analogous to a medium human development country.

In Australia, there has been a large amount of research looking separately at gaps between the total male and female population and between Indigenous and non-Indigenous Australians. Research on the first issue has focused to a certain extent on the gender wage gap that persists, despite females having higher rates of educational attendance and attainment (Equal Opportunity for Women in the Workplace Agency (EOWA) 2008; Human Rights and Equal Opportunity Commission (HREOC) 2008; International Trade Union Confederation (ITUC) 2008). The large gap between Indigenous and non-Indigenous Australians across a range of socioeconomic outcomes was identified by the Prime Minister Kevin Rudd in his apology to the Stolen Generations on 13 February 2008 in which he set himself and his government a number of concrete targets to be achieved in terms of 'closing the gap' (Rudd 2008).

The evidence concerning the disadvantaged circumstances faced by the Indigenous population is well documented (Altman 2000; Altman, Biddle & Hunter 2008; Daly & Hawke 1994; SCRGSP 2005, 2007). However, the gender differences within the Indigenous community have received far less attention, despite the fact that in most parts of the world Indigenous women are among the most marginalised groups, suffering discrimination on the basis of both their sex and ethnicity (Banda & Chinkin 2004).

In this paper, we explore the gender disparities within the Indigenous population across a set of socioeconomic outcomes from the most recent (2006) Census of Population and Housing. In doing so, this paper contributes to existing research in two ways. Firstly, the gender differences in education and employment at the national level are analysed. Secondly, a Gender-Related Index for Indigenous Australians (GRIFIA) is developed, a tool to enable the relative ranking of Indigenous males and females at the Region level based on their measured socioeconomic outcomes.

UNDP: United Nations Development Programme

HDI: Human Development Index

GDI: Gender-related Development Index

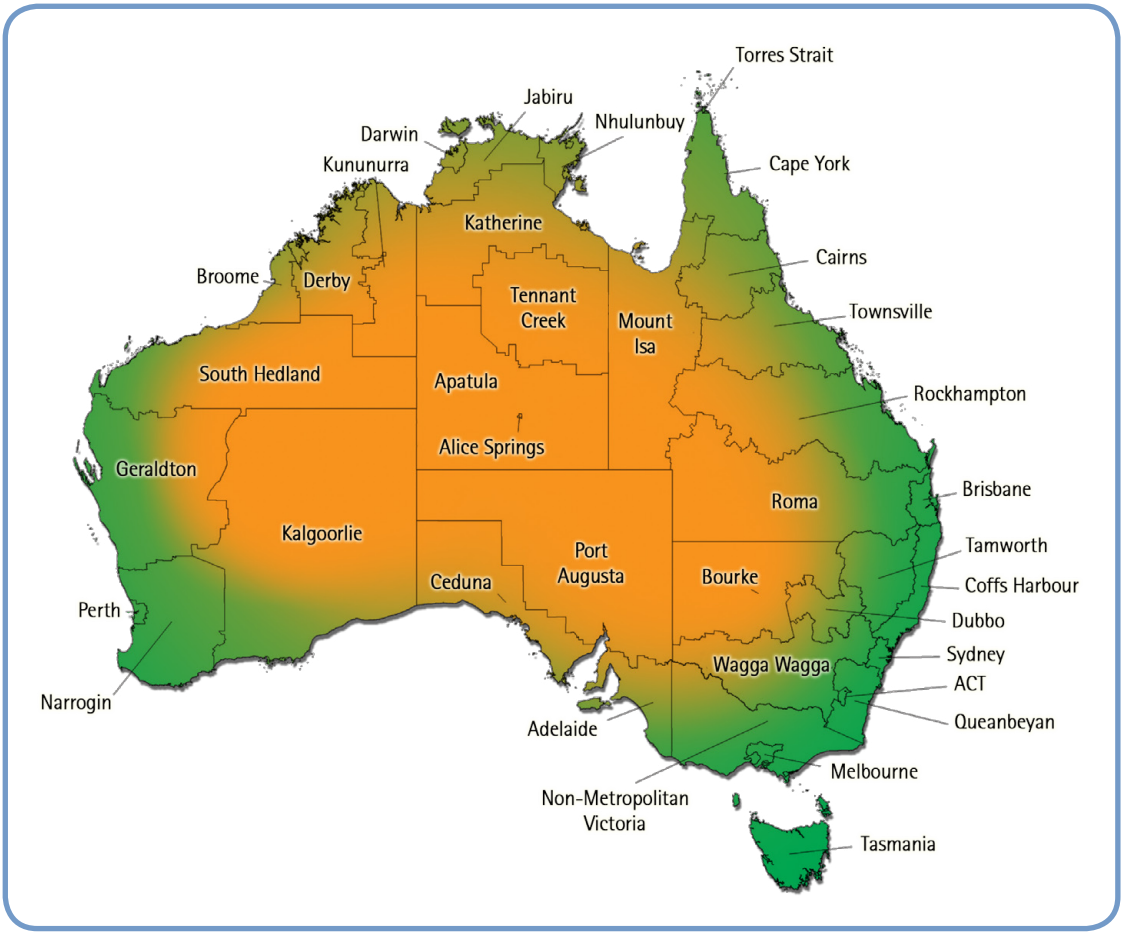
EOWA: Equal Opportunity for Women in the Workplace Agency

HREOC: Human Rights and Equal Opportunity Commission

ITUC: International Trade Union Confederation

GRIFIA: Gender-Related Index for Indigenous Australians

Fig. 1. Indigenous Region structure, 2006



The extent to which Indigenous males and females differ in their socioeconomic outcomes is an important avenue of research from a social justice position alone. However, understanding the differences at a regional level will enable a more nuanced approach to Indigenous development, especially as input into policy formulation at the regional level. There is substantial evidence to suggest place matters and understanding these differences helps ensure that services or policies are being targeted at areas of greatest needs (Baum 2006; Biddle 2009; Stimson, Baum & O'Connor 2003).

Throughout this paper, indicators such as employment, education and income will be discussed partly because these variables are currently available from the 2006 Census, but most importantly because policies so far have mainly centred on these issues (e.g. the Australian Employment Covenant, the education revolution), and because of the link between the two as a pathway towards income generation.

While we feel that the GRIFIA developed for this paper captures a number of important aspects of socioeconomic status, relying on data from the census means that it is only ever going to be a partial measure. For this reason, in the final section of this paper we sketch out an agenda for future research that will move towards a more comprehensive measure. In the next section of the paper, however, we outline the data and geography used in order to identify some of the constraints.

Table 1. Ratio of Indigenous and non-Indigenous males to females for Indigenous Regions, 2006

	Indigenous		Non-Indigenous		Ratio males to females[a]	
Indigenous Region	Males ('000)	Females ('000)	Males ('000)	Females ('000)	Indigenous	Non-Indigenous
Queanbeyan	4.36	4.30	142.44	146.57	1.02	0.97
Bourke	3.73	3.82	16.92	16.07	0.98	1.05
Coffs Harbour	19.77	20.28	613.51	645.49	0.97	0.95
Sydney	20.52	21.29	1849.00	1917.56	0.96	0.96
Tamworth	7.23	7.49	87.79	89.41	0.97	0.98
Wagga Wagga	8.22	8.09	205.11	207.63	1.02	0.99
Dubbo	4.49	4.70	36.04	37.18	0.96	0.97
Melbourne	6.99	7.15	1645.83	1724.71	0.98	0.95
Non-Met. Victoria	7.70	8.22	619.08	640.89	0.94	0.97
Brisbane	20.35	21.02	1176.05	1227.88	0.97	0.96
Cairns	8.91	9.36	83.44	82.82	0.95	1.01
Mt Isa	3.39	3.61	10.21	8.64	0.94	1.18
Cape York	3.41	3.54	2.74	2.19	0.96	1.25
Rockhampton	7.53	7.58	183.08	182.37	0.99	1.00
Roma	5.95	6.30	138.37	141.62	0.94	0.98
Torres Strait	3.50	3.60	0.68	0.57	0.97	1.19
Townsville	9.36	9.67	151.73	148.69	0.97	1.02
Adelaide	8.31	8.68	644.92	673.22	0.96	0.96
Ceduna	0.96	1.07	15.29	14.60	0.90	1.05
Port Augusta	3.13	3.32	35.13	33.99	0.94	1.03
Perth	10.51	10.82	655.99	679.65	0.97	0.97
Broome	1.79	1.77	3.99	3.66	1.01	1.09
Kununurra	2.09	2.25	2.05	1.72	0.93	1.19
Narrogin	4.20	4.25	149.94	150.43	0.99	1.00
South Hedland	2.90	2.77	16.60	13.80	1.05	1.20
Derby	2.15	2.28	1.16	0.93	0.94	1.25
Kalgoorlie	2.58	2.64	22.48	20.23	0.98	1.11
Geraldton	2.65	2.85	22.91	22.08	0.93	1.04
Tasmania	8.28	8.44	213.09	222.87	0.98	0.96
Alice Springs	2.09	2.41	8.71	8.81	0.87	0.99
Jabiru	4.55	4.60	1.25	0.93	0.99	1.34
Katherine	4.09	4.18	3.57	3.23	0.98	1.11
Apatula	4.48	4.55	1.03	0.87	0.98	1.18
Nhulunbuy	4.20	4.34	2.69	2.13	0.97	1.26
Tennant Creek	1.64	1.62	0.87	0.75	1.01	1.15
Darwin	5.22	5.54	44.84	41.50	0.94	1.08
ACT	1.92	1.93	149.45	155.06	0.99	0.96
Australia—Total	**223.1**	**230.3**	**8957.9**	**9270.7**	**0.97**	**0.97**

Note: a. A ratio greater than 1 = more males than females; a ratio less than 1 = more females than males.

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

DATA AND GEOGRAPHY

The data and geography used in this paper is outlined in more detail elsewhere (Biddle 2009; Biddle, Taylor & Yap 2008; Taylor & Biddle 2008). In summary, the data in this paper comes from the 2006 Census, focusing on those who identify as being Indigenous (Aboriginal, Torres Strait Islander or both) and making comparisons with those who identify as being non-Indigenous. This is done separately for males and for females. Those who do not state their Indigenous status are excluded from the analysis.

AIGC: Australian Indigenous Geographical Classification

The geographic unit of analysis used to look at the distribution of outcomes is the Indigenous Region. These are the least disaggregated level of geography in the Australian Indigenous Geographical Classification (AIGC) and in 2006 there were 37 Indigenous Regions. The boundaries and nomenclature are given in Fig. 1.

DEMOGRAPHY

Before considering socioeconomic differences between males and females, there is a need to examine the age and sex composition of the Indigenous and non-Indigenous population. Nationally, the Indigenous population tends to have a younger age profile when compared to the rest of the population, due for the most part to higher fertility, lower life expectancy, and the high probability that a child of an Indigenous and non-Indigenous couple is identified as being Indigenous (ABS 2008b). For both the Indigenous and non-Indigenous populations, there were more females than males, with a ratio of 0.97 males to every female for both populations in 2006.

The aforementioned population/sex ratios vary by Indigenous Region, especially for the non-Indigenous population. This is shown in Table 1, with a ratio greater than one meaning that there are more males than females in the Region, and a ratio less than one meaning that there are more females than males.

In most Indigenous Regions, there are fewer Indigenous males than Indigenous females. The exceptions to this observation are Queanbeyan, Wagga Wagga, Broome, South Hedland and Tennant Creek. For the non-Indigenous population on the other hand, there are more males than females in most non-capital city Regions, with Jabiru (1.34) and Nhulunbuy (1.26) displaying the highest ratios.

The Indigenous Region with the lowest population/sex ratio in Australia for the Indigenous population is Alice Springs (0.87). Coffs Harbour and Melbourne are the two Indigenous Regions with the lowest population/sex ratio for the non-Indigenous population (0.95). Interestingly, in many Regions, where the ratio of Indigenous males to Indigenous females is less than one, the ratio of non-Indigenous males to non-Indigenous females is more than one. Darwin was the only capital city in which there were more males than females with a population/sex ratio of 1.08 for the non-Indigenous population. For the Indigenous population, there were more females than males in all the capital cities.

