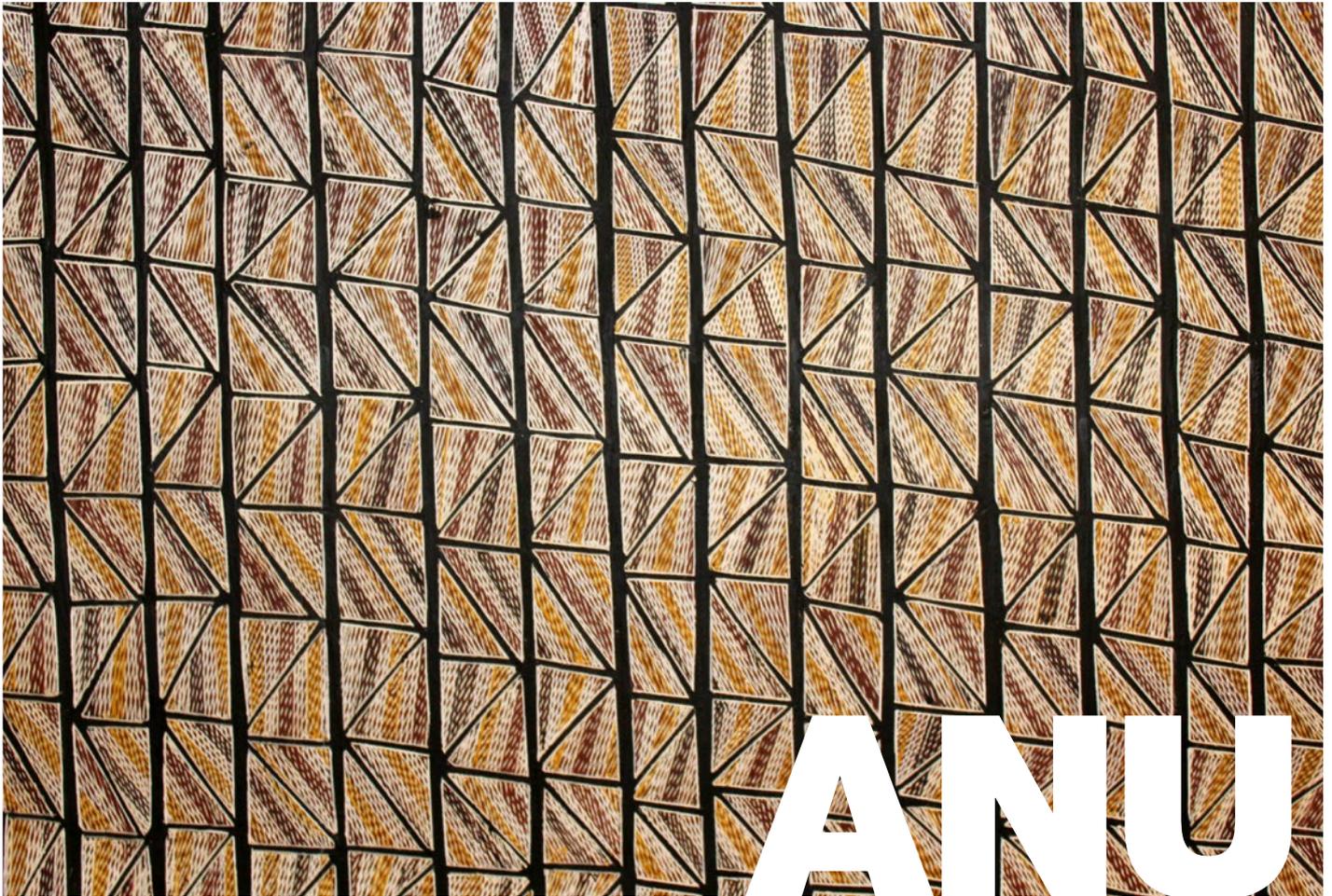




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ONGOING GROWTH IN THE NUMBER
OF INDIGENOUS AUSTRALIANS IN
BUSINESS

S SHIRODKAR, B HUNTER AND D FOLEY

Centre for
Aboriginal Economic
Policy Research
ANU College of
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Ongoing growth in the number of Indigenous Australians in business

S Shirodkar, B Hunter and D Foley

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Abstract

In 2014, Boyd Hunter attempted to provide a consistent estimate of the growth in Indigenous self-employment between 1991 and 2011. Changes in the census questionnaire structure and sequencing means that projecting the growth trends back to 1991 is now problematic. This paper provides a more refined, consistent and transparent method for calculating the number of Indigenous owner–managers, including accounting for the growing prevalence of Indigenous owner–managers who are increasingly identifying themselves as Indigenous in the census, unlike in previous censuses where many did not identify. Using census data and estimated residential population statistics, we conservatively estimate that around 17 900 Indigenous business owner–managers operated in Australia in 2016. We estimate that the number of Indigenous business owner–managers grew by 30% between 2011 and 2016. The rate of Indigenous business ownership has grown marginally as a share of the Indigenous working-age population at a time when the non-Indigenous rate of business ownership has fallen. Yet the rate of Indigenous business ownership remains relatively low compared with the rate of business ownership among non-Indigenous Australians. The paper also provides insights about the characteristics of Indigenous owner–managers, including their number, geographic distribution, gender composition, industrial sectors, and whether they are running incorporated or unincorporated enterprises. The recent growth in Indigenous owner–managers is almost entirely in urban areas and cities where well-developed and diverse labour and

product markets operate. The paper explores some of the key factors that are impacting on Indigenous business development, including issues about the economics of discrimination and remoteness. The paper also outlines policy implications that arise from the analysis. We reflect on further refinements of the Indigenous Procurement Policy, the recently announced Indigenous Business Sector Strategy and other policy options.

Keywords: Indigenous businesses, Indigenous owner–managers, Indigenous entrepreneurship, economics of discrimination, remote Indigenous business

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Acronyms

ABS	Australian Bureau of Statistics
ACLD	Australian Census Longitudinal Dataset
ANU	Australian National University
CAEPR	Centre for Aboriginal Economic Policy Research
CEO	chief executive officer
ERP	estimated residential population
IPP	Indigenous Procurement Policy

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1 Introduction

Indigenous businesses are crucial for the economic self-determination of First Nations communities. As part of the process, it is important to improve Australia's broader understanding of the sector and chart its growth. The recent growth in awareness of Indigenous business has created significant interest in good estimates for the size of the sector. Understanding the basic characteristics of such businesses and the composition of the sector offers important information for policy makers. This paper provides reliable estimates of the sector, based on detailed analysis of recent census data as well as compositional facts.

Historically, inadequate data and relatively small numbers captured in previous censuses has limited the analysis of Indigenous businesses (Hunter 1999). The information has improved with the collection of consistent data in recent censuses, albeit indirect information based on individuals who own or manage an enterprise. Of course, not all businesses have a single owner who also happens to be manager. Many businesses are complex legal and tax entities that are difficult to identify and even more difficult to analyse. And a number of entrepreneurs own multiple businesses at the same time, or have owned multiple businesses over their lifetime.

Unsurprisingly, definitional differences arise. Foley (2013) argues that the overall number of Aboriginal and Torres Strait Islander businesses is unnecessarily restricted by official statistics that focus on majority Indigenous ownership (i.e. more than 50% of the equity in the business is controlled by Indigenous people). His research documents how large numbers of First Australians are in partnership with non-Indigenous people, with a substantial number of these business partnerships involving a married couple. We have no evidence to suggest that such businesses are Indigenous *in name only*. Many such businesses clearly involve substantial Indigenous control (also see Foley & Hunter 2013). The above illustrates the complexity of trying to untangle these economic entities. Therefore, rather than focusing on the business entity, the thought-provoking and arguably more practical area of enquiry is in understanding the Indigenous business owners themselves.

Hunter (2014) attempted to provide a broadbrush estimate of the growth in Indigenous self-employment, which he claims has been growing steadily since the 1991 Census, albeit from a low base. The major issue in

previous estimates of the Indigenous business sector is an element of confusion as to what constitutes self-employment, how it relates to businesses and how to measure it in the data. The 1991 Census asked whether respondents were self-employed rather than working in business *per se*. Recent censuses have asked whether an individual is the owner–manager of an enterprise (including incorporated or unincorporated enterprises).

Using the census definition given by the Australian Bureau of Statistics (ABS), this paper provides a more refined, consistent and transparent method for attempting to estimate the real number of Indigenous business owner–managers in Australia.

Section 2 documents the policy context for the Indigenous business sector. We then discuss important differences between Indigenous businesses, Indigenous entrepreneurs and Indigenous owner–managers. Some definitional compromises are required to measure practically the growing prevalence of Indigenous business owners.

One of the major contributions of this paper is providing a method to estimate a realistic approximation of the number of Indigenous business owner–managers in Australia over the decade to 2016 (Section 3). Crucially, the method attempts to account for a phenomenon observed in the data in which a substantial and growing share of the Indigenous business population has not identified their Indigenous status in earlier censuses but has done so in subsequent censuses. The calculation also adjusts for the Indigenous population undercount in the census – that is, the roughly 20% of Indigenous Australians who were not captured in the census (see Box 1 and Appendix A for details on the methodology).

In Section 4, the paper describes salient characteristics of Indigenous owner–managers, including where they are located, which regions have experienced the highest rates of growth, and the distribution of owner–managers by industry, gender, demography and types of business.

Section 5 explores the contributing factors that impact negatively on Indigenous business development, including unpacking the literature about the economics of discrimination and examining the increased challenges for remote-based Indigenous businesses. The final section (Section 6) reflects on the policy implications of the findings.