Nationally, the most likely explanation for a lower male to female ratio is a higher rate of age-specific mortality for males and the resulting gap in life expectancy. A non-Indigenous female can expect to live 83.5 years and a non-Indigenous male can expect to live 78.7 years (ABS 2007b). While there are a number of difficulties in estimating life expectancy for the Indigenous population, the most recent estimates suggest values of 66.9 years for males and 72.6 years for females (ABS 2008a).

Table 2 provides a sex breakdown by age for the Indigenous and non-Indigenous population by Indigenous Regions, to further draw out the composition of the two populations.

Table 2. Ratio of males to females by age group for Indigenous Regions, 2006[a]

	Indigenous				Non-Indigenous			
Indigenous Region	Aged 0–14	Aged 15–24	Aged 25–54	Aged 55+	Aged 0–14	Aged 15–24	Aged 25–54	Aged 55+
Queanbeyan	1.06	1.15	0.90	0.89	1.07	1.08	0.98	0.96
Bourke	1.04	1.03	0.99	0.86	1.04	1.01	0.99	0.98
Coffs Harbour	1.07	1.10	0.89	0.93	1.10	1.10	0.98	0.92
Sydney	1.11	1.10	0.90	0.84	1.10	1.05	0.99	0.91
Tamworth	1.08	1.09	0.88	0.93	1.07	1.06	1.00	0.94
Wagga Wagga	1.02	1.09	0.96	0.88	1.07	1.06	1.00	0.92
Dubbo	1.17	0.96	0.84	0.94	1.08	1.06	0.99	0.95
Melbourne	1.03	1.04	1.00	0.84	1.10	1.06	0.99	0.90
Non-Met. Victoria	1.06	1.03	0.93	0.93	1.09	1.09	0.98	0.93
Brisbane	1.08	1.06	0.93	0.82	1.10	1.05	0.98	0.94
Cairns	1.07	1.06	0.96	0.76	1.06	1.01	0.95	1.04
Mt Isa	1.09	0.99	0.95	0.85	0.92	1.01	0.98	1.16
Cape York	1.06	0.92	1.00	0.95	0.80	0.99	0.94	1.49
Rockhampton	1.05	1.05	0.93	0.93	1.05	1.04	0.97	0.99
Roma	1.07	1.10	0.87	0.96	1.08	1.06	0.97	0.96
Torres Strait	1.13	1.03	0.91	0.79	0.72	0.72	1.00	1.70
Townsville	1.06	1.08	0.94	0.79	1.05	1.02	0.99	0.97
Adelaide	1.08	1.03	0.94	0.82	1.10	1.08	1.01	0.89
Ceduna	1.17	1.02	0.91	0.68	1.03	1.12	1.00	0.94
Port Augusta	1.04	1.07	0.98	0.82	1.02	1.07	1.01	0.94
Perth	1.06	1.07	0.94	0.81	1.09	1.07	0.98	0.92
Broome	0.99	1.11	1.03	0.69	0.97	0.81	0.96	1.40
Kununurra	1.11	1.00	0.93	0.85	0.86	1.00	0.99	1.22
Narrogin	1.07	1.06	0.92	0.88	1.06	1.08	0.97	0.97
South Hedland	1.08	1.04	1.01	0.66	0.90	0.89	1.01	1.45
Derby	1.05	0.98	0.98	0.95	0.74	0.90	1.00	1.38
Kalgoorlie	1.17	0.87	0.94	0.93	0.94	0.99	1.02	1.04
Geraldton	1.02	1.05	0.98	0.91	1.01	1.02	0.97	1.05
Tasmania	1.07	1.05	0.89	1.02	1.11	1.07	0.98	0.93
Alice Springs	1.23	1.03	0.88	0.74	1.06	0.97	0.96	1.10
Jabiru	1.09	0.93	1.00	0.80	0.98	0.61	0.97	1.47
Katherine	1.08	1.06	0.92	0.88	0.89	0.93	0.97	1.37
Apatula	1.04	1.10	1.01	0.63	0.89	0.50	1.12	1.50
Nhulunbuy	1.15	1.05	0.90	0.84	0.85	0.98	1.01	1.47
Tennant Creek	1.10	1.20	0.88	0.79	0.90	0.91	0.92	1.36
Darwin	1.10	1.06	0.96	0.67	0.96	1.05	0.95	1.17
ACT	1.04	1.07	0.94	0.91	1.08	1.09	0.98	0.92
Australia—Total	**1.08**	**1.06**	**0.93**	**0.85**	**1.09**	**1.06**	**0.99**	**0.92**

Note: a. A ratio greater than 1 = more males than females; a ratio less than 1 = more females than males.

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Across most Indigenous Regions, there are many more young males aged 0–14 and 15–24 relative to females in the Indigenous and non-Indigenous populations. This is an important point, as research in developing countries indicates that a gender imbalance towards young men can result in social ills such as violence and crime (Hesketh & Xing 2006). This is a potential area of future research for the Australian Indigenous population.

The high ratio of males to females amongst the young quickly reverses when older age groups are analysed. In all the Indigenous Regions with the exception of Tasmania, Indigenous females over 55 outnumber Indigenous males of the same age group, with the difference highest in Ceduna, Broome, South Hedland, Apatula and Darwin.

One of the biggest differences between the Indigenous and non-Indigenous populations is that for the latter, Indigenous Regions which Table 1 showed had a high population/sex ratio of males to females appear to be mainly driven by the larger male to female ratio in the older age group (55 years and over). In many Indigenous Regions in the Northern Territory, non-Indigenous males outnumber females by at least 36 persons per hundred in the age group 55 years and over. For the Indigenous population on the other hand, where the differences are significant, the ratio is mainly in favour of females to males.

FERTILITY

The fertility rate has important implications for the composition of any population, and it impacts on potential development options for females. Australia's total fertility rate has been on a decline since the 1970s and is now 1.93 babies per woman, below the replacement rate of 2.1 (ABS 2007a). Fertility is not only important as a source of population growth, but also important in ensuring that there is a continuous workforce in place to support the non-working population. Australia's population is rapidly ageing, and this is partly attributable to the declining fertility rate experienced in the last 30 years. The implications of an ageing population on the workforce and economy have been widely discussed and debated (Day & Dowrick 2004; Productivity Commission 2005; Treasury 2002, 2007). One of the potential reasons for low and declining fertility is that women are participating at higher rates in education and employment. As such, there are increased opportunity costs associated with having children, resulting in females having children later in life, and fewer children over their lifetime.

On the whole Indigenous women tend to have more children (2.12 babies per woman) than non-Indigenous women (1.93 babies per woman). This higher Indigenous fertility rate is largely driven by the high fertility rates at younger ages, with the median age of Indigenous mothers at 24.6 years being six years lower than the median age of all mothers at 30.8 years (ABS 2007a: 32). An indication of the distribution of fertility rates is given in Table 3, which shows the average number of children ever born for those aged 15–24 and those aged 25 years and over. Results are given for Indigenous females, non-Indigenous females and the ratio between the two.

Nationally, Indigenous women aged 15–24 have on average four times as many children than non-Indigenous women in the same age group. For women 25 years and over, that difference is 1.3 times. Across all the Indigenous Regions, Indigenous women also have higher fertility rates than non-Indigenous women. Once again, the ratios are highest amongst the young. For example, in six mainly remote Regions, Indigenous females aged 15–24 are having five times as many children or more on average than non-Indigenous females.

In the major capital cities, Indigenous 15–24 year olds have on average 0.30 children, lower than the national Indigenous average of 0.47. In Jabiru, Katherine, Mt. Isa and Kununurra, the means are 0.80 or higher. For the older age group, in the major capital cities, Indigenous women have on average 2.30 children,

Table 3. Average number of children ever born by age of Indigenous and non-Indigenous females for Indigenous Regions, 2006

	Indigenous females		Non-Indigenous females		Ratio	
Indigenous Region	Aged 15–24	Aged 25+	Aged 15–24	Aged 25+	Aged 15–24	Aged 25+
Queanbeyan	0.47	2.77	0.15	2.22	3.1	1.2
Bourke	0.63	3.05	0.27	2.36	2.4	1.3
Coffs Harbour	0.37	2.65	0.14	2.20	2.6	1.2
Sydney	0.32	2.33	0.09	1.82	3.7	1.3
Tamworth	0.54	2.96	0.20	2.39	2.8	1.2
Wagga Wagga	0.45	2.86	0.17	2.41	2.6	1.2
Dubbo	0.56	3.07	0.23	2.46	2.4	1.2
Melbourne	0.30	2.14	0.07	1.84	4.5	1.2
Non-Met. Victoria	0.44	2.74	0.14	2.33	3.2	1.2
Brisbane	0.34	2.42	0.12	1.98	2.8	1.2
Cairns	0.53	2.84	0.16	1.99	3.4	1.4
Mt Isa	0.80	3.19	0.22	2.10	3.6	1.5
Cape York	0.60	2.75	0.18	1.89	3.4	1.5
Rockhampton	0.47	2.88	0.22	2.34	2.2	1.2
Roma	0.50	3.00	0.21	2.41	2.4	1.2
Torres Strait	0.65	3.06	0.22	1.82	3.0	1.7
Townsville	0.43	2.80	0.16	2.19	2.7	1.3
Adelaide	0.38	2.48	0.11	2.01	3.4	1.2
Ceduna	0.44	2.87	0.19	2.42	2.3	1.2
Port Augusta	0.55	2.75	0.26	2.38	2.1	1.2
Perth	0.44	2.68	0.10	1.97	4.4	1.4
Broome	0.58	2.98	0.11	1.58	5.5	1.9
Kununurra	0.84	3.23	0.11	1.60	8.0	2.0
Narrogin	0.51	2.97	0.17	2.36	2.9	1.3
South Hedland	0.56	2.86	0.18	1.85	3.1	1.5
Derby	0.79	2.95	0.21	1.74	3.7	1.7
Kalgoorlie	0.64	2.84	0.24	2.21	2.7	1.3
Geraldton	0.62	3.10	0.16	2.33	3.9	1.3
Tasmania	0.36	2.48	0.17	2.17	2.1	1.1
Alice Springs	0.58	2.51	0.15	1.74	3.9	1.4
Jabiru	0.91	2.72	0.21	1.64	4.2	1.7
Katherine	0.81	2.90	0.16	1.96	5.0	1.5
Apatula	0.73	2.47	0.05	1.39	15.8	1.8
Nhulunbuy	0.77	2.61	0.14	1.90	5.6	1.4
Tennant Creek	0.78	2.81	0.15	1.92	5.1	1.5
Darwin	0.43	2.63	0.15	1.80	2.9	1.5
ACT	0.22	2.11	0.07	1.82	3.0	1.2
Australia—Total	**0.47**	**2.68**	**0.11**	**2.01**	**4.2**	**1.3**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

once again below the average for Indigenous women nationally. Outside the capital cities, therefore, the average number of children is above the national average with particularly high rates in Kununurra, Geraldton and Mt. Isa. This is likely to have impacts on these women's participation in education and the labour market.

NATIONAL DIFFERENCES IN EMPLOYMENT AND EDUCATION

Education and employment have long been championed as a tool of empowerment and the keys to eradicating poverty (United Nations Secretariat 2008; World Bank 2001). They can affect wellbeing in two ways. Firstly, they allow for human skills to be increased for economic production, and secondly, they enlarge individual opportunity by giving people new possibilities by which to enrich their lives (Lanzi 2007: 426). This section examines the gender differences pertaining to education and employment at the national level, both of which form the basis of human capital formation.