2 The growing prevalence of Indigenous Australians in business

The historical exclusion of Indigenous Australians from mainstream economic life has led to low accumulation of wealth across many Indigenous communities. Only a relative few gained formal business experience before the last decade. The result is that the vast bulk of entrepreneurially inclined Indigenous Australians likely lack the key preconditions to start a business and prosper in our capitalist economy. Despite the challenging environment, the number of Indigenous Australians in business (or self-employment) has grown substantially in recent decades (Hunter 2014). Recent efforts to highlight the successes of Indigenous-owned businesses have raised the national profile of the rapidly growing sector.

The sector's recent growth (or, at the very least, growth in the mainstream awareness of the sector) is, in part, attributable to initiatives such as the Indigenous Procurement Policy (IPP), which established department-level targets for Australian Government procurement in 2015. Under the IPP, the dollar value of successful tenders for Australian Government contracts by Indigenous business owners grew from an estimated \$6 million in 2012–13 to more than \$1 billion in the policy's first two and a half years (July 2015 to December 2017). Currently, more than 1000 Indigenous businesses are contracting with the Australian Government as a result of the IPP.

The Australian Government also recently announced the Indigenous Business Sector Strategy, which includes measures that provide greater business support, improved access to finance, stronger connections to business networks and better sharing of information about commercial opportunities.

Further, in 2017, the Department of the Prime Minister and Cabinet published the first Indigenous business fact sheet, which compiled information on the size, composition and broad geographic locations of Indigenous businesses. The fact sheet provides access to aggregate and average data on Indigenous firm performance. The revenues of Indigenous firms registered with the Supply Nation database reached \$1.15 billion in 2014–15, with an average annual revenue of \$1.65 million per firm. And the revenue of firms registered with Supply Nation that had been operating from 2009–10 to 2013–14 grew at an annual average rate of 12.5%.

Using the large number of in-depth interviews he has conducted, Foley (2013) pointed to a multiplier effect that Indigenous businesses have on the creation of jobs for First Australians. Hunter (2015) demonstrates the statistical significance of Foley's multiplier with his analysis of a sample of more than 17 700 Australian businesses. He found that, in his sample, Indigenous businesses were 100 times more likely than non-Indigenous businesses to employ Indigenous workers. And they also employed large proportions of non-Indigenous workers. Foley's research was further validated by the fact that Indigenous businesses were many more times as likely to hire Indigenous employees irrespective of whether there was majority Indigenous equity, or the business was an equal partnership between Indigenous and non-Indigenous people.¹ More recently, Australian Government analysis of Supply Nation's register of Indigenous businesses suggests that Indigenous-owned firms are between 40 and 50 times more likely to hire Indigenous employees than non-Indigenous firms. Regardless of the estimates, clearly, Indigenous businesses offer a mechanism to deliver economic development and increase Indigenous workforce participation.

The Australian Government notes in the 2018 *Closing the gap* report that Indigenous business success is shifting the national Indigenous narrative from *welfare and dependence* to *aspiration, empowerment, independence* and the *achievement of excellence*. The attainment of business, financial and economic independence helps to counter the inherent racism of low expectations and is beginning to reverse the challenges that arose from marginalisation and low historic access to economic opportunities that previously defined the Indigenous status quo. But to interpret the sector's potential, policy makers require a lexicon that offers definitional clarity and consistency.

Definitions: Indigenous businesses, Indigenous entrepreneurs and owner-managers of businesses who are Indigenous Australians

Indigenous entrepreneurship is an emerging field of international scholarship. Much of the research focuses on management issues and on the *Indigenous-specific* aspects of entrepreneurship (Hindle & Moroz 2010, Henare et al. 2014, Dana 2015). Previous Australian studies have also focused on the concept of an Indigenous business (Foley 2013), or an Indigenous Australian entrepreneur (Foley 2000). This paper focuses

on Indigenous Australians who are owner–managers of businesses. The concepts are largely similar, but a handful of differences exist.

Foley (2013) argues that the definition of an Indigenous business should be directly analogous to the legal and governmental definitions of whether a person is accepted as Indigenous. Accordingly, he argues that to accept a business as Indigenous, they should meet at least three conditions:

1. At least one person holding equity in the business should identify as being Aboriginal or Torres Strait Islander.
2. The business should identify itself as an Indigenous-owned business.
3. The Indigenous business community should accept this business as being Indigenous.

Foley widens the definition to include businesses that may only have one Indigenous person holding potentially a minority equity stake, rather than insisting on majority Indigenous ownership (or even 50% equity). Foley acknowledges that the definition may cause concerns, especially for policy makers who may want to target programs and direct taxpayers' funds to those individuals or entities who are most in need. However, the definition is also potentially more restrictive because of the need for acceptance by the rest of Indigenous business fraternity, for which arguably each member also faces the same definitional issue.

The difficulty in using the above definition for the analysis in this paper arises with measurement. Not only is it difficult to capture the detailed cultural and social context in statistical collections, but comparisons with non-Indigenous businesses are not straightforward and attempting to distinguish the two can become perilous. Hence, instead of looking at businesses directly, we find value in understanding the individual entrepreneurs themselves.

Foley defines an Indigenous Australian entrepreneur in the following way:

The Indigenous Australian entrepreneur alters traditional patterns of behaviour, by utilising their resources in the pursuit of self-determination and economic sustainability via their entry into self-employment, forcing social change in the pursuit of opportunity beyond the cultural norms of their initial economic resources. (2000:11)

The definition applies a range of social criteria that represent the empowering effect of entrepreneurship, not least of which was breaking the shackles of the historic oppressive 'Indigenous Australian economic *status quo*' (Foley 2000:11), which still defines the experience of many First Australians today. Crucially, Indigenous entrepreneurs offer their community an avenue for greater and long-overdue economic self-determination, create positive role models within families and communities, and can serve as mentors to young, entrepreneurial Indigenous Australians. But the difficulty in using the definition is the impracticality of asserting the social goals of individuals or firms from data sources such as the census.

Measuring the number of business owner–managers is a much simpler task. The ABS Census of Population and Housing offers the most comprehensive means of capturing Indigenous owner–managers across Australia. It is based on the ABS census classification of owner–managers, with various characteristics, including firm classifications of incorporated or unincorporated. While the number of owner–managers provides an indirect measure of Indigenous *businesses*, the measure offers the most robust source of information on the sector's growth. Accordingly, the census definition and the associated census counts form the starting point for this paper's estimate of the total number of Indigenous owner–managers. The definitions below are found in the *Census dictionary*:

Owner–managers of unincorporated enterprises:
An owner–manager of an unincorporated enterprise is a person who operates his/her own unincorporated economic enterprise, that is, a business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred. It includes those engaged independently in a profession or trade.

An owner–manager of an incorporated enterprise: is a person who works in his/her own incorporated enterprises, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as a limited liability company).

3 Identifying recent trends in Indigenous business owner–managers

This paper estimates that the Indigenous business community continued to grow strongly in the 10 years to 2016, reaching 17 900 owner–managers in 2016 (Figure 1). The estimate adjusts for the undercount of Indigenous Australians (using the estimated residential population statistics [ERP]) in the census and the propensity for some owner–managers to identify as Indigenous in future censuses – that is, accounting for the rate of Indigenous owner–managers who are newly identified as Indigenous. Biddle and Markham (2018) use the ABS’s Australian Census Longitudinal Dataset (ACL D) to show that the net increase in the total Indigenous population from identification change was around 84 600 between 2011 and 2016. Details of our methodology for estimating the number of Indigenous owner–managers are provided in Box 1 and Appendix A.

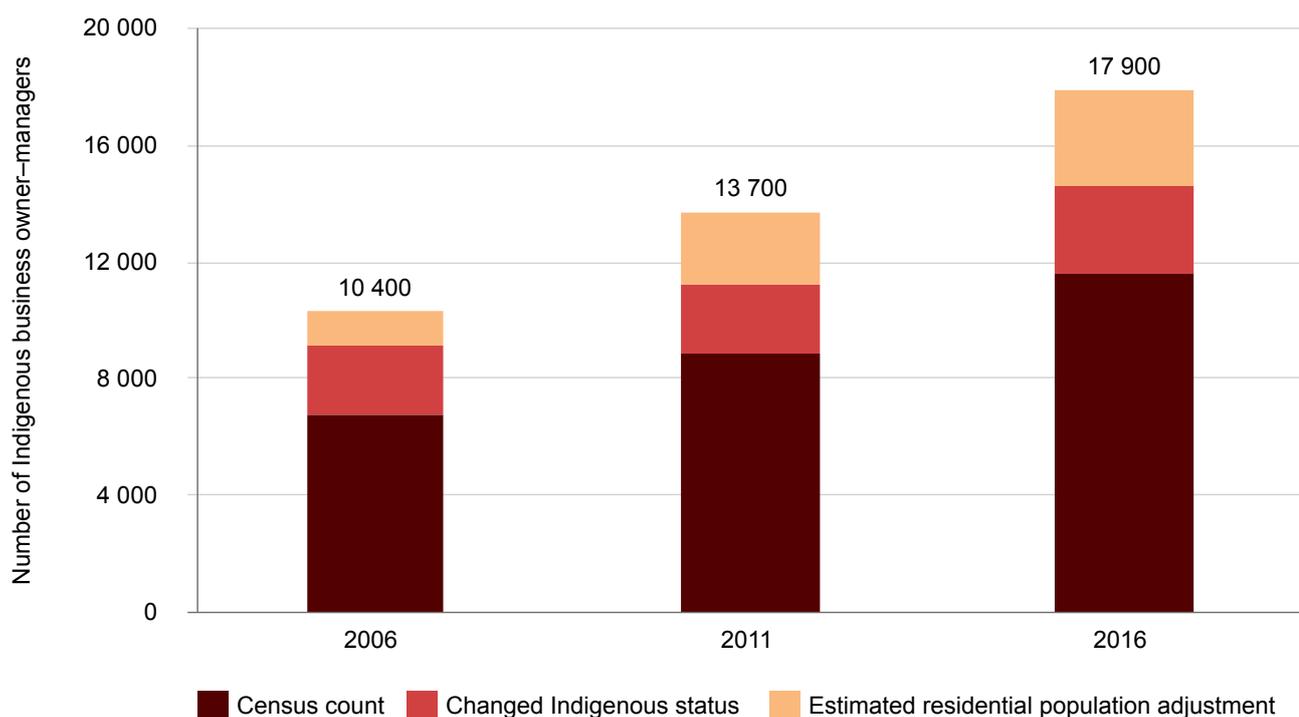
Applying this method to 2011 data, we estimate that approximately 13 700 Indigenous owner–managers were operating in 2011. Therefore, the number of Indigenous owner–managers grew by around 30% between 2011 and 2016. The estimate is 1200 more owner–managers

than previously estimated by Hunter (2014) for 2011. And we estimate that there were around 10 400 Indigenous owner–managers in 2006, which is around 1500 more than Hunter’s (2014) estimate for 2006 (note that Appendix A covers some methodological issues that might result in a higher estimate of Indigenous owner–managers in 2006 than would otherwise be the case). Figure 1 displays the relative contributions of each component of the calculation to the aggregates for the last three censuses. The growth in the number of Indigenous business owner–managers in the 10 years between 2006 and 2016 is in line with the growth in the census headcount of Indigenous owner–managers.

The release of the 2006–16 ACL D will provide an even more accurate estimate of the number of Indigenous owner–managers over the last three periods.

Despite the strong growth in the number of Indigenous Australians choosing a life in business, the rate of Indigenous business ownership as a share of the 15+ population is still significantly lower than the non-Indigenous rate (Figure 2). But some positive signs have emerged. The proportion of Indigenous owner–managers is increasing as a share of the 15+ population, from 3.2% in 2006 to 3.4% in 2016. And the increase in the rate of Indigenous business ownership is occurring

Figure 1 Growth in the number of Indigenous owner–managers in Australia, 2006–16



Note: Calculations are derived using the methodology developed in this paper, as outlined in Box 1 and Appendix A.

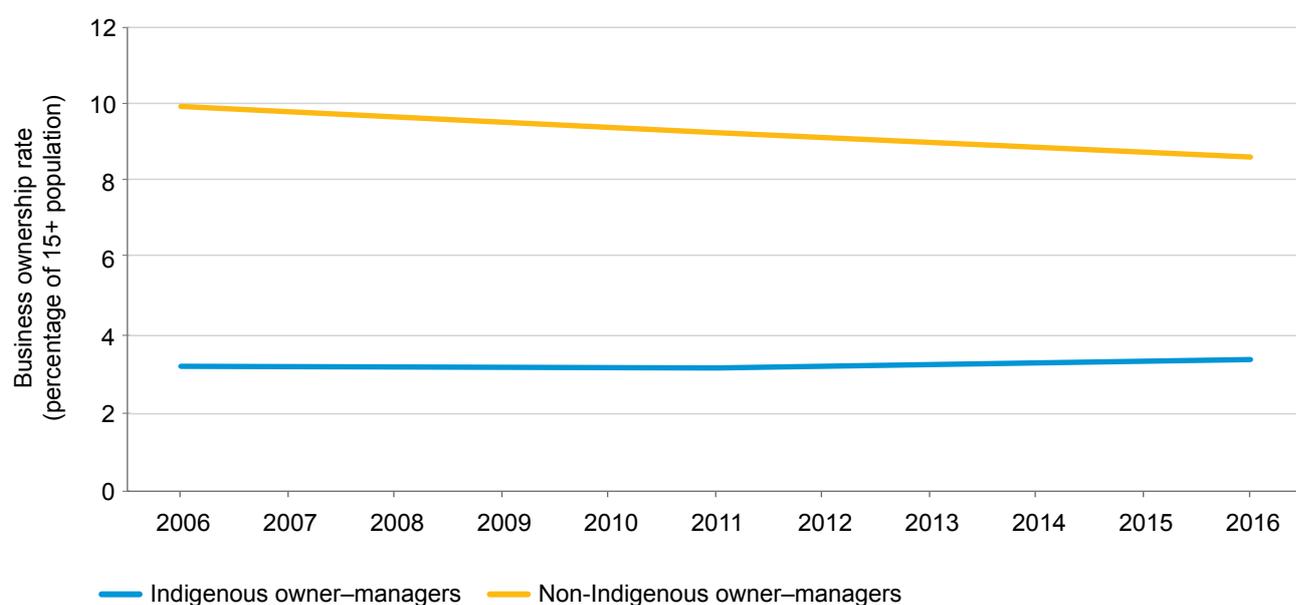
at a time when the proportion of non-Indigenous owner-managers is actually decreasing – from 10.0% in 2006, to 9.2% in 2011 and 8.6% in 2016. The general decline in the non-Indigenous rate of business ownership could reflect the difficulties that have affected the Australian economy since the global financial crisis in 2008. Against that backdrop, the growth in the share of Indigenous owner-managers is noteworthy and implies that Indigenous owner-managers are making headway in the economy despite the relatively low-growth environment over the last decade.

The calculations above represent a conservative estimate of the number of Indigenous businesspeople, based on information from the census and the ACLD. It offers a proxy for the number of Indigenous businesses. We note unpublished estimates from Foley, who estimated that there were at least 25 000 Indigenous businesses between 2010 and 2012. The research was based on consultation with leading Indigenous thinkers in the field, including Ms Esme Monaghan (former CEO of the Koori Business Network), Neil Willmet (former CEO of the Indigenous Business Network), and researchers at the Australian Taxation Office and the New South Wales Indigenous Chamber of Commerce. The research uses various databases to count the number of registered Indigenous businesses. Any estimates that use multiple sources for their data must ensure that the databases do not overlap (to minimise the likelihood of double counting

enterprises), and that they contain data for the same period of time.

In addition, PwC Indigenous Consulting and PricewaterhouseCoopers (2018) – referred to as PwC – present estimates of between 8600 and 11 900 Indigenous businesses (including self-employed individuals, enterprises and trusts) as of 2016. The higher estimate is based on 2016 Census counts of the number of self-employed and owner-managers of enterprises identified in the census, and on 400 Indigenous trusts identified in the Office of the Registrar of Indigenous Corporations reports. The lower bound of PwC estimates uses Supply Nation’s Indigenous Business Direct directory to calculate the number of Indigenous enterprises with employees (i.e. not the self-employed). Note that Supply Nation does not yet have a comprehensive register of Indigenous businesses, having only 1573 verified Indigenous businesses on their register (and only around 1000 businesses at the time PwC Indigenous Consulting developed its estimate). Based on PwC’s methodology, their estimated range could involve a degree of double counting that is difficult to overcome. Finally, the PwC estimate does not account for the growing propensity to switch to ‘Indigenous’ on the census. As such, the methodology adopted in our paper provides a more complete means to measure the Indigenous business sector’s footprint than the very conservative estimates provided by PwC.

Figure 2 Rates of Indigenous and non-Indigenous business ownership, 2006–16



Note: Calculations are derived using the methodology developed in this paper, as outlined in Box 1 and Appendix A.

Box 1 Estimating the number of Indigenous owner–managers

Two statistics are required to accurately calculate the number of Indigenous Australians in business (Appendix A provides further details of these calculations and their construction):

- $E(\rho_{16})$, the Indigenous estimated residential population (ERP) aged 15+ in 2016
- $E(\beta_{16})$, the rate of Indigenous business ownership as a share of the Indigenous 15+ population in 2016, calculated from the census and the Australian Census Longitudinal Dataset (ACLD).

Multiplying the two components together gives the number of Indigenous business owner–managers.

The census provides the most comprehensive source of information on the number of identified Indigenous Australians in business. But there are well-known limitations. For example, each census undercounts the entire Australian population by around 5% because of a range of collection challenges. For Indigenous Australians, the undercount as measured through the ERP is around 19%. That is, around a fifth of Indigenous Australians are not captured in the census. A more accurate estimate of the number of Indigenous Australians in businesses is obtained by scaling using the ERP – that is, $E(\rho_{16})$.

The census also provides a basis for estimating the rate of Indigenous business ownership, $E(\beta_{16})$. But a complication arises because of the significant numbers of Indigenous owner–managers who do not initially identify as Indigenous, but do in future censuses. Evidence from Foley (2000) suggests that many Indigenous owner–managers may not openly identify as Indigenous because of the fear of racial discrimination from customers, suppliers, lenders, and perhaps even the public service and society more broadly. Foley documents a number of instances of difficulties that have arisen when it is revealed to the non-Indigenous business community that a business person is Indigenous. As a result, Indigenous businesspeople may display a greater level of caution in revealing their Indigenous identity to others than the rest of the Indigenous population. Any calculation of the number of Indigenous owner–managers needs to make an appropriate adjustment for the underreporting of responses to the Indigenous status question. Data from the ACLD maps changes between censuses for a 5% sample of Australians between 2011 and 2016. The ACLD supports the above position by showing that an additional 41.7% of Indigenous owner–managers in 2016 did not initially identify as Indigenous in 2011. In comparison, only an additional 12.5% of the Indigenous 15+ population in 2016 did not identify in 2011.

Putting these findings into the equations (see Appendix A for full details), we estimate that the rate of Indigenous business ownership – that is, $E(\beta_{16})$ – grew from 3.2% in 2006 to 3.4% in 2016.