Table 4. National difference in education and employment participation between males and females by Indigenous status, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Key indicators	Males (%)	Females (%)	Males (%)	Females (%)	Indigenous	Non-Indigenous
Education—Secondary						
Completed Year 12	20.74	23.44	46.91	47.90	0.88	0.98
Education—Non-school						
Degree or higher	3.26	5.40	17.20	19.31	0.61	0.89
Without non-school qualifications	75.72	76.72	49.01	59.06	0.99	0.83
Employment						
In the labour force	60.79	48.74	71.95	58.43	1.25	1.23
Unemployed[a]	15.71	15.32	4.99	5.10	1.03	0.98
Employed	51.24	41.28	68.35	55.46	1.24	1.23
Employed as managers[b, c]	6.32	5.35	16.56	10.09	1.18	1.64
Employed as managers and professionals[b, c]	14.86	20.97	34.41	33.41	0.71	1.03
Employed full-time[d]	65.98	46.75	79.83	50.67	1.41	1.57
Employed in the private sector[e]	76.64	70.96	88.13	82.18	1.08	1.07
Employed full-time and in the private sector[f]	52.06	31.28	69.38	40.15	1.66	1.73
CDEP participation[b]	13.00	9.85	n.a.	n.a.	1.32	n.a.

Notes:
a. Calculated as a percentage of those in the labour force.
b. Calculated for those who are employed.
c. Managers and professionals are defined as per the 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO 2006).
d. Calculated as a percentage of those employed full-time and part-time.
e. Calculated as a percentage of those employed in the private and public sector.
f. Calculated as a percentage of those employed (full-time and part-time) and (private and public).

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

ANZSCO: Australian and New Zealand Standard Classification of Occupations

Table 4 shows the national difference in education and employment participation between males and females by Indigenous status. The first four columns show the percentage of Indigenous and non-Indigenous males and females with particular education and employment indicators, while the final two columns show the ratio of the male to female percentages. All percentages are calculated on the population aged 15 years and over. In addition, the unemployment percentages are for those in the labour force only. Furthermore, managers and/or professionals, full-time and/or private sector employment as well as Community Development and Employment Projects (CDEP) program percentages are for those who are employed only.

CDEP:
Community
Development
Employment
Projects

Nationally, Indigenous and non-Indigenous females were more likely to have completed Year 12 compared to their male counterparts. However, the extent of that gender difference is substantially larger in the Indigenous population than the non-Indigenous population, with a male to female ratio of 0.88 in the former but only 0.98 in the latter. Indigenous females are also more likely to have degree qualifications (or higher) compared to Indigenous males. This is in line with what is happening generally as more males (both Indigenous and non-Indigenous) tend to be engaged in Vocational Education and Training rather than pursuing tertiary qualifications (ABS 2004). The gender differences observed in post-school qualifications are larger than those for completion of Year 12.

Despite males having lower education outcomes, Indigenous and non-Indigenous males are more likely to be participating in the labour force. Indigenous males are also more likely to be working in private sector employment and in full-time employment compared to females. This is not surprising given that a large proportion of females spend a substantial amount of their time engaged in unpaid work, with 65 per cent of unpaid work in Australia done by women in 1997 (ABS 2000). Furthermore, according to the most recent Census, one in every four Indigenous females aged between 25 and 44 spends 30 hours on unpaid domestic work per week compared to around 5 per cent of Indigenous males in the same age group.

Although they are more likely to be employed than Indigenous females, Indigenous males are slightly more likely to be unemployed. This could reflect in part the lower educational attainment of Indigenous men. However it also represents a divergence in the type of disengagement with the labour market between Indigenous males and females, with the latter more likely to not be in the labour force.

When discussing Indigenous employment, the CDEP scheme remains a key component, as it is the predominant form of local employment in a number of remote areas. There are many more male CDEP participants than females. Across all age groups, Indigenous males had higher CDEP participation rates compared to Indigenous females with the peak of participation occurring at age 20–24 for both groups (Biddle, Taylor & Yap 2008). While male participation rates tend to fall above 30 years of age, the opposite is observed for females, where participation appears to increase in the older age groups. Nationally, Indigenous males are also more likely to be employed as managers. There are, however, more Indigenous females employed as professionals, indicating the different types of industries males and females are most likely to be employed in. According to the most recent Census, Indigenous males are more likely to be employed in agriculture, forestry and fishing (4.7% of employed males compared to 1.5% of employed females), mining (3.4% compared to 0.7%), manufacturing (11.9% compared to 3.4%) and construction (12.6% compared to 1.4%). These industries are likely to employ relatively few professionals as opposed to managers. Indigenous females, on the other hand are more likely to be employed in retail trade (10.5% of employed females compared to 5.8% of employed males), education and training (13.8% compared to 4.4%) and health care and social assistance (22.4% compared to 9.1%).

Whatever the cause, when managers and professionals are combined as one occupational group (both of them being in the same skill classification (ABS 2006a)), Indigenous males are less likely to be employed in that occupational grouping when compared to Indigenous females.

The national picture presented in Table 4 masks some of the differences at the regional level, in particular, the differences between the urban and remote areas. In Adelaide for example, 70 per cent of Indigenous males are in full-time and private sector employment. In other parts of South Australia, only about 45 per cent of Indigenous males are employed full-time and in the private sector.

The unemployment rate is another example. The unemployment rate nationally for Indigenous males is 15.71 per cent. However, the unemployment rate for Indigenous males across the different Regions ranged from 4 per cent in Derby to 24 per cent in Tamworth. There are also significant differences between Indigenous males and females of a particular Region. For Australia as a whole, the ratio of Indigenous males to females for unemployment rates is 1.03, which suggests there are very few gender differences. But looking across the Region, in the Australian Capital Territory (ACT), Indigenous males are 1.78 times more likely to be unemployed than Indigenous females. The regional estimates for Indigenous males and females across the various indicators are attached in Appendix 1.

ACT: Australian Capital Territory

A GENDER-RELATED INDEX FOR INDIGENOUS AUSTRALIANS

The UNDP developed the GDI in 1995 to consider gender disparity in the overall human development of a nation, recognising that the achievements of males and females will have to go hand in hand for a nation to develop as a whole (UNICEF 2006; World Bank 2001). The GDI measures differences between males and females across three components—life expectancy, literacy rates and income. An index value of 1 suggests that gender inequality does not exist across the indicators measured. Since 2001, Australia has maintained a ranking in the top ten across these indicators (UNDP 2008) suggesting that relative to other countries, women are achieving similar outcomes to men in the three components indicated above. This suggests that the loss of human development due to gender inequality is minor.

Most of the studies analysing gender inequality using the GDI are based in developing countries and at the national level (Economic Commission of Africa 2004; Government of Madhya Pradesh 2002; UNDP 2008). There has only been limited research looking at gender differences at the regional level (CPD-UNFPA 2002; Rustagi 2004) although some work has been done attempting to estimate gender inequalities in States and Territories for the whole population in Australia using the GDI (Basu & Basu 2005). The authors found that in all States and Territories in Australia, except New South Wales, gender inequalities existed, with men outperforming women. However, the extent of the inequality was very small in all cases.

The aforementioned relative equality between males and females in Australia may not hold across a greater range of indicator variables and may not necessarily hold true for sub-populations. In particular, Table 4 showed a number of differences between Indigenous and non-Indigenous males at the national level in terms of education and labour market outcomes. In the remainder of this paper a Gender-Related Index for Indigenous Australians (GRIFIA) is constructed at the Indigenous Region level. This will enable the relative and absolute ranking of Indigenous male outcomes compared to female outcomes. Following is an outline of the methodology used to construct the index.

GRIFIA: Gender-Related Index for Indigenous Australians

GRIFIA: METHODOLOGY

Traditionally, the three dimensions of the GDI include:

- health as measured by life expectancy at birth
- acquired knowledge as measured by two components—the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio
- standard of living as measured by earned income (UNDP 1995).

Table 5. Variables used to construct the GRIFIA

Variable	Males (%)[a]	Females (%)[a]	Ratio[b]
Year 12 as highest year of schooling	17.99 (8.82)	20.56 (8.95)	0.88
Did not go to school	3.71 (3.39)	3.37 (3.56)	1.10
Managerial or professional occupation	13.70 (5.07)	20.01 (4.43)	0.68
Employment to population percentage	51.18 (8.70)	40.41 (7.61)	1.27
Degree as non-school qualifications	2.54 (2.79)	4.50 (3.28)	0.56
Core activity restriction	2.16 (0.62)	2.17 (0.42)	1.00
Children engaged in preschool	51.19 (4.82)	48.80 (4.82)	1.05
Individual income less than $250 per week	52.77 (14.32)	49.19 (10.08)	1.07
Individual income more than $1000 per week	9.59 (6.15)	4.89 (3.52)	1.96

Notes: a. Standard deviations in parentheses.

b. A ratio greater than 1 = males are more likely to report that characteristic; a ratio less than 1 = females are more likely to report that characteristic.

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

However, given one of the study aims is to develop an index of gender disparity for the Indigenous population regionally, the study is limited to the availability of sex-disaggregated data by Indigenous status at the regional level from the 2006 Census. As a result, dimensions such as culture, health, development and justice outcomes are not included in the index. These and other dimensions will be considered in an expanded index in future work as discussed in the final section of this paper.

Applying a similar methodology to that used by the Australian Bureau of Statistics (ABS) in the construction of Socio-Economic Indexes for Areas (SEIFA) indices and by Biddle (2009) for the Indigenous population as a whole, this study summarises the variables of interest in the Census at the Indigenous Region level using Principal Component Analysis (PCA). Whilst life expectancy is an important indicator, at present the best available information on life expectancy from the ABS is experimental and is only available at the national or State level. Instead, the percentage of the population with a core activity restriction[1] is used as a proxy for poor health.

The variables considered for inclusion in the index are listed in Table 5 alongside the average values for Indigenous males and females across Australia in 2006.

PCA was applied to summarise the set of variables into a single index. Two versions of the GRIFIA are created. The first involves creating two separate indices, one for males and one for females. This first index, GRIFIA(I), shows how the distribution of Indigenous males and females differs across Indigenous

ABS: Australian Bureau of Statistics

SEIFA: Socio-Economic Indexes for Areas

PCA: Principal Component Analysis

Table 6. Loadings and eigenvalues for the GRIFIA

Variable	Males	Females	Males and females
Employment to population	0.23	0.35	0.22
Year 12 completion	0.43	0.41	0.45
Degree or equivalent qualifications	0.40	0.42	0.42
Managers and professionals	0.36	0.30	0.31
Did not attend schooling	-0.36	-0.33	-0.38
Individual income less than $250 per week	-0.43	-0.41	-0.45
Individual income more than $1000 per week	0.44	0.39	0.33
Variance explained	0.62	0.68	0.57

Note: Preschool enrolment, core activity restriction and private sector employment were excluded from the PCA as their loadings were less than 0.30. The employment to population percentages were maintained for the male index as well as the index for males and females together to maintain consistency with the female index, where it had a value greater than 0.3.

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Regions. The second index, GRIFIA(II), involves pooling both Indigenous males and females together to create a single ranking that allows the outcomes of Indigenous males in a particular Region to be compared to their female counterparts.

For both indices, the first component of the PCA is used to rank the Indigenous Region.[2] The loading that is used to construct this rank is the correlation between the component and the variable for each Region. The sign of the loading indicates whether the variable contributes positively or negatively to regional outcomes, with the size of the loading (absolute value) indicating the strength of the correlation. If that strength is low it means the component is not highly correlated with the variable, suggesting the removal of the variable will not affect the overall explanatory power of the model. Variables which had a loading in absolute value of less than 0.3 were removed. It should be kept in mind that this is an area-based analysis, and not an individual-based analysis. There is likely to be substantial diversity across individuals within Regions.

GRIFIA: CONSTRUCTING THE INDICES

Table 6 outlines the loadings on the first component from each of the PCAs. The final line of the table gives the percentage of the total variation across all the retained variables explained by this component.