When we multiply the Indigenous ERP for 15+ (523 835) by the estimated rate of Indigenous business ownership (3.4%) – that is, $E(\rho_{16}) \times E(\beta_{16})$ – we find that there were around 17 900 Indigenous owner–managers in 2016.

4 Distribution of Indigenous owner–managers in the census

The following descriptive analysis examines the distribution of Indigenous owner–managers, as found in the census, by geography, gender, age, industry and other components. The analysis does not attempt to estimate the compositional breakdowns based on our calculation of 17 900 owner–managers, since the method is less accurate for small subsets of Indigenous owner–managers.

Where are Indigenous owner–managers located?

Table 1 presents raw census counts of the numbers of Indigenous owner–managers in each jurisdiction's Greater Capital City Statistical Area (GCCSA) and in

the rest of the state or territory. The vast majority of Indigenous owner–managers are located on the east coast of Australia, in particular in greater Sydney and the rest of New South Wales. Large numbers also live in Brisbane, the rest of Queensland and in Melbourne. The growth of Indigenous owner–managers in capital cities over the last decade has been significant and has occurred at double-digit rates except in Darwin, where the number of Indigenous businesses fell between 2011 and 2016.

The experiences of regionally based Indigenous owner–managers are more mixed. In regional areas of New South Wales, Queensland and Victoria, the number of Indigenous owner–managers increased at double-digit rates between 2006 and 2011, and between 2011 and 2016. In fact, the number of Indigenous Australians in business in regional New South Wales doubled over the decade (from 1317 in 2006 to 2719 in 2016). In regional South Australia, Western Australia and Tasmania, the

Table 1 Location of Indigenous owner–managers by Greater Capital City Statistical Area

GCCSA	2006	2011	2016	2006–11 change (%)	2011–16 change (%)
Sydney	978	1275	1830	30	44
Rest of NSW	1317	1856	2719	41	46
Melbourne	405	547	823	35	50
Rest of Vic	287	357	469	24	31
Brisbane	643	819	1122	27	37
Rest of Qld	1228	1568	2035	28	30
Greater Adelaide	167	247	309	48	25
Rest of SA	122	164	171	34	4
Greater Perth	343	428	535	25	25
Rest of WA	315	397	400	26	1
Greater Hobart ^a	173	194	228	12	18
Rest of Tas ^b	320	408	421	28	3
Greater Darwin ^a	110	168	167	53	–1
Rest of NT ^b	188	306	172	63	–44
ACT	109	146	165	34	13

GCCSA = Greater Capital City Statistical Area

a 2006 figures derived from Statistical Divisions of Hobart and Darwin.

b 2006 figures derived as differences between GCCSA for Tasmania and the Northern Territory and the Statistical Divisions of Hobart and Darwin

Note: The GCCSA results are provided in the census. The aggregation of these figures does not equal this paper's estimated Indigenous business population for Australia.

number of Indigenous owner–managers grew at double-digit rates between 2006 and 2011, but remained flat between 2011 and 2016. And while the number in regional Northern Territory grew by 63% between 2006 and 2011, it fell by 44% in the following five years.

The lack of recent growth in Indigenous owner–managers in Western Australia and South Australia, and the significant recent declines in the Northern Territory, could partially reflect the reduction in business opportunities following the end of the mining boom. Queensland-based Indigenous owner–managers, however, did not experience similar declines in their numbers, implying greater diversity of business activities across the state. Mining cannot fully explain the significant changes in the Northern Territory. The ongoing effect of the Australian Government’s Northern Territory Intervention may have also affected

the region’s economic prospects. The matter warrants further investigation.

The ABS’s regional maps provide a more granular picture of the location of Indigenous owner–managers, presenting them as a share of the regional Indigenous working-age population (15–64 years).² Figure 3 shows that the highest proportions of Indigenous owner–managers are concentrated in east coast urban areas where the labour and product markets are most developed, as well as in regional parts of the eastern states of Queensland, New South Wales, Victoria and Tasmania. Indigenous owner–managers are more sparsely concentrated across the rest of the country and make up the lowest shares of the Indigenous population in large parts of remote Western Australia, South Australia and the Northern Territory.

Figure 3 Owner–managers as a percentage of the Indigenous working-age population (15–64 years), 2016

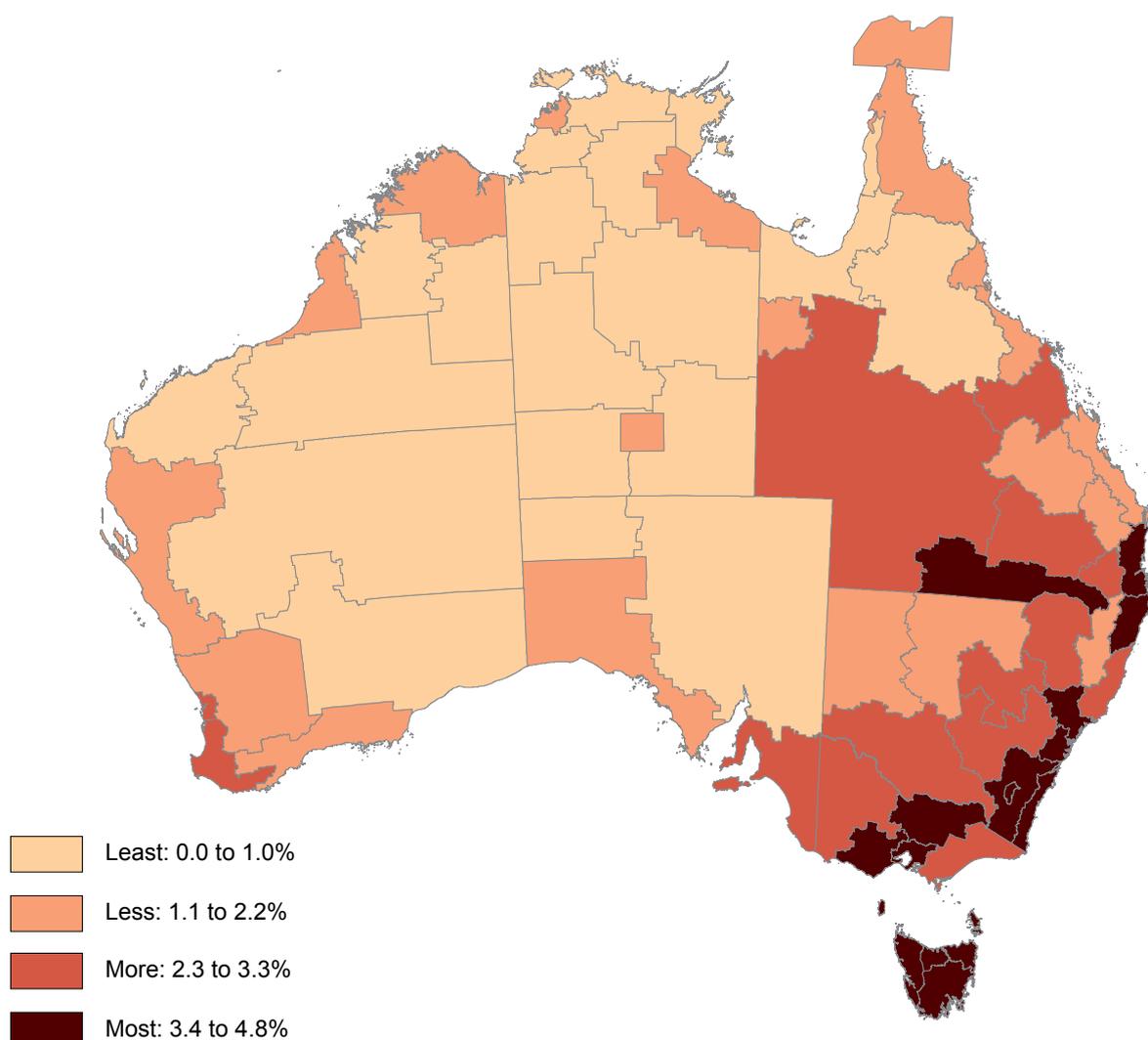
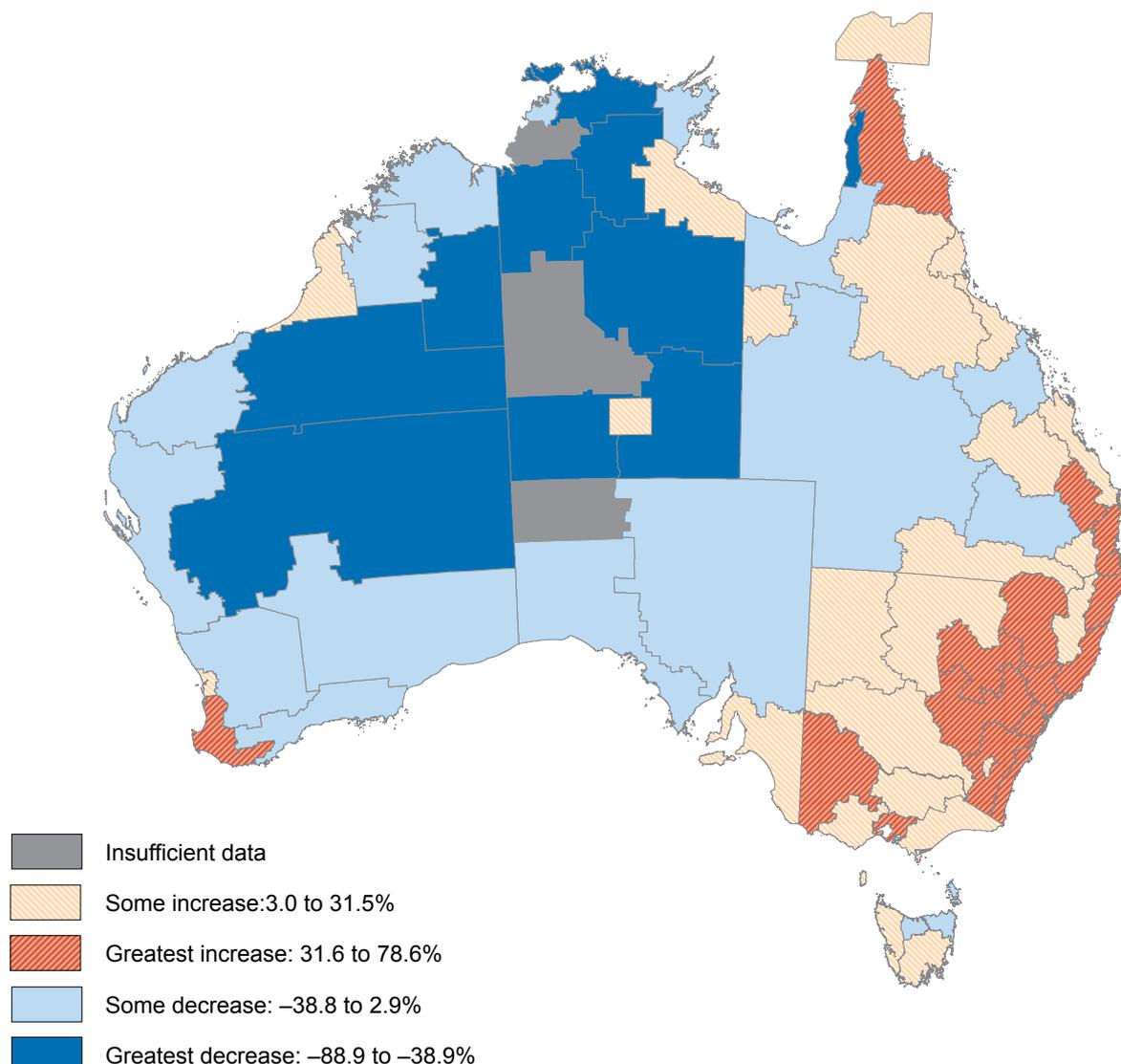