The first component explains about 62 per cent of the variation in Indigenous males and 68 per cent of the variation in Indigenous females (Table 6). Of the variables in the model, for both Indigenous males and females separately, and in the pooled dataset, education as denoted by completing Year 12 and possessing a degree qualification had the highest positive correlation with the GRIFIA, whereas individual income of less than $1,000 per month had highest negative correlation. For Indigenous females, possessing a degree qualification was also the most dominant factor contributing to the rank of the Indigenous Regions.

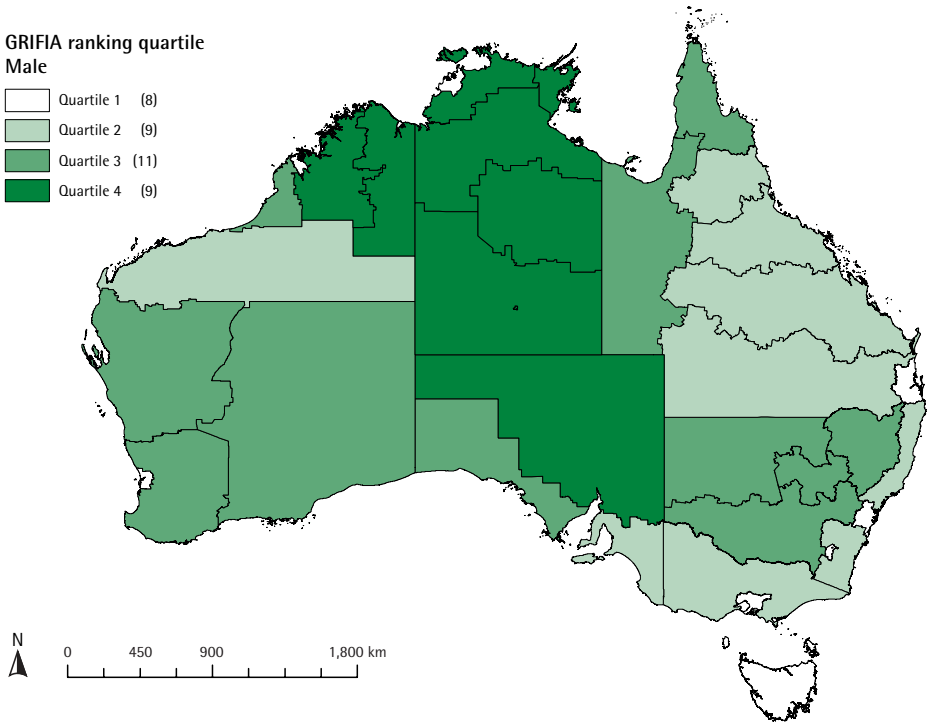
Table 7. Relative and absolute ranking for Indigenous outcomes across Indigenous Regions (GRIFIA), 2006

	Relative rank[a]		Absolute rank[a]		Difference	
Indigenous Region	Males	Females	Males	Females	Relative	Absolute
Queanbeyan	12	9	29	15	3	14
Bourke	27	26	52	46	1	6
Coffs Harbour	14	13	31	20	1	11
Sydney	3	3	7	5	0	2
Tamworth	23	24	49	41	-1	8
Wagga Wagga	20	20	43	36	0	7
Dubbo	21	22	47	37	-1	10
Melbourne	2	2	3	4	0	-1
Non-Met. Victoria	13	16	28	27	-3	1
Brisbane	4	4	6	8	0	-2
Cairns	15	11	30	17	4	13
Mt Isa	19	23	39	42	-4	-3
Cape York	28	28	56	53	0	3
Rockhampton	11	15	25	26	-4	-1
Roma	16	17	33	32	-1	1
Torres Strait	6	7	14	10	-1	4
Townsville	10	14	22	21	-4	1
Adelaide	9	8	23	12	1	11
Ceduna	26	18	54	34	8	20
Port Augusta	30	31	61	59	-1	2
Perth	5	5	11	9	0	2
Broome	24	12	50	24	12	26
Kununurra	31	32	64	62	-1	2
Narrogin	18	21	38	40	-3	-2
South Hedland	17	27	35	55	-10	-20
Derby	32	29	65	60	3	5
Kalgoorlie	25	30	51	57	-5	-6
Geraldton	22	25	48	45	-3	3
Tasmania	8	10	18	19	-2	-1
Alice Springs	29	19	58	44	10	14
Jabiru	33	35	68	66	-2	2
Katherine	34	33	69	63	1	6
Apatula	37	37	74	71	0	3
Nhulunbuy	36	36	73	70	0	3
Tennant Creek	35	34	72	67	1	5
Darwin	7	6	16	13	1	3
ACT	1	1	2	1	0	1

Note: a. Indigenous Regions are ranked from 1–37 for the relative ranking and 1–74 for the absolute ranking (combining males and females), with 1 having on average the most favourable outcomes.

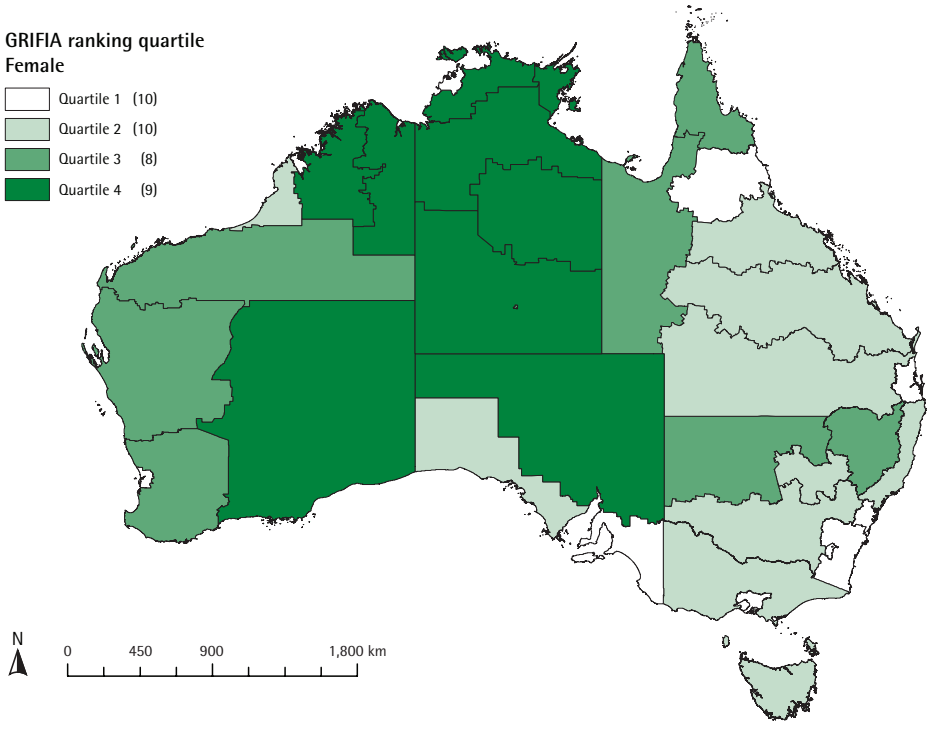
Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Fig. 2. Pooled ranking for Indigenous males by quartile, 2006



Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Fig. 3. Pooled ranking for Indigenous females by quartile, 2006



Source: Authors' calculations using the ABS Census of Population and Housing 2006.

GRIFIA: RANKING REGIONS

In this section, Indigenous Regions are ranked from 1–37 for the relative ranking and 1–74 for the absolute ranking (combining males and females), with 1 having on average the most favourable outcomes. The difference between the rankings for Indigenous males and females is also calculated. For the relative rankings, a negative difference means that Indigenous males in that Region are at a more favourable part of the distribution than Indigenous females. A positive difference of course means the opposite. For the absolute ranking, the difference indicates the extent to which males rank worse when compared directly to Indigenous females in the area (rather than just distributionally).

Reading across the first line of results in Table 7, we can see, for example, that relative to Indigenous males in other Indigenous Regions, those in Queanbeyan rank 12th out of 37. Relative to other Indigenous females, however, those in Queanbeyan rank 9th. When outcomes for Indigenous males and Indigenous females in Queanbeyan are pooled in the one estimation, however, Indigenous males rank 29th out of the 74 observations and Indigenous females 15th.

In terms of the relative ranking, the results suggest that Indigenous males and females in the capital cities have the most favourable outcomes, with Indigenous males and Indigenous females ranked at the top of the distribution of their respective group. The main variables driving this are the high Year 12 completions and the high proportion of the population with degree qualifications in these cities.

In the capital cities, there is very little difference in the relative ranking of males compared to females. On the other hand, the Regions where Indigenous males rank relatively poorly compared to the distribution of Indigenous females are Broome, Alice Springs and Ceduna. In these areas, Indigenous males tend to not have completed Year 12 nor have a degree qualification, two components that are dominant factors in explaining the index for both males and females. At the other end of the spectrum, Indigenous males are faring relatively well in South Hedland, Kalgoorlie, Mount Isa, Rockhampton and Townsville. In these places, there are higher male employment to population percentages compared to Indigenous males in other Regions.

For the pooled ranking, Indigenous males and females living in capital cities also have the most favourable outcomes, with the exception of Indigenous males in Adelaide. Two maps (Figs 2 and 3) illustrate the composition of gender differences when the Indigenous Regions are grouped into four quartiles. The lightest tone represents the first quartile (least disadvantaged), while the darkest tone represents the most disadvantaged. Fig. 3 illustrates the overall better ranking of Indigenous females compared to Indigenous males, with a higher proportion of lighter shades than the comparative map for Indigenous males (Fig. 2).

Indigenous males appear to be faring better than Indigenous females in Kalgoorlie and South Hedland. This is largely driven by more Indigenous males being employed than Indigenous females in these areas. There is also a higher proportion of Indigenous males earning more than $1000 per week and a lower proportion of Indigenous males compared to Indigenous females earning less than $250 per week.

The proportion of Indigenous females who were employed as managers and professionals was less than half that of Indigenous males in South Hedland. Indigenous females were also much less likely to have degree qualifications than Indigenous males in Kalgoorlie, where the ratio was 0.20.

On the other hand, the pooled ranking also suggests that Indigenous females are better off than Indigenous males in Cairns, Dubbo and Wagga Wagga. This is a consequence of much fewer Indigenous males having degree qualifications (or higher), especially in Dubbo and Cairns, as well as fewer Indigenous males completing Year 12 compared to Indigenous females in these Regions.

From both maps, it is evident that Indigenous males and females living in the central and northern part of Australia tend to fall into the fourth quartile (including Katherine, Apatula, Kunnunurra, and Tennant Creek). This is mainly a result of lower education attainment and a higher proportion of Indigenous males and females earning less than $250 per week. Those Indigenous males and females in capital cities, on the other hand, both tend to rank in the top quartile. Ultimately, what this shows is that while gender differences are important, the outcomes of the Indigenous population as a whole cannot be ignored.

Although the Index serves as a composite indicator, summarising the outcomes for the Indigenous Region, there is likely to be substantial variation in socioeconomic status within Regions. The better performance of Indigenous males and females in the capital cities mask some of the differences within the capital cities (Appendix 1).

SUMMARY, IMPLICATIONS AND FURTHER WORK

In this paper we have highlighted gender differences within the Indigenous population across a range of demographic and socioeconomic variables. Demographically, there are more males than females in the younger age groups for both the Indigenous and non-Indigenous population. However, that observation is reversed when we move up the age distribution as a result of relatively high female life expectancy. Indigenous females tend to have more children on average than non-Indigenous females. This is mainly driven by the higher fertility rate amongst young Indigenous women (15–24 years of age). In the older age group (25 years and over) there is less of a difference between Indigenous and non-Indigenous females, reflecting the later age at which non-Indigenous females have children.