Figure 4 provides details about the change in the number of Indigenous owner–managers between 2011 and 2016 across regions. While growth in the number of Indigenous owner–managers was relatively high in metropolitan areas, growth was weaker in areas where relatively few Indigenous owner–managers operated. For example, the growth rate in Mallee was 78%. Interestingly the second-highest growth of owner–managers was in Newcastle, which now has more Indigenous enterprises than metropolitan Melbourne.³ This is likely to be partly the result of Indigenous grassroots organisations promoting Indigenous business activity. Their training and support mechanisms included the now-defunct Mandurah Hunter Valley Aboriginal Chamber of Commerce, which later merged into the NSW Indigenous Chamber of Commerce. The head office is in the Hunter Valley region.

The largest declines in the number of owner–managers were in remote regions, which also had relatively few enterprises in 2011. The Northern Territory and very remote parts of Western Australia and the Northern Territory appear hardest hit. Overall, the change in the number of Indigenous owner–managers reinforces the story that remote areas, where almost 20% of the Indigenous population live, are underdeveloped in terms of access to markets. Clearly, the situation is becoming more challenging.

The chapter on the economy in the second edition of the *Atlas of Indigenous Australia* will provide additional informative maps that describe the geographic distribution of enterprises run by Indigenous owner–managers (Hunter et al. forthcoming).

Figure 4 Percentage changes in the numbers of Indigenous owner–managers, 2011–16



We do not attempt to adjust the owner–manager geography statistics based on the methodology outlined in this paper. But we note that Biddle and Markham (2018) use the ACLD to show that the vast majority of those who changed their Indigenous status in the census lived in urban parts of Australia in 2011. Using our methodology, this suggests an even more pronounced increase in the number of owner–managers living in urban areas than is suggested in Figures 3 and 4.

Distribution of owner–managers by gender

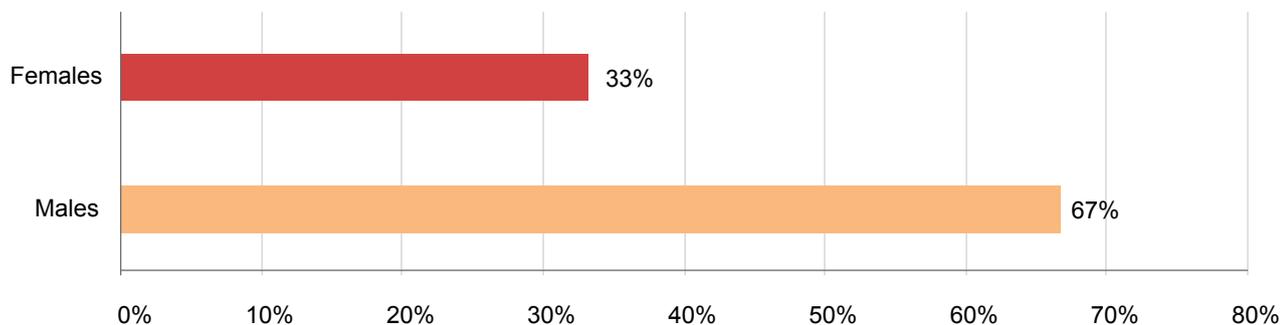
Men make up 67% of Indigenous owner–managers and women 33% (Figure 5). The Australian Government has stated that an objective of the Indigenous Business Sector Strategy is to increase the proportion of Indigenous women that go into business. This is a worthy goal, since the proportion of working-age Indigenous women (and men) in business is still relatively low. However, policy makers should note that

the gender balance among Indigenous owner–managers is exactly the same as the gender balance among non-Indigenous owner–managers (Figure 6). As such, the lower proportion of Indigenous women taking up opportunities in business is likely to reflect broader societal factors that inhibit Australian women from taking up a life in business.

Distribution of owner–managers by age

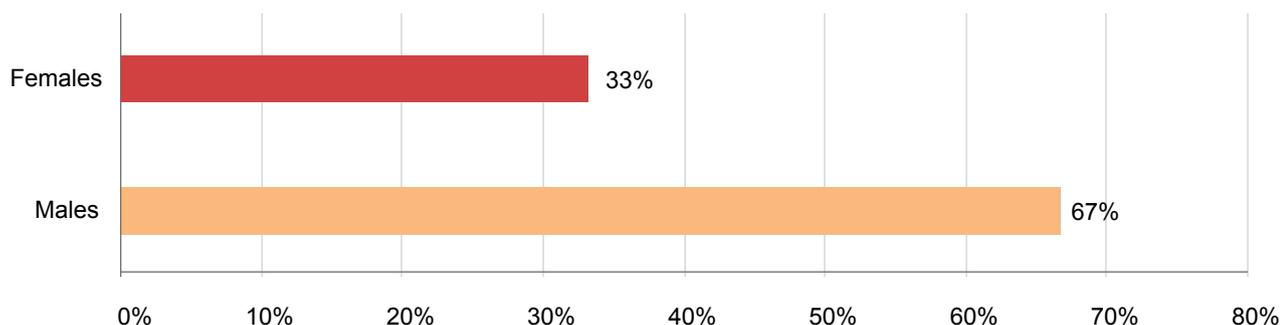
The census reveals that the population profile for Indigenous owner–managers is younger than that for non-Indigenous owner–managers (Figure 7). The median age range for Indigenous entrepreneurs is 40–44 years, while the median range for non-Indigenous entrepreneurs is 45–49 years; 20–24-year-olds make up roughly 5% of the Indigenous owner–managers, but only 2% of non-Indigenous owner–managers. The 25–29 years category shows a similar 3 percentage point difference. Conversely, proportionately more non-Indigenous Australians are in business at relatively older ages, particularly from 55 onwards.