Females are more likely to have completed Year 12 and possess a degree qualification than males. This is true for both the Indigenous and non-Indigenous population. Whilst one would expect these trends to translate to more women participating in the workforce, a significant proportion of these women may be working part-time, or not in the labour force for parts of their working life, as they take on childcaring responsibilities. Hence there are lower employment to population percentages and labour force participation rates for Indigenous females. This is in line with the findings of Basu and Basu (2005) for the general population. In terms of explaining the low labour force participation of Indigenous women, there are also factors that act as barriers or incentives to employment. Some factors that have been suggested in the literature include location of residence, education qualifications, and other sources of household income (Daly 1991; Daly & Hunter, 1999; Hunter & Daly, 2008). Fertility and interaction with the criminal justice system also has a significant negative impact on the probability of participating in the labour force for Indigenous females.

There are more Indigenous males employed as managers than Indigenous females, but when we extend the analysis to include professionals, Indigenous females represent a higher proportion than Indigenous males. This reflects to a certain extent the different types of industries that Indigenous males and females are employed in.

Trends at the national level tend to mask what is happening at the Indigenous Region level. The GRIFIA serves as a useful tool for ranking Indigenous males and females and their relative and absolute performance in the different Regions. Using the GRIFIA, we can see that in an absolute sense, Indigenous females are outperforming Indigenous males across most Regions, with the greatest gap outside the capital cities.

Any gap between Indigenous males and females needs to be placed in the context of broader disparities with the non-Indigenous population. For example, in some Indigenous Regions in the Northern Territory, whilst the gender differences are small, there are large disparities in measured outcomes between the

Indigenous and non-Indigenous population and within the Indigenous population in other parts of the country. Therefore, policies in this case might be aimed at improving the outcomes for both groups as an initial step before addressing gender inequalities.

One of the major limitations of the analysis in this paper is that the ranking holds true only for the set of variables used to create the index. If a different set of variables were included, a different picture might emerge. For example, in this paper, the education component of the index was the dominant factor. As a result, the better performance of Indigenous females as measured by education indicators placed Indigenous women higher in the rankings compared to Indigenous males.

In the recently released HREOC report on gender equality, two significant issues facing Indigenous women were family violence and the need for Indigenous female leadership to enable community support and strengthening (HREOC 2008). There are, of course, other factors not captured in the census such as life expectancy, imprisonment rates, incidence of domestic violence, suicide rates, substance abuse rates and Indigenous language use, which are equally important when planning policies for addressing Indigenous disadvantage.

So, while the GRIFIA developed for this paper points to a number of interesting regional patterns, it should best be considered as the starting point towards a more comprehensive indicator or set of indicators. As part of this process, comprehensive consultation with Indigenous males and females is planned in order to identify the outcomes that are of particular relevance. Once priorities have been established, available data from census and administrative sources will be collated in order to identify the geographic distribution of as wide a range of indicators as possible. Where outcomes that have been identified as being important are not available at the local level, small area estimation techniques will be considered in order to exploit information available from sample surveys.

Ultimately, the gender differences tabled in this paper—which may ultimately be found with a more comprehensive index—could be attributed to the different gender roles and responsibilities that Indigenous men and women have across Australia (Bell 1983; Hamilton 1975; Merlan 1988). A final question that we will consider, therefore, is the extent to which gender equality matters to Indigenous Australians across a range of different indicators and the extent to which it impacts on child, household and other outcomes.

While we feel it is important to follow the above process in order to obtain the most comprehensive picture of gender-related disparities and development options for the Indigenous population, we also feel that the insights gained from the GRIFIA calculated for this paper can be important inputs into policy formulation at the regional level. The results from the paper show that there are significant geographical variations. In some Indigenous Regions, the delivery of policies may have to be tailored to Indigenous males and females depending on their circumstances. Given that Indigenous Australians were less likely to move in response to employment opportunities than other Australians, a location based development of employment opportunities may have a particular role to play in generating employment in remote areas (Biddle & Hunter 2006; Hunter & Daly 2008). For Indigenous males and females living in capital cities, on the other hand, a possible policy direction could be to increase Indigenous representation on boards and improve access to managerial and professional positions.

Furthermore, we hope that this paper puts gender back on the agenda, so to speak, as the experience in a number of countries suggests that treating gender equality as just an end in itself rather than a means to an end has resulted in a failure of development policies. A gender-based analysis could provide new insights into explaining and overcoming the poor socioeconomic outcomes of Indigenous Australians. It is hoped that this paper provides some of the statistical evidence for such an analysis to be built upon.

NOTES

1. Core activity restriction refers to those people needing assistance in one or more of the three core activity areas of self care, mobility and communication (because of a long-term health condition, disability or old age).

2. The first component of the PCA explained the largest amount of variation in the original variables (68%) and therefore is used as the index. While the eigenvalue for the second component was greater than 1, the common cut-off used in PCA (Darlington 1997), the difference was substantial enough between the first and second components to justify the use of only one component.

REFERENCES

Altman, J.C. 2000. 'The economic status of Indigenous Australians', *CAEPR Discussion Paper No. 193*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/discussion.php**>.

——, Biddle, N. and Hunter, B.H. 2008. 'How realistic are the prospects for "closing the gaps" in socioeconomic outcomes for Indigenous Australians?', *CAEPR Discussion Paper No. 287*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/discussion.php**>.

Australian Bureau of Statistics (ABS) 2000. *Unpaid Work and the Australian Economy*, cat. no. 5240.0, ABS, Canberra.

—— 2004. *Year Book Australia, 2004*, cat. no. 1301.0, ABS, Canberra.

—— 2006a. *Australian and New Zealand Standard Classification of Occupations*, cat. no. 1220.0, ABS, Canberra.

—— 2006b. *Socio-Economic Indexes for Areas (SEIFA) – Technical Paper*, cat. no. 2039.0.55.001, ABS, Canberra.

—— 2007a. *Births, 2007*, cat. no. 3301.0, ABS, Canberra.

—— 2007b. *Deaths, Australia, 2006*, cat. no. 3302.0, ABS, Canberra.

—— 2008a. *Discussion Paper: Assessment of Methods for Developing Life Tables for Aboriginal and Torres Strait Islander Australians*, cat. no. 3302.0.55.002, ABS, Canberra.

—— 2008b. *Population Characteristics: Aboriginal and Torres Strait Islander Australians, 2006*, cat. no. 4713.0, ABS, Canberra.

Australian Public Service Commission (APSC) 2006. *State of the Service Report 2006–2007*, APSC, Canberra.

Banda, F. and Chinkin, C. 2004. *Gender, Minorities and Indigenous Peoples,* Minority Rights Group International, London.

Basu, S. and Basu, P. 2005. 'Regional disparity in Australia: Analysis of gender development index', *International Review of Business Research Papers*, 1 (2): 56–66.

Baum, S. 2006. 'A typology of socio-economic advantage and disadvantage in Australia's large non-metropolitan cities, towns and regions', *Australian Geographer*, 27 (2): 233–58.

Bell, D. 1983. *Daughters of the Dreaming*, McPhee Gribble, Melbourne and George Allen & Unwin, Sydney.

Biddle, N. 2009. 'Ranking regions: Revisiting an index of relative Indigenous socioeconomic outcomes', *CAEPR Working Paper No. 50*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/working.php**>.

—— and Hunter, B. 2006. 'Factors associated with internal migration: A comparison between Indigenous and non-Indigenous Australians', *CAEPR Working Paper No. 32*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/working.php**>.

——, Taylor, J. and Yap, M. 2008. 'Indigenous participation in regional labour markets, 2001–06', *CAEPR Discussion Paper No. 288*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/discussion.php**>.

Cooke, M., Mitrou, F., Lawrence, D., Guimond, E. and Beavon, D. 2007. 'Indigenous well-being in four countries: An application of the UNDP's Human Development Index to Indigenous Peoples in Australia, Canada, New Zealand and the United States', *BMC International Health and Human Rights*, 7(9).

CPD-UNFPA 2002. 'Gender-Related Development Index for 64 districts of Bangladesh', *Paper No. 19*, Programme on Population and Sustainable Development, Bangladesh.

Daly, A. 1991. 'The impact of welfare on the economic status of Aboriginal women', *CAEPR Discussion Paper No. 7*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/discussion.php**>.

—— and Hawke, A. 1994. 'The impact of the welfare state on the economic status of Indigenous Australian women', *CAEPR Discussion Paper No. 65*, CAEPR, ANU, Canberra, available at <**http://www.anu.edu.au/caepr/discussion.php**>.

—— and Hunter, B. 1999. 'Incentives to work: Replacement ratios and the cost of job loss among Indigenous Australians', *Australian Economic Review*, 32 (3): 219–36.

Darlington, R.B. 1997. *Factor Analysis*, viewed 21 April 2008, **<http://www.psych.cornell.edu/Darlington/factor.htm>**.

Day, C. and Dowrick, S. 2004. 'Ageing economics: Human capital, productivity and fertility', *Agenda*, 11 (1): 3–20.

Economic Commission for Africa 2004. *The African Gender and Development Index*, United Nations, Ethiopia.

Equal Opportunity for Women in the Workplace Agency (EOWA) 2008. *Gender income distribution of top earners in ASX200 companies: 2006 EOWA census of women in leadership*, EOWA, Sydney.

Government of Madhya Pradesh 2002. *Madhya Pradesh Human Development Report 2002*, India.

Hamilton, A. 1975. 'Aboriginal women: The means of production' in J. Mercer (ed.), *The Other Half*, Penguin, Harmondsworth, pp. 167–79.

Hesketh, T. and Xing, Z. W. 2006. 'Abnormal sex ratios in human population: Causes and consequences', *Proceedings of the National Academy of Sciences*, September, 103 (36): 13271–5.

Human Rights and Equal Opportunity Commission (HREOC) 2008. *Gender Equality: What Matters to Australian Women and Men*, The Listening Tour Community Project, HREOC, Sydney.

Hunter, B. and Daly, A. 2008. 'Interactions between crime and fertility in the labour supply of Indigenous Australian women', *CAEPR Working Paper No. 40*, CAEPR, ANU, Canberra, available at at <**http://www.anu.edu.au/caepr/working.php**>.

International Trade Union Confederation (ITUC) 2008. *The Global Gender Pay Gap*, ITUC, Belgium.

Lanzi, D. 2007. 'Capabilities, human capital and education', *The Journal of Socio-Economics*, 36: 424–35.

Merlan, F. 1988. 'Gender in Aboriginal social life: A review', in Berndt, R. M. & Tonkinson, R. (eds), *Social Anthropology and Australian Aboriginal Studies: A Contemporary Overview*, Aboriginal Studies Press, Canberra, pp. 15–77.

Department of Family and Community Services, Office for Women 2004. *Women in Australia 2004*, Canberra.

Productivity Commission 2005. *Economic Implications of an Ageing Australia*, Productivity Commission, Canberra.

Rudd, K. 2008. Apology to Australia's Indigenous Peoples, House of Representatives, Parliament House, Canberra, viewed 31 October 2008, <http://www.pm.gov.au/media/speech/2008/speech_0073.cfm>.

Rustagi, P. 2004. 'Significance of Gender-related development indicators: An analysis of Indian States', *Indian Journal of Gender Studies*, 11: 291–343.

Steering Committee for the Review of Government Service Provision (SCRGSP) 2005. *Overcoming Indigenous Disadvantage: Key Indicators 2005*, Productivity Commission, Canberra.

—— 2007. *Overcoming Indigenous Disadvantage: Key Indicators 2007*, Productivity Commission, Canberra.

Stimson, B., Baum, S. and O'Connor, K. 2003. 'The social and economic performance of australia's large regional cities and towns: Implications for rural and regional policy', *Australian Geographical Studies*, 41(2): 131–47.

Taylor, J. and Biddle, N. 2008. 'Locations of Indigenous population change: What can we say?', *CAEPR Working Paper No. 43*, CAEPR, ANU, Canberra, available at <http://www.anu.edu.au/caepr/working.php>.

The Treasury 2002. *Intergenerational Report 2002–03*, Budget Paper No. 5, Commonwealth of Australia, Canberra.

—— 2007. *Intergenerational Report 2007*, Commonwealth of Australia, Canberra.

United Nations Secretariat 2008. *The Milennium Development Goals Report 2008*, UN, New York.

United Nations Development Programme (UNDP) 1995. *Human Development Report 1995, Gender and Human Development*, UNDP, New York.

—— 2008. *Human Development Report 2007/2008, Fighting Climate Change: Human Solidarity in a Divided World*, UNDP, New York.

United Nations Children's Fund (UNICEF) 2006. *The State of the World's Children 2007: Women and children—The double dividend of gender equality*, UNICEF, New York.

World Bank 2001. *Engendering Development: Through Gender Equality in Rights, Resources and Voice*, A World Bank Policy Research Report, The World Bank, Washington DC and Oxford University Press, UK.

—— 2003. *Gender Inequality and the Millennium Development Goals*, Gender and Development Group, The World Bank, Washington DC.

APPENDIX 1

Table A1. Indigenous and non-Indigenous unemployment rates for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males	Females	Males	Females	Indigenous	Non-Indigenous
Queanbeyan	21.27	17.93	6.03	5.36	1.19	1.12
Bourke	22.79	20.02	7.14	5.73	1.14	1.25
Coffs Harbour	21.22	19.40	7.65	7.23	1.09	1.06
Sydney	16.02	14.20	5.22	5.17	1.13	1.01
Tamworth	24.18	24.46	5.96	6.00	0.99	0.99
Wagga Wagga	22.01	20.17	5.07	5.49	1.09	0.92
Dubbo	23.29	21.31	5.66	4.86	1.09	1.16
Melbourne	12.84	13.08	5.25	5.31	0.98	0.99
Non-Met. Victoria	18.96	19.06	5.42	5.56	0.99	0.97
Brisbane	12.21	13.46	4.29	4.88	0.91	0.88
Cairns	15.50	15.18	3.60	3.90	1.02	0.92
Mt Isa	12.28	11.88	2.14	2.61	1.03	0.82
Cape York	5.63	6.15	4.00	2.14	0.91	1.87
Rockhampton	14.90	15.95	4.90	6.05	0.93	0.81
Roma	15.57	17.36	4.22	4.81	0.90	0.88
Torres Strait	4.25	5.56	3.17	2.20	0.77	1.44
Townsville	14.09	16.65	3.16	4.34	0.85	0.73
Adelaide	18.31	16.14	5.26	4.75	1.13	1.11
Ceduna	12.79	9.03	4.21	3.56	1.42	1.18
Port Augusta	13.99	12.83	7.43	6.26	1.09	1.19
Perth	16.44	15.84	3.30	3.75	1.04	0.88
Broome	10.58	10.71	2.63	1.83	0.99	1.44
Kununurra	4.89	12.66	1.78	1.57	0.39	1.13
Narrogin	19.81	16.09	3.51	4.26	1.23	0.82
South Hedland	15.17	18.46	1.66	2.46	0.82	0.68
Derby	3.99	4.23	3.03	1.62	0.94	1.88
Kalgoorlie	11.94	10.95	2.82	3.65	1.09	0.77
Geraldton	18.63	17.36	4.53	4.16	1.07	1.09
Tasmania	14.75	12.43	6.56	6.02	1.19	1.09
Alice Springs	10.20	10.08	1.59	1.78	1.01	0.89
Jabiru	8.12	8.52	2.32	1.83	0.95	1.27
Katherine	12.80	12.57	2.26	1.76	1.02	1.29
Apatula	23.17	24.97	0.36	1.07	0.93	0.34
Nhulunbuy	14.86	22.46	0.97	1.74	0.66	0.56
Tennant Creek	12.50	15.93	1.46	2.08	0.78	0.70
Darwin	14.74	11.84	3.06	2.85	1.24	1.07
ACT	13.63	7.66	3.59	2.98	1.78	1.20
Australia—Total	**15.71**	**15.32**	**4.99**	**5.10**	**1.03**	**0.98**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A2. Indigenous and non-Indigenous labour force participation ratios for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males	Females	Males	Females	Indigenous	Non-Indigenous
Queanbeyan	58.36	48.23	64.91	53.72	1.21	1.21
Bourke	56.96	42.13	65.66	54.20	1.35	1.21
Coffs Harbour	59.13	48.88	63.83	51.65	1.21	1.24
Sydney	63.28	52.80	73.43	59.07	1.20	1.24
Tamworth	58.24	44.32	70.03	55.47	1.31	1.26
Wagga Wagga	53.07	45.61	70.41	56.64	1.16	1.24
Dubbo	61.39	45.14	71.51	57.40	1.36	1.25
Melbourne	68.44	55.95	72.84	58.78	1.22	1.24
Non-Met. Victoria	58.89	45.45	69.15	55.53	1.30	1.25
Brisbane	69.24	57.06	73.53	60.98	1.21	1.21
Cairns	61.87	50.97	75.39	65.25	1.21	1.16
Mt Isa	70.67	45.68	86.74	73.39	1.55	1.18
Cape York	69.95	50.98	81.50	75.45	1.37	1.08
Rockhampton	62.40	51.32	69.38	55.00	1.22	1.26
Roma	65.22	48.16	70.90	56.75	1.35	1.25
Torres Strait	77.33	59.24	88.91	80.85	1.31	1.10
Townsville	63.34	48.60	77.19	62.69	1.30	1.23
Adelaide	57.85	47.46	69.13	56.62	1.22	1.22
Ceduna	58.43	45.86	72.64	59.84	1.27	1.21
Port Augusta	52.75	43.04	67.43	54.15	1.23	1.25
Perth	56.34	46.14	75.31	60.53	1.22	1.24
Broome	58.03	50.09	83.62	79.14	1.16	1.06
Kununurra	60.73	42.31	89.83	82.73	1.44	1.09
Narrogin	61.02	46.70	71.52	55.77	1.31	1.28
South Hedland	60.90	45.12	92.21	75.34	1.35	1.22
Derby	68.46	56.03	85.04	83.09	1.22	1.02
Kalgoorlie	62.40	45.34	84.97	67.38	1.38	1.26
Geraldton	57.60	44.32	74.17	61.22	1.30	1.21
Tasmania	66.01	54.77	67.10	55.04	1.21	1.22
Alice Springs	51.85	43.82	86.73	79.97	1.18	1.08
Jabiru	49.40	35.47	86.62	82.55	1.39	1.05
Katherine	58.93	43.26	85.51	80.01	1.36	1.07
Apatula	35.96	29.24	90.63	88.05	1.23	1.03
Nhulunbuy	45.86	36.69	96.44	79.39	1.25	1.21
Tennant Creek	44.84	30.99	84.20	85.48	1.45	0.98
Darwin	56.49	49.95	82.54	74.83	1.13	1.10
ACT	74.42	66.26	77.79	69.14	1.12	1.13
Australia—Total	**60.79**	**48.74**	**71.95**	**58.43**	**1.25**	**1.23**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A3. Indigenous full-time and private sector employment to population percentages for Indigenous Regions, by gender, 2006

	Full-time			Private sector			Full-time private sector		
Indigenous Region	Male	Female	Ratio	Male	Female	Ratio	Male	Female	Ratio
Queanbeyan	66.42	45.05	1.47	81.34	71.71	1.13	65.48	40.31	1.62
Bourke	58.28	45.13	1.29	74.26	65.57	1.13	56.49	42.47	1.33
Coffs Harbour	66.61	41.85	1.59	82.43	78.48	1.05	65.33	38.18	1.71
Sydney	76.43	54.69	1.40	81.60	75.42	1.08	75.09	51.91	1.45
Tamworth	63.63	40.76	1.56	79.89	75.29	1.06	64.80	36.63	1.77
Wagga Wagga	73.71	43.12	1.71	82.37	77.19	1.07	73.74	40.65	1.81
Dubbo	70.32	43.09	1.63	79.15	74.62	1.06	70.02	39.65	1.77
Melbourne	75.74	53.65	1.41	87.01	79.83	1.09	75.66	51.13	1.48
Non-Met. Victoria	72.72	46.20	1.57	84.71	78.28	1.08	72.45	43.35	1.67
Brisbane	74.57	50.72	1.47	84.09	76.15	1.10	73.34	46.58	1.57
Cairns	61.21	43.56	1.41	67.54	61.97	1.09	67.91	44.79	1.52
Mt Isa	63.78	50.07	1.27	69.78	60.82	1.15	69.53	51.09	1.36
Cape York	44.49	35.67	1.25	30.29	33.23	0.91	56.36	44.65	1.26
Rockhampton	71.60	44.90	1.59	78.53	74.62	1.05	71.71	42.03	1.71
Roma	71.06	45.60	1.56	76.56	71.91	1.06	73.21	43.99	1.66
Torres Strait	50.84	50.56	1.01	21.28	28.29	0.75	63.79	50.76	1.26
Townsville	71.87	49.45	1.45	81.18	73.34	1.11	70.99	46.88	1.51
Adelaide	70.15	48.41	1.45	81.01	71.50	1.13	68.10	43.68	1.56
Ceduna	44.83	42.40	1.06	69.40	69.60	1.00	49.69	42.53	1.17
Port Augusta	42.57	36.39	1.17	65.04	58.47	1.11	47.02	38.95	1.21
Perth	73.61	54.16	1.36	83.24	68.69	1.21	73.59	49.78	1.48
Broome	43.76	41.07	1.07	77.62	71.21	1.09	43.62	40.44	1.08
Kununurra	36.74	35.06	1.05	64.22	65.62	0.98	38.31	38.01	1.01
Narrogin	64.46	37.71	1.71	84.08	73.85	1.14	63.69	36.47	1.75
South Hedland	62.47	47.11	1.33	79.93	70.25	1.14	65.68	47.29	1.39
Derby	26.32	28.31	0.93	68.05	66.44	1.02	30.22	31.19	0.97
Kalgoorlie	44.28	32.00	1.38	71.17	61.60	1.16	54.26	36.62	1.48
Geraldton	63.96	44.17	1.45	79.27	68.94	1.15	64.39	45.05	1.43
Tasmania	75.94	40.98	1.85	87.22	79.98	1.09	75.93	37.73	2.01
Alice Springs	65.02	63.24	1.03	62.14	60.00	1.04	74.50	64.13	1.16
Jabiru	31.65	30.85	1.03	49.91	57.32	0.87	34.52	30.64	1.13
Katherine	33.30	33.99	0.98	49.70	48.71	1.02	39.36	35.52	1.11
Apatula	27.00	27.53	0.98	44.37	50.34	0.88	33.03	26.85	1.23
Nhulunbuy	32.48	32.24	1.01	40.15	46.57	0.86	35.45	32.11	1.10
Tennant Creek	32.83	37.66	0.87	50.30	63.20	0.80	43.11	40.41	1.07
Darwin	72.33	60.21	1.20	67.85	55.43	1.22	71.87	52.72	1.36
ACT	76.30	64.05	1.19	61.78	50.41	1.23	69.84	49.73	1.40
Australia—Total	**65.44**	**46.42**	**1.41**	**75.15**	**69.75**	**1.08**	**67.90**	**44.07**	**1.54**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A4. Indigenous and non Indigenous employment to population percentages for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males	Females	Males	Females	Indigenous	Non-Indigenous
Queanbeyan	45.95	39.58	61.00	50.84	1.16	1.20
Bourke	43.97	33.70	60.98	51.09	1.30	1.19
Coffs Harbour	46.59	39.40	58.95	47.91	1.18	1.23
Sydney	53.14	45.31	69.60	56.02	1.17	1.24
Tamworth	44.16	33.48	65.86	52.14	1.32	1.26
Wagga Wagga	41.39	36.41	66.84	53.53	1.14	1.25
Dubbo	47.09	35.52	67.46	54.61	1.33	1.24
Melbourne	59.65	48.63	69.02	55.65	1.23	1.24
Non-Met. Victoria	47.72	36.79	65.40	52.44	1.30	1.25
Brisbane	60.79	49.38	70.38	58.01	1.23	1.21
Cairns	52.28	43.23	72.68	62.70	1.21	1.16
Mt Isa	61.99	40.26	84.88	71.48	1.54	1.19
Cape York	66.02	47.84	78.25	73.84	1.38	1.06
Rockhampton	53.10	43.14	65.99	51.67	1.23	1.28
Roma	55.06	39.80	67.91	54.02	1.38	1.26
Torres Strait	74.04	55.95	86.09	79.06	1.32	1.09
Townsville	54.41	40.51	74.75	59.97	1.34	1.25
Adelaide	47.26	39.80	65.49	53.93	1.19	1.21
Ceduna	50.96	41.72	69.59	57.71	1.22	1.21
Port Augusta	45.37	37.51	62.42	50.76	1.21	1.23
Perth	47.08	38.84	72.83	58.26	1.21	1.25
Broome	51.90	44.73	81.42	77.69	1.16	1.05
Kununurra	57.77	36.95	88.24	81.43	1.56	1.08
Narrogin	48.93	39.19	69.00	53.40	1.25	1.29
South Hedland	51.66	36.79	90.68	73.48	1.40	1.23
Derby	65.73	53.66	82.46	81.74	1.22	1.01
Kalgoorlie	54.95	40.38	82.57	64.92	1.36	1.27
Geraldton	46.87	36.63	70.81	58.67	1.28	1.21
Tasmania	56.27	47.96	62.69	51.73	1.17	1.21
Alice Springs	46.56	39.40	85.36	78.54	1.18	1.09
Jabiru	45.39	32.45	84.61	81.04	1.40	1.04
Katherine	51.39	37.82	83.57	78.60	1.36	1.06
Apatula	27.63	21.94	90.30	87.11	1.26	1.04
Nhulunbuy	39.05	28.45	95.50	78.01	1.37	1.22
Tennant Creek	39.23	26.05	82.97	83.71	1.51	0.99
Darwin	48.16	44.04	80.01	72.70	1.09	1.10
ACT	64.28	61.18	75.00	67.08	1.05	1.12
Australia—Total	**51.24**	**41.28**	**68.35**	**55.46**	**1.24**	**1.23**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A5. Indigenous individual weekly income for Indigenous Regions, by gender, 2006