Figure 5 Indigenous owner–managers, by gender, 2016

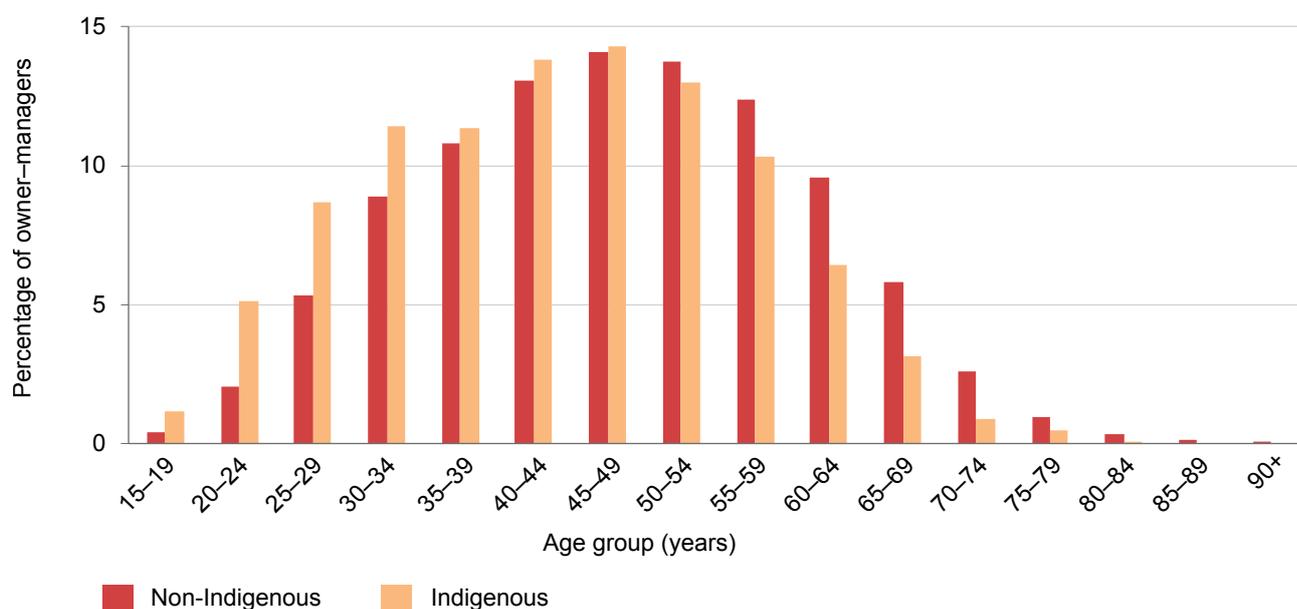


Source: 2016 Census of Population and Housing

Figure 6 Non-Indigenous owner–managers, by gender, 2016



Source: 2016 Census of Population and Housing

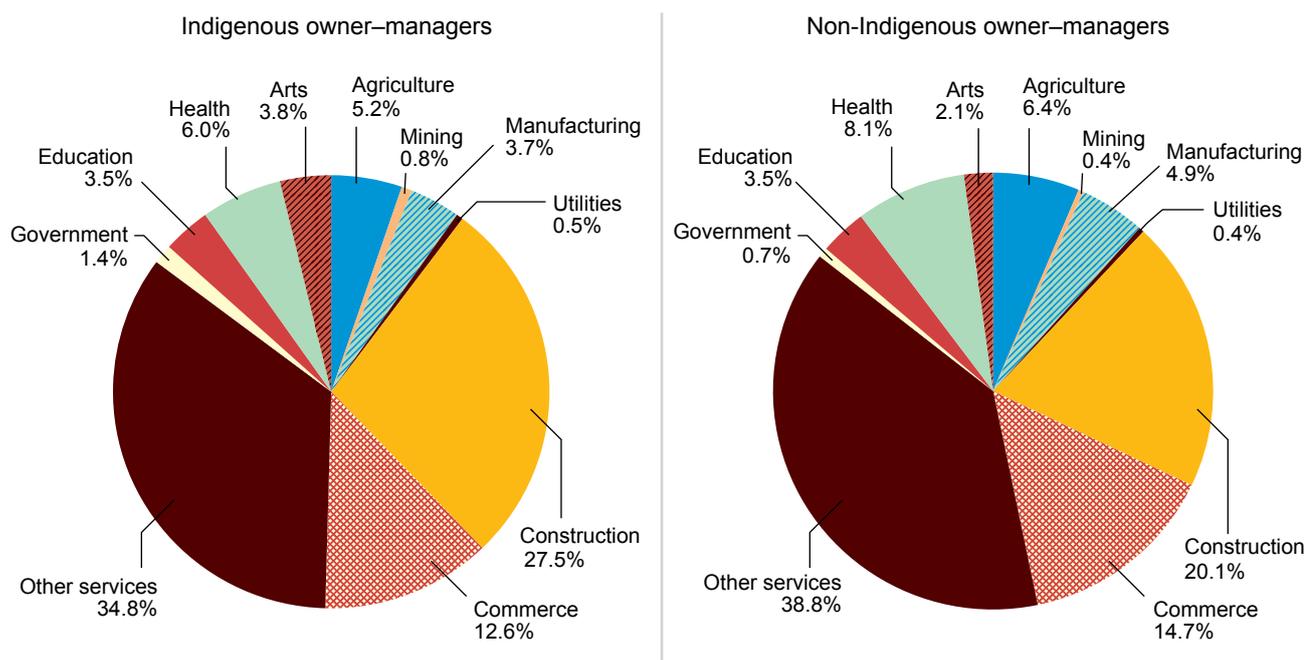
Figure 7 Indigenous and non-Indigenous business owner age profiles, 2016

One could interpret the results in a number of ways. It likely reflects the fact that Indigenous Australians have a much younger demographic profile than non-Indigenous Australians. But it could also mean that young Indigenous Australians are more open about going into a life of business ownership than their non-Indigenous peers – the average younger Indigenous Australian is coming out with more primary, secondary and tertiary education skills than previous generations, better equipping them for the business environment. Perhaps, given the greater barriers that our society has placed before Indigenous people in the past compared with today, fewer older Indigenous Australians had opportunities to go into business, hence the slightly skewed Indigenous business-age profile. Alternatively, the stresses of business life, coupled with the difficult and unfair prejudicial circumstances in Australian society that have resulted in a lower average life expectancy, could mean that, on average, Indigenous owner-managers are passing away sooner. Preliminary qualitative research (Foley 2017) and other interrelated studies indicate that a combination of complex factors impact on the Indigenous business person differently from the non-Indigenous. Further research about population distributions would assist in testing each of the hypotheses outlined above.

Distribution of owner-managers by industry

The industry representation of Indigenous owner-managers in the Australian economy is similar in composition to the industry representation of non-Indigenous owner-managers (Figure 8). For example, the largest share of Indigenous owner-managers operates in the 'other services' sector (34.8%),⁴ which is similar to the share of non-Indigenous owner-managers (38.8%). Of note is the high proportion of Indigenous business operators in construction (27.5%) compared with 20.1% of non-Indigenous businesses in construction. And, despite the historic focus on the economic potential that the art sector offers Indigenous people (Altman 2000), it now only represents 3.8% of the Indigenous business sector, similar in relative size to the non-Indigenous arts sector (2.1%).⁵ However, that figure may not give a true indication of actual enterprise levels because the Indigenous arts industry often operates in the cash economy, with few or no accurate records.

A segregation index for Indigenous and non-Indigenous owner-managers measures the similarities between the two groups. The estimation technique is the index of dissimilarity (Duncan & Duncan 1955). The method uses the sum of half the absolute differences between the industry distributions of Indigenous and non-Indigenous owner-managers. The dissimilarity index figure is 0.104, which shows that only 10.4% of Indigenous owner-managers need to shift industries to have the

Figure 8 Industry composition of Indigenous and non-Indigenous owner-managers, 2016

same industry profile as non-Indigenous Australians. This result is primarily driven by the differences in the construction sector, which alone accounts for around one-third of the variation between the two groups.

Number of employees and incorporation status

Information about Indigenous owner-managers, based on the number of employees as defined in the census and whether they are incorporated enterprises, is provided in Table 2.

Owner-manager of enterprises with no employees

If an enterprise has no employees, then the owner-manager is self-employed or a sole trader. Around 63% of Indigenous-owned enterprises and 58% of non-Indigenous enterprises fall into this category. Indigenous-owned enterprises with no employees are more prevalent across southern and eastern Australia. These 'self-employed' owner-managers are the predominant form of Indigenous enterprise in Ceduna, Kalgoorlie and northwestern New South Wales.

Owner-manager of smaller enterprises

The 2016 Census clarifies that a self-employed person/sole trader who owns and manages their own business cannot classify themselves as an employee. As that

clarification was not provided in the 2011 Census or before, comparisons about changes between censuses around the growth of the category may deceive.

Around 33% of Indigenous-owned enterprises and 38% of non-Indigenous enterprises had 1–19 employees in 2016. The higher rate for non-Indigenous enterprises is not surprising and likely reflects the fact that non-Indigenous owner-managers have been established for longer, and have therefore been able to achieve greater economies of scale. Given the relatively recent and rapid growth in the Indigenous business sector, Indigenous owner-managers have had less time to establish and grow, hence a smaller proportion have employees. Note, within category estimates of the number of employees would provide greater details of the macroeconomic impacts of Indigenous ownership.

Owner-manager of larger enterprises

Larger enterprises (those with 20 or more employees) are still relatively rare in both the Indigenous and non-Indigenous populations. Among both owner-manager cohorts, enterprises with 20 or more employees make up only 4% of their respective populations. About half of the areas around Australia have no large enterprises. Such enterprises only comprise a substantial portion of Indigenous owner-managers where there are relatively few owner-managers in an area. For example, in Alice Springs and Borroloola, more than 11% of Indigenous owner-managers are in charge of larger (20+ employee)

Table 2 Characteristics of enterprises by Indigenous status, 2016

	Indigenous (%)	Non-Indigenous (%)
Number of employees in enterprise		
No employees	63	58
1–19 employees	33	38
20 or more employees	4	4
Incorporated and unincorporated enterprises		
OMs incorporated	37	46
OMs unincorporated	63	54
OMs incorporated without employees	35	35
OMs unincorporated without employees	79	77

OM = owner–manager

Source: 2016 Census data derived from ABS TableBuilder

enterprises. Really large enterprises are not explicitly identified in the census but are an important source of Indigenous employment. Most Indigenous enterprises with more than 100 employees are likely to have headquarters in major cities (especially Sydney, Melbourne and Brisbane) to optimise engagement with the global economy.

Owner–manager of unincorporated enterprises

The proportion of Indigenous unincorporated enterprises (63%) is the same as that of Indigenous owner–managers with no employees. And the proportion of non-Indigenous unincorporated enterprises (54%) is similar to the rate of non-Indigenous owner–managers with no employees (58%). It implies that the overlap between the cohorts is significant, across both Indigenous and non-Indigenous populations. The proportion of enterprises that are unincorporated is highest in southern Australia and some parts of southeast Queensland. This is consistent with the notion that unincorporated enterprises (those not incorporated under the *Corporations Act 2001*) are more likely to be sole traders.