Indigenous Region	Income <$250 per week		Income >$1000 per week		Income <$250 per week	Income >$1000 per week
	Males	Females	Males	Females	Ratio males to females	
Queanbeyan	47.88	44.35	7.08	6.54	1.08	1.08
Bourke	54.53	48.72	5.10	4.55	1.12	1.12
Coffs Harbour	47.77	44.87	5.28	4.76	1.06	1.11
Sydney	38.45	38.76	10.76	9.33	0.99	1.15
Tamworth	50.78	47.35	4.25	3.70	1.07	1.15
Wagga Wagga	47.54	46.52	4.34	3.87	1.02	1.12
Dubbo	47.57	46.42	4.64	3.91	1.02	1.19
Melbourne	33.72	40.06	8.71	8.22	0.84	1.06
Non-Met. Victoria	43.42	44.33	4.25	3.67	0.98	1.16
Brisbane	33.80	38.11	7.11	6.26	0.89	1.14
Cairns	46.52	40.85	5.64	4.72	1.14	1.19
Mt Isa	46.68	46.31	6.64	5.86	1.01	1.13
Cape York	60.65	57.88	2.67	2.50	1.05	1.07
Rockhampton	41.21	43.22	3.96	3.55	0.95	1.12
Roma	41.18	44.23	4.13	3.62	0.93	1.14
Torres Strait	52.67	42.72	3.08	2.77	1.23	1.11
Townsville	41.12	43.34	5.18	4.55	0.95	1.14
Adelaide	44.51	42.53	7.48	6.45	1.05	1.16
Ceduna	57.46	48.63	5.52	4.35	1.18	1.27
Port Augusta	62.87	56.53	3.38	2.96	1.11	1.14
Perth	40.56	42.33	9.28	7.68	0.96	1.21
Broome	61.23	46.36	5.61	5.15	1.32	1.09
Kununurra	69.71	57.46	3.61	3.20	1.21	1.13
Narrogin	45.51	46.51	4.29	3.73	0.98	1.15
South Hedland	48.82	52.62	6.84	6.45	0.93	1.06
Derby	73.69	61.26	2.97	2.73	1.20	1.09
Kalgoorlie	58.29	58.80	3.71	3.19	0.99	1.16
Geraldton	45.73	42.87	4.27	3.55	1.07	1.20
Tasmania	38.00	43.67	4.84	4.47	0.87	1.08
Alice Springs	54.47	47.23	9.37	7.26	1.15	1.29
Jabiru	78.80	68.35	0.86	0.79	1.15	1.08
Katherine	74.53	62.32	2.96	2.73	1.20	1.08
Apatula	83.63	68.41	0.48	0.41	1.22	1.16
Nhulunbuy	83.97	74.56	0.92	0.82	1.13	1.13
Tennant Creek	78.42	70.37	2.08	1.98	1.11	1.05
Darwin	44.03	40.51	11.44	9.26	1.09	1.23
ACT	32.72	30.73	22.40	21.33	1.06	1.05
Australia—Total	**47.67**	**46.04**	**10.67**	**5.29**	**1.04**	**2.10**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A6. Indigenous and non-Indigenous completion of Year 12 for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males (%)	Females (%)	Males (%)	Females (%)	Indigenous	Non-Indigenous
Queanbeyan	18.29	20.47	36.90	38.28	0.89	0.96
Bourke	11.35	13.64	24.40	29.93	0.83	0.82
Coffs Harbour	18.94	21.13	33.78	34.17	0.90	0.99
Sydney	27.38	29.03	56.61	54.93	0.94	1.03
Tamworth	14.23	17.49	31.12	36.19	0.81	0.86
Wagga Wagga	15.21	18.12	30.61	35.69	0.84	0.86
Dubbo	15.71	19.12	29.68	35.58	0.82	0.83
Melbourne	29.85	35.50	53.53	54.37	0.84	0.98
Non-Met. Victoria	17.19	20.93	32.12	37.79	0.82	0.85
Brisbane	32.14	34.99	50.31	50.18	0.92	1.00
Cairns	28.58	29.59	42.53	46.45	0.97	0.92
Mt Isa	15.88	22.08	37.06	47.81	0.72	0.78
Cape York	14.09	15.29	38.32	47.50	0.92	0.81
Rockhampton	23.89	28.13	32.38	35.90	0.85	0.90
Roma	21.41	23.50	33.92	38.20	0.91	0.89
Torres Strait	36.05	39.17	49.57	59.91	0.92	0.83
Townsville	26.49	30.26	38.71	42.36	0.88	0.91
Adelaide	22.40	24.78	42.72	43.50	0.90	0.98
Ceduna	12.73	14.12	27.77	35.16	0.90	0.79
Port Augusta	9.00	12.91	26.64	32.40	0.70	0.82
Perth	24.10	27.27	51.57	51.97	0.88	0.99
Broome	21.54	26.84	43.56	55.88	0.80	0.78
Kununurra	11.60	12.73	39.66	56.95	0.91	0.70
Narrogin	14.98	17.74	34.01	37.81	0.84	0.90
South Hedland	15.19	16.37	39.11	48.47	0.93	0.81
Derby	14.00	18.02	41.87	55.10	0.78	0.76
Kalgoorlie	12.22	13.22	35.08	41.25	0.92	0.85
Geraldton	14.19	17.19	31.86	38.33	0.83	0.83
Tasmania	18.04	23.30	34.05	35.98	0.77	0.95
Alice Springs	13.17	14.95	43.73	53.70	0.88	0.81
Jabiru	7.98	8.72	42.70	54.82	0.92	0.78
Katherine	6.13	8.89	40.49	51.21	0.69	0.79
Apatula	3.36	3.86	45.36	63.61	0.87	0.71
Nhulunbuy	6.92	8.59	45.65	53.57	0.81	0.85
Tennant Creek	4.05	5.88	35.02	49.18	0.69	0.71
Darwin	20.10	22.38	45.64	51.96	0.90	0.88
ACT	44.36	41.85	68.79	65.21	1.06	1.05
Australia—Total	**20.74**	**23.44**	**46.91**	**47.90**	**0.88**	**0.98**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A7. Indigenous and non-Indigenous population with degree qualifications and higher for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males (%)	Females (%)	Males (%)	Females (%)	Indigenous	Non-Indigenous
Queanbeyan	4.09	6.46	12.44	14.91	0.63	0.83
Bourke	1.39	3.16	6.11	11.65	0.44	0.52
Coffs Harbour	3.63	6.14	10.68	12.90	0.59	0.83
Sydney	6.13	8.92	23.67	24.12	0.69	0.98
Tamworth	1.73	3.03	9.26	13.34	0.57	0.69
Wagga Wagga	2.59	3.84	8.78	13.10	0.68	0.67
Dubbo	1.26	3.59	7.91	12.81	0.35	0.62
Melbourne	8.17	10.12	21.86	23.44	0.81	0.93
Non-Met. Victoria	3.30	5.33	9.97	14.25	0.62	0.70
Brisbane	5.24	7.86	16.38	18.46	0.67	0.89
Cairns	1.86	4.59	10.36	15.66	0.40	0.66
Mt Isa	0.86	1.80	8.72	16.41	0.48	0.53
Cape York	0.00	1.71	10.53	20.64	0.00	0.51
Rockhampton	2.11	4.35	7.51	11.27	0.48	0.67
Roma	2.19	4.79	8.88	12.84	0.46	0.69
Torres Strait	2.23	3.62	19.89	37.59	0.62	0.53
Townsville	2.04	4.47	9.03	13.82	0.46	0.65
Adelaide	4.06	6.20	14.40	16.30	0.65	0.88
Ceduna	0.67	4.28	5.50	10.90	0.16	0.50
Port Augusta	0.99	2.13	6.03	10.20	0.47	0.59
Perth	4.84	8.29	18.60	19.80	0.58	0.94
Broome	0.44	5.48	12.90	24.44	0.08	0.53
Kununurra	0.83	1.78	13.09	30.33	0.46	0.43
Narrogin	1.62	3.40	7.93	11.86	0.47	0.67
South Hedland	1.26	2.56	10.56	17.41	0.49	0.61
Derby	0.33	2.26	14.30	29.36	0.14	0.49
Kalgoorlie	0.46	2.35	8.65	13.60	0.20	0.64
Geraldton	1.50	2.86	7.09	12.34	0.53	0.57
Tasmania	3.30	5.73	12.43	15.31	0.58	0.81
Alice Springs	1.64	4.85	16.73	26.12	0.34	0.64
Jabiru	0.37	0.95	17.21	29.74	0.39	0.58
Katherine	0.88	1.69	11.30	22.96	0.52	0.49
Apatula	0.42	0.65	15.86	27.78	0.65	0.57
Nhulunbuy	0.67	1.18	14.86	24.06	0.57	0.62
Tennant Creek	0.83	1.02	9.80	21.65	0.81	0.45
Darwin	3.90	5.55	15.07	23.03	0.70	0.65
ACT	15.32	18.54	33.81	33.20	0.83	1.02
Australia—Total	**3.26**	**5.40**	**17.20**	**19.31**	**0.61**	**0.89**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A8. Indigenous and non-Indigenous population without non-school qualifications for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males (%)	Females (%)	Males (%)	Females (%)	Indigenous	Non-Indigenous
Queanbeyan	71.49	72.59	47.91	60.36	0.98	0.79
Bourke	84.39	84.04	62.64	68.64	1.00	0.91
Coffs Harbour	70.79	71.30	49.63	62.95	0.99	0.79
Sydney	68.39	70.62	44.86	53.69	0.97	0.84
Tamworth	79.30	79.71	57.05	63.86	0.99	0.89
Wagga Wagga	76.73	78.02	56.24	64.06	0.98	0.88
Dubbo	79.39	80.41	58.20	64.35	0.99	0.90
Melbourne	63.41	67.30	47.66	56.74	0.94	0.84
Non-Met. Victoria	72.18	74.46	54.25	64.23	0.97	0.84
Brisbane	68.79	69.80	48.60	59.74	0.99	0.81
Cairns	78.48	77.27	49.18	61.65	1.02	0.80
Mt Isa	85.19	88.22	50.63	63.26	0.97	0.80
Cape York	85.54	86.46	44.83	57.89	0.99	0.77
Rockhampton	75.55	78.37	56.25	69.59	0.96	0.81
Roma	79.03	79.00	58.96	66.76	1.00	0.88
Torres Strait	69.68	71.65	34.62	38.27	0.97	0.90
Townsville	77.49	77.95	52.54	66.43	0.99	0.79
Adelaide	72.07	72.54	52.23	62.91	0.99	0.83
Ceduna	80.98	79.79	63.20	68.21	1.01	0.93
Port Augusta	85.39	84.85	57.87	71.37	1.01	0.81
Perth	74.02	74.74	46.18	57.29	0.99	0.81
Broome	77.84	78.38	42.77	47.89	0.99	0.89
Kununurra	86.61	88.67	46.65	44.87	0.98	1.04
Narrogin	80.51	78.89	55.97	65.30	1.02	0.86
South Hedland	80.04	85.52	40.95	56.74	0.94	0.72
Derby	88.16	88.01	43.23	44.11	1.00	0.98
Kalgoorlie	85.45	87.40	52.88	64.73	0.98	0.82
Geraldton	81.36	83.62	56.12	65.44	0.97	0.86
Tasmania	70.62	72.72	53.51	64.09	0.97	0.83
Alice Springs	81.31	77.89	43.79	48.11	1.04	0.91
Jabiru	91.40	92.30	40.69	45.55	0.99	0.89
Katherine	88.86	87.91	43.05	49.58	1.01	0.87
Apatula	93.19	91.75	43.58	44.30	1.02	0.98
Nhulunbuy	92.40	91.59	33.44	48.26	1.01	0.69
Tennant Creek	89.73	92.43	50.85	50.86	0.97	1.00
Darwin	73.17	73.95	45.68	52.33	0.99	0.87
ACT	60.64	59.97	39.49	45.55	1.01	0.87
Australia—Total	**75.72**	**76.72**	**49.01**	**59.06**	**0.99**	**0.83**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A9. Indigenous and non-Indigenous working as managers for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males (%)	Females (%)	Males (%)	Females (%)	Indigenous	Non-Indigenous
Queanbeyan	9.62	6.10	19.12	12.55	1.58	1.52
Bourke	6.67	3.76	25.00	16.69	1.78	1.50
Coffs Harbour	7.12	5.14	14.58	8.94	1.38	1.63
Sydney	7.86	6.97	16.29	10.19	1.13	1.60
Tamworth	6.09	4.45	24.75	14.90	1.37	1.66
Wagga Wagga	7.66	5.29	23.44	13.33	1.45	1.76
Dubbo	6.27	3.53	26.70	14.99	1.77	1.78
Melbourne	9.05	7.86	15.85	9.23	1.15	1.72
Non-Met. Victoria	9.77	5.98	20.72	11.88	1.64	1.74
Brisbane	5.99	6.07	14.57	9.16	0.99	1.59
Cairns	4.71	3.33	16.95	11.23	1.41	1.51
Mt Isa	2.40	4.02	12.60	10.99	0.60	1.15
Cape York	3.12	3.97	17.67	13.50	0.79	1.31
Rockhampton	4.96	4.73	15.70	11.30	1.05	1.39
Roma	5.47	4.54	21.05	13.30	1.21	1.58
Torres Strait	5.56	5.83	19.04	17.66	0.95	1.08
Townsville	4.02	4.30	14.69	9.80	0.93	1.50
Adelaide	8.25	6.21	16.56	9.60	1.33	1.72
Ceduna	6.64	5.18	33.97	17.51	1.28	1.94
Port Augusta	3.58	3.14	18.87	11.91	1.14	1.58
Perth	6.06	5.17	14.19	8.27	1.17	1.72
Broome	5.03	4.99	17.42	12.27	1.01	1.42
Kununurra	1.65	1.97	21.19	14.67	0.84	1.44
Narrogin	6.70	5.82	22.21	14.39	1.15	1.54
South Hedland	2.97	3.55	10.43	8.93	0.84	1.17
Derby	2.27	2.27	18.77	11.30	1.00	1.66
Kalgoorlie	6.64	3.76	15.29	11.09	1.77	1.38
Geraldton	5.52	3.21	21.79	14.19	1.72	1.54
Tasmania	10.09	7.03	16.47	9.42	1.43	1.75
Alice Springs	5.07	8.47	15.09	9.68	0.60	1.56
Jabiru	2.83	1.77	19.93	14.60	1.60	1.36
Katherine	4.02	3.63	17.49	13.69	1.11	1.28
Apatula	2.23	2.40	23.60	18.56	0.93	1.27
Nhulunbuy	2.70	1.48	10.49	8.39	1.83	1.25
Tennant Creek	4.04	6.36	19.10	12.45	0.63	1.53
Darwin	6.59	5.54	15.91	11.04	1.19	1.44
ACT	11.54	10.44	18.37	12.90	1.11	1.42
Australia—Total	**6.32**	**5.35**	**16.56**	**10.09**	**1.18**	**1.64**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A10. Indigenous and non-Indigenous working as managers and professionals for Indigenous Regions, by gender, 2006

	Indigenous		Non-Indigenous		Ratio males to females	
Indigenous Region	Males (%)	Females (%)	Males (%)	Females (%)	Indigenous	Non-Indigenous
Queanbeyan	18.88	23.27	33.27	32.81	0.81	1.01
Bourke	13.57	22.11	33.67	36.39	0.61	0.93
Coffs Harbour	16.38	23.32	29.02	29.64	0.70	0.98
Sydney	19.43	25.95	38.78	37.25	0.75	1.04
Tamworth	12.66	19.76	35.39	34.69	0.64	1.02
Wagga Wagga	15.22	19.47	33.90	32.66	0.78	1.04
Dubbo	13.75	18.20	36.40	35.30	0.76	1.03
Melbourne	22.54	27.64	36.77	34.91	0.82	1.05
Non-Met. Victoria	19.65	22.43	32.81	32.35	0.88	1.01
Brisbane	15.32	20.59	31.93	30.90	0.74	1.03
Cairns	12.65	17.87	29.20	29.22	0.71	1.00
Mt Isa	6.72	15.56	22.86	30.18	0.43	0.76
Cape York	8.29	13.90	29.91	35.52	0.60	0.84
Rockhampton	11.16	16.26	25.41	28.37	0.69	0.90
Roma	11.71	16.47	31.56	31.20	0.71	1.01
Torres Strait	12.51	17.15	44.56	54.99	0.73	0.81
Townsville	9.65	18.12	25.28	27.91	0.53	0.91
Adelaide	17.79	24.34	33.26	31.75	0.73	1.05
Ceduna	16.18	23.11	42.54	34.41	0.70	1.24
Port Augusta	9.38	18.01	27.68	30.68	0.52	0.90
Perth	16.79	23.21	33.34	31.49	0.72	1.06
Broome	12.77	20.61	32.56	34.93	0.62	0.93
Kununurra	6.93	12.91	34.50	41.32	0.54	0.83
Narrogin	11.63	18.37	31.53	30.56	0.63	1.03
South Hedland	8.79	18.71	21.26	27.16	0.47	0.78
Derby	4.92	14.16	34.61	41.03	0.35	0.84
Kalgoorlie	11.79	16.18	24.77	28.27	0.73	0.88
Geraldton	11.20	17.86	31.38	32.51	0.63	0.97
Tasmania	16.03	18.40	31.72	30.72	0.87	1.03
Alice Springs	18.39	27.57	33.30	36.15	0.67	0.92
Jabiru	13.69	16.92	39.12	43.81	0.81	0.89
Katherine	9.38	15.64	29.51	36.15	0.60	0.82
Apatula	6.83	20.41	36.02	38.85	0.33	0.93
Nhulunbuy	11.97	12.95	24.79	34.93	0.92	0.71
Tennant Creek	10.77	24.09	29.48	37.35	0.45	0.79
Darwin	19.03	24.80	31.22	35.32	0.77	0.88
ACT	31.32	32.97	47.58	43.38	0.95	1.10
Australia—Total	**14.86**	**20.97**	**34.41**	**33.41**	**0.71**	**1.03**

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A11. Variation within Indigenous Regions for the relative index (male)

Indigenous Regions	Region level quartile	Quantile 1	Quantile 2	Quantile 3	Quantile 4
Queanbeyan	2	2	6	1	0
Bourke	3	0	2	5	3
Coffs Harbour	2	3	11	11	0
Sydney	1	31	12	7	6
Tamworth	3	0	3	5	6
Wagga Wagga	2	0	8	11	4
Dubbo	2	0	1	5	2
Melbourne	1	18	5	0	0
Non-Met. Victoria	2	4	13	4	1
Brisbane	1	16	7	4	1
Cairns	2	7	4	6	1
Mt Isa	3	0	1	2	3
Cape York	3	1	1	1	10
Rockhampton	2	2	8	7	1
Roma	2	1	7	6	2
Torres Strait	1	1	5	7	2
Townsville	2	3	3	4	3
Adelaide	1	8	7	7	1
Ceduna	3	0	0	3	0
Port Augusta	4	0	0	5	2
Perth	1	15	7	0	0
Broome	3	0	1	0	5
Kununurra	4	0	1	1	11
Narrogin	3	0	4	10	3
South Hedland	3	1	1	1	3
Derby	4	0	1	0	9
Kalgoorlie	4	0	1	4	4
Geraldton	3	1	1	2	4
Tasmania	1	2	7	6	1
Alice Springs	3	1	0	0	1
Jabiru	4	0	1	1	9
Katherine	4	0	1	0	9
Apatula	4	0	0	1	14
Nhulunbuy	4	0	0	2	9
Tennant Creek	4	0	0	1	5
Darwin	1	11	3	3	0
ACT	1	3	0	0	0

Source: Authors' calculations using the ABS Census of Population and Housing 2006.

Table A12. Variation within Indigenous Regions for the relative index (female)

Indigenous Regions	Region level quartile	Quantile 1	Quantile 2	Quantile 3	Quantile 4
Queanbeyan	2	3	3	2	1
Bourke	3	0	0	7	3
Coffs Harbour	2	4	12	8	1
Sydney	1	31	15	5	5
Tamworth	3	0	3	7	4
Wagga Wagga	3	0	5	13	5
Dubbo	2	0	2	4	2
Melbourne	1	15	7	1	0
Non-Met. Victoria	2	3	7	9	3
Brisbane	1	17	7	4	0
Cairns	1	7	7	3	1
Mt Isa	3	0	3	0	3
Cape York	3	1	0	6	6
Rockhampton	2	5	6	5	2
Roma	2	2	8	4	2
Torres Strait	1	5	7	3	0
Townsville	2	3	5	4	1
Adelaide	2	6	7	7	3
Ceduna	3	0	1	2	0
Port Augusta	4	0	1	2	4
Perth	1	12	6	4	0
Broome	2	1	1	0	4
Kununurra	4	0	0	2	11
Narrogin	3	1	4	9	3
South Hedland	3	1	0	2	3
Derby	4	0	1	2	7
Kalgoorlie	4	0	0	4	5
Geraldton	3	0	1	5	2
Tasmania	1	3	9	4	0
Alice Springs	3	0	1	0	1
Jabiru	4	0	0	2	9
Katherine	4	0	1	0	9
Apatula	4	0	0	0	15
Nhulunbuy	4	0	0	0	11
Tennant Creek	4	0	0	1	5
Darwin	1	9	4	2	2
ACT	1	3	0	0	0

Source: Authors' calculations using the ABS Census of Population and Housing 2006.