Owner–manager of incorporated enterprises

Indigenous incorporated enterprises must incorporate under the *Corporations Act* or the *Corporations (Aboriginal and Torres Strait Islander) Act 2006*. Table 2 shows that 65% (100% – 35%) of incorporated enterprises (Indigenous and non-Indigenous) employ at least one worker. That compares with unincorporated enterprises, where only around 21% of Indigenous

enterprises and 23% of non-Indigenous enterprises employ at least one worker. Indigenous incorporated enterprises make up most of the sector in remote parts of the country. The relatively common occurrence of such enterprises in the remotest parts of the country may reflect the number of Indigenous community organisations operating shops or other enterprises on behalf of the local community. Note that the census can only identify such enterprises if an Indigenous person identifies themselves as an owner and manager. Many of these organisations may well actually fall into the category of Indigenous enterprises that are communally owned and may have a social dimension to their activities (see Appendix B). To further pursue analysis of such enterprises, readers are encouraged to investigate data from the Office of the Registrar of Indigenous Corporations.

5 Explaining the low rates of Indigenous business ownership in Australia

The economics of discrimination

The relatively low rates of Indigenous business ownership suggest there are structural, social and economic barriers, such as societal prejudice, that are limiting the proportion of Indigenous Australians entering into business. The 2016 Australian Reconciliation Barometer survey found that 46% of Indigenous Australians reported experiencing at least one form of

racial prejudice in the previous six months compared with 18% of non-Indigenous people. And the survey suggests that Australia is becoming more hostile to Indigenous Australians, with the proportion of Indigenous people experiencing racism growing from 39% in 2014 to 46% in 2017.

At the turn of the 20th century, William Edward Burghardt Du Bois (1903) spoke of a race prejudice that tainted the viewpoint of white Americans against African Americans, from 'doubt and distrust among the best elements of whites to a frenzied hatred among the worst ...' Du Bois said that a bias exists among the majority in the United States that makes them unable to view African Americans without prejudice. Without awareness of that prejudice, the bias can become implicit, inherent and unacknowledged. It seeps seamlessly into the everyday decision making of economic actors. The biased views remain unchecked within collective thought as if they presented genuine, immutable and incontestable 'facts' about the characteristics of an entire group.

The economic implications of such prejudicial judgments on a whole group can become staggering. Such judgments are almost always ignorant of reality. The societal prejudice that is the cause of certain people's marginalisation sounds prophetic, but in truth is deterministic. The effect is shockingly invariable and universally applicable to the disenfranchised and marginalised around the world. If such views seep unchecked into modern life, it could explain the limited social and economic progress that has plagued marginalised communities globally, including Indigenous communities and other minorities. It explains how our society remains prejudicial towards Indigenous Australians, resulting in many being barred from genuine access to economic and social opportunities – which directly affects their wellbeing.

Gary Becker (1957) was one of the first modern economists to develop a model that explores the economic ramifications of discrimination and bias. His model was premised on the basis that whites in the United States had a *taste* for discrimination, which he suggests was the result of experiencing a disutility from being near, working with or working for African Americans. To represent this experience in the market, Becker prices this component into white producers', workers' and consumers' production or utility functions – showing that discriminators are willing to pay a premium for exclusively associating with other whites. Where discrimination exists, Becker predicts that, in a perfectly competitive market, black businesses and

workers and white businesses and workers who do not discriminate would gain substantial market advantages and eventually push out those with a taste for discrimination. Becker suggests that because of market imperfections – which he does not explore in detail – bigoted market participants remain and poor outcomes continue for African Americans.

Becker found that discrimination explained much of the significant disparity between the socioeconomic status of white and African American communities. He even alluded to the more difficult situation of Native Americans compared with African Americans. Charles and Guryan (2008) support Becker's claims by showing empirically that African American wages are lower when the prejudice of the 'marginal' white in a state is greater. But while Becker's approach tried to explain the *effects* of racism, he did not adequately explain *why* racism may exist, which Kenneth Arrow (1998) explores and for which he provides an intriguing explanation.

Arrow argues that, contrary to the low entry-cost principle underpinning well-functioning markets, the nexus between one's social life and their life as a market participant may, in fact, reinforce and reward racially exclusive networks. He suggests that maintaining racially exclusive networks helps create *social capital* among the inside group. The insiders share social benefits among themselves while maintaining high barriers against outsiders. The benefits more than offset the higher costs of transacting exclusively with insider group peers. The result is that resource allocation decisions are radically altered. Arrow indicates that with social capital, 'discrimination no longer has a cost to the discriminator; indeed, it has social rewards' (Arrow 1998:98).

One can draw strong parallels between the experiences of African Americans and Indigenous Australians. Indeed, a number of authors have explored the ramifications of bias and discrimination on Indigenous Australians (Foley 2003, 2006; Schaper 2007; Booth et al. 2012; Biddle et al. 2013; Hunter 2014; Hunter et al. 2014; Biddle 2015). And Foley (2006) specifically discusses the impact of prejudice on the success of Indigenous businesses. Governments and large actors in society must consider how they can influence wider societal changes to help address the ongoing effects of bias, prejudice and discrimination on Indigenous Australians and their access to economic opportunity.

The issue of remoteness

The maps presented in this paper illustrate that Indigenous businesses are more prominent in well-developed markets or near major cities (Figures 3 and 4). Large population centres offer greater markets for the goods and services that Indigenous businesses provide. Even businesses that service the public sector will have a comparative advantage by locating their operations in major cities, because that is where most public sector agencies are located. The larger the business, the more reliant it is on a wide range of skills; and hence complex labour markets will facilitate hiring workers with suitable qualifications or outsourcing to other firms. The proximity to markets that urban environments provide also means that individuals do *not* need to achieve significant economies of scale to operate and earn a reasonable income. This could explain the significant proportion of sole trader/unincorporated enterprise operations in southeastern Australia. It could also explain the proportionately larger prevalence of employing incorporated enterprises in some parts of remote Australia.

The new economic geography literature describes centripetal and centrifugal forces associated with existing centres of economic activity (Krugman 1995). Network economies and agglomeration economies are examples of the former, which tend to reinforce the location of existing economic activities and encourage new businesses to locate in larger markets. Centrifugal forces that push economic activities away from existing markets include the immobility of resources located in regional areas and low transport costs where infrastructure exists, an absence of congestion, generally affordable rents, and plenty of living space. The remarkable ongoing growth in major urban areas throughout the world indicates that centripetal factors dominate, on average, anchoring and drawing activity towards the centre. Technology has offered the prospect of delivering services remotely, but in an era of globalisation this introduces the prospect of competition from low-wage countries. The high transportation and other transaction costs associated with living in remote Australia continue to limit the prospects for many remote communities to develop fully. Supportive organisational and physical infrastructure is crucial for Indigenous owner-managers. Greater and sustained investment in road, rail, electricity, water and other infrastructure will help with remote economic development. One type of infrastructure that needs considerable investment and support is information and communication technology (Radoll & Hunter 2017).

The decline in the prevalence of Indigenous owner-managers in remote Australia between 2011 and 2016 has followed two events: the abolition of the Community Development Employment Projects (CDEP) scheme and the end of the mining boom. The CDEP scheme involved local community-run organisations that created work experience for participants and opportunities to work in communities and meet community needs through small-scale activities that were not otherwise funded. The funding provided for the CDEP scheme was used to support the on-costs for these community organisations. The abolition of the CDEP scheme led to the closure of many of these organisations. Even if those community organisations were unlikely to have owner-managers associated with them in the census, they may have supported other local enterprises with low-cost or subsidised labour.

We also acknowledge the view that some of these CDEP activities became 'destinations' for Indigenous workers, particularly when few other prospects for long-term work or business opportunities arose. We recognise that Australian Government-contracted CDEP providers had little incentive to turn such highly subsidised activities into formal businesses, in particular to avoid the added costs of having to pay minimum or award wages and the administrative requirements of running a business. And ultimately, the income flows to a provider are higher when their case load of unemployed jobseekers is higher, all things being equal. As a result, many providers under CDEP and subsequently under the Remote Jobs and Communities Programme benefited financially from keeping Indigenous Australians in activities rather than employing them in a formal business, or indeed placing workers into other employment. The Community Development Programme attempted to address the disincentives to turn many income-generating activities into viable businesses. But a number of providers, unsurprisingly, have indicated a dislike of such rules since under previous regimes the provider was able to retain all the income generated.

The end of the construction phase of the mining boom has meant that many remote construction and engineering-based businesses have had to shift their focus to other parts of the country. Remote Indigenous owner-managers are no exception, and have no doubt been affected by the sizeable shift from construction to mining production. It has occurred while Indigenous employment in the mining sector has grown, perhaps because a nearby workforce of Indigenous Australians is available for the ongoing production activities of

these mines. Governments should also consider the ongoing implications of measures from the Northern Territory Intervention and the subsequent Stronger Futures policies that may have constrained remote communities in their abilities to develop their economies and exercise independence.

Finally, one cannot ignore the compounding effect of discriminatory behaviour and remoteness in regional, rural and remote parts of Australia. Pearson (2007) states in an op-ed:

To say that an [I]ndigenous child in a remote community, with a history of poor health and possessing minimal education, has the right to choose her life path is nonsense. Her choices have already been made for her: she is predestined to a life removed from participation in the economy.

Underlining the fatalism of Pearson's position is the spectre of structural racism. It is most apparent in unconscious and conscious displays of bias, often seen in remote locations but also present in urban settings. Although laws no longer separate communities, the segregation that results from glares, lopsided frowns and palpable distrust (which tell a person they are not welcome) has a very real impact when someone decides whether to participate in the economy. Walking through the main streets of Alice Springs or Kununurra, one would be hard-pressed to identify a single Indigenous person working behind the counter in a shop, even though Indigenous people make up 30–50% of the local population – let alone identify any private enterprises that are Indigenous-owned. Non-Indigenous Australian, foreign and migrant workers occupy many positions and own many of the businesses. That pattern was also apparent in art galleries that purported to sell legitimate Indigenous art. One government worker described the situation as akin to apartheid. Perhaps it is simply considered an immutable characteristic of the remote Australian context. Such open segregation is not often analysed in Australia. Evidence from Markham and Biddle (2018a) around the degree of segregation suggests the trends are mixed depending on the data sources used.

6 Discussion and policy implications

The sector's recent growth is partially attributable to the wider acceptance of Indigenous Australians in business. Since 2015, the IPP has no doubt played a role. But, despite recent successes, one cannot ignore the impact that discrimination has on the economic participation and socioeconomic status of marginalised Indigenous Australians. More work is required to encourage and empower greater numbers of Indigenous Australians to access business opportunities if that is their inclination. Importantly, governments and society at large need to address discriminatory behaviours and attitudes in the wider community. One action that governments could take is to review their messaging about Indigenous Australians and consider how that message may impact on wider society's perceptions of Indigenous people. Does it cast Indigenous people in a positive light, does it have negative connotations, and/or does it paint them as victims and promulgate the 'deficit discourse'?

Policy makers, academia and other commentators should acknowledge the role of demand-side factors in generating opportunities for Indigenous owner-managers. The mandatory allocation of remote Australian Government contracts under the IPP may partially address the scarcity of Indigenous owner-managers in remote areas, but requires effective implementation, including ensuring remote-based Australian Government procurement staff are aware of their obligations to implement the IPP.

For lenders, suppliers and potential business partners of Indigenous Australians to break closed networks and release the economic potential of First Australians, it is worth first acknowledging one's own biases. We must recognise that the actions of even freewheeling entrepreneurial capitalists and cold mercantile institutions, which the 'invisible hand' supposedly guides, are not immune to societal bias and prejudice. Prejudice can infect decision making that would otherwise be calculated and objective. Acknowledgment offers a good first step to begin a process of incrementally rectifying the systemic societal barriers

that have severely restricted Indigenous Australians from accessing and exploiting economic opportunities for two and a half centuries.

One novel approach to break the cycle is for institutions to have offshore subsidiaries or offshore partner organisations undertake the assessment of Indigenous business proposals, which may help remove the *Australian colour lens* that otherwise taints the institutions' assessors. The approach offers potentially significant rewards, for it could unlock fresh territories for growth and wealth creation that would otherwise remain unexplored and invisible to the institution.

Another approach is to hire greater numbers of capable Indigenous Australians and place them in positions where they can use their asymmetric informational advantage about Indigenous Australians to make the institution aware of, and highlight the rewards of investing in, Indigenous individuals, communities and peoples, while minimising any risks.

Given the lower proportion of women going into business across the Indigenous and non-Indigenous populations, the government should consider initiatives that address the glass ceiling. Government efforts to address the gender balance issue in business may require greater resources to support entrepreneurially inclined women to start a business. That is not to suggest that mainstream programs will necessarily reach all Indigenous women. Indigenous women arguably face even greater societal hurdles that may bar their entry into business. Specific programs that support entrepreneurially inclined Indigenous women must form part of the mix.

Governments should also consider broader regional development initiatives for remote areas. If demand-side explanations are important, then policy needs to focus on regional economic development that includes Indigenous people at its core and not the periphery. This will ensure that local economic activity is sustainable and provides an adequate level of economic growth to sustain the demand for Indigenous owner-managers and build a suitably skilled local Indigenous workforce. It is difficult to predict winners in terms of businesses or even industries, but the economic development literature may provide theoretical insight into the processes of regional development (Thirlwall 2011).

Policies such as the IPP target remote areas. But it is necessary to also address the general lack of market and governmental expenditure opportunities in such areas. Further data about the location of IPP contracts would provide greater insights about the inroads that the IPP is making in remote Australian Government procurement spending. And if governments were to investigate regional policy, then Indigenous businesses in regional and remote Australia are likely to offer good places to start, since the economic multipliers offer significant benefit for Indigenous and non-Indigenous communities (Stoeckl et al. 2014).

It is difficult to be excessively optimistic about the possibility of substantial economic development in remote Australia unless we see substantial investment in the infrastructure and service capacity needs of remote, particularly Indigenous, communities. Nor should we ignore the social, economic and legal factors that limit the potential of Indigenous entrepreneurs to activate economic opportunities on Indigenous and native title land. Some industries, such as mining and tourism, can generate opportunities for Indigenous businesses, but those industries are heavily exposed to international markets and fluctuations in the Australian dollar. In the short run, the best policy option is to continue to support Indigenous businesses through the IPP, Indigenous Business Australia and initiatives such as the Indigenous Business Sector Strategy, which are designed to address the historic effects of long-term economic exclusion, including providing access to capital, business support, greater information about opportunities and business networks. Governments must make long-term commitments to continue investing in such initiatives, creating fertile ground for the Indigenous business fraternity to grow and flourish.

Appendix A

Calculating the number of Indigenous business owner–managers

Calculating the number of Indigenous owner–managers is difficult. The census provides a significant but ultimately partial picture. It reports a headline figure of 11 592 for the number of Indigenous owner–managers in 2016. For Indigenous Australians, the undercount as measured through the ERP is around 19%. Using the Post Enumeration Survey, the ABS reports the best estimate of the Indigenous population, which is the ERP. And thanks to the ACLD, we are aware that increasingly more Australians are starting to identify as Indigenous in the census, having previously not identified. This paper makes appropriate adjustments to the headline figure of 11 592 to provide a more complete picture of the rate of Indigenous business ownership and thereby help to calculate the total number of Indigenous owner–managers.

Data sources are:

- 2016 Census of Population and Housing (census)
- 2011–16 and 2006–11 ACLD
- 2016 ERP.

Key symbols used include:

- Greek letters, which denote true population parameters (ρ , β)
- upper-case letters, which denote counts from the census and the ERP (P , U)
- $E(x)$, which denotes the expected value of variable x ; it combines the official census count and the estimated undercounts for the various population parameters
- lower-case letters, which denote rates (i.e. percentages, shares).

Key equations

$$\begin{aligned} \rho_t \times \beta_t &= \text{the true number of Indigenous} \\ &\quad \text{owner–managers in year } t \quad (1) \\ &\approx E(\rho_t) \times E(\beta_t) \end{aligned}$$

where ρ_t is an unknown population parameter and denotes the true Indigenous residential population aged 15+ in year t , β_t is an unknown population parameter that gives the true rate of Indigenous business ownership as a share of the Indigenous 15+ population

in year t , $E(\rho_t)$ is the Indigenous ERP aged 15+ in year t and $E(\beta_t)$ is the ACLD-adjusted census rate of Indigenous business ownership as a share of the Indigenous 15+ population.

$$E(\rho_t) = P_t + U_t \quad (2)$$

where P_t is the census population count in year t and U_t is the estimated population undercount in year t .

$$E(\rho_{16}) = P_{16} + U_{16} = 428\,772 + 95\,394 = 523\,835$$

$$E(\beta_t) = \frac{OM_t(1 + u_{OM_t})}{P_t(1 + u_{P_t})} \quad (3)$$

Equation 3 is expressed as a share of the total Indigenous 15+ population as counted in the census where:

- OM_t is the census count of identified Indigenous owner–managers. $OM_{16} = 11\,592$
- u_{OM_t} is the net rate of newly identified Indigenous status for owner–managers between censuses t and $t + 1$
- u_{P_t} is the net rate of newly identified Indigenous status for people aged 15+ between censuses t and $t + 1$.

Calculating the net propensity to identify as Indigenous for businesspeople and the population at large (u_{OM_t} and u_{P_t})

One of the key components required in calculating the number of Indigenous owner–managers is estimating how many Indigenous Australians may not have previously identified as Indigenous in one census, but do so in future censuses. For instance, Markham and Biddle (2018b) use the ABS's ACLD to show that the 128 500 person (19%) net increase in the Indigenous population between 2011 and 2016 is partly due to changes in how people were identified as being of Indigenous origin.

The ACLD takes a 5% sample of census records and links them across the 2011 and 2016 censuses.⁶ The data can identify whether people change their Indigenous status during the intercensal period. Markham and Biddle (2018b) make the case that Indigenous Australians have many good reasons for not disclosing their ancestry, not least of which is Australia's history of discrimination against Indigenous people. They argue that the 'decision to identify as Indigenous (or not) in the census should not be interpreted as a

reflection on someone's Indigenous identity, which is a separate matter from what box gets ticked on a census form.'

Evidence provided in Foley (2003) indicates that Indigenous owner-managers have particular cause to not reveal their Indigenous status. The added sensitivity, which the data displays, relates to the increased consequences of prejudice and racial discrimination, which can occur from suppliers, customers and lenders. Any one of these elements can destroy a productive enterprise's prospects for success. Foley documents the experiences of a number of Indigenous owner-managers who have previously faced significant hurdles, and, in some cases, had to fold their business once their Indigenous identity was revealed to the non-Indigenous business fraternity or clients.

We use the ACLD to estimate u_{OM_t} and u_{P_t} (Table A.1). u_{OM_t} is the net rate of newly identified Indigenous Australians who are owner-managers, and u_{P_t} is the net rate of newly identified Indigenous Australians who are 15 years and older. One needs both components to ensure that the estimate of the rate of Indigenous

business ownership is specified appropriately.

Equation 3 gives $E(\beta_t)$, which is the ACLD-adjusted census-based rate of Indigenous business ownership and is constructed with the above two propensities to identify as Indigenous in mind.

If we assume that Indigenous Australians do not shift their Indigenous identity status in the census between intercensal periods, both u_{OM_t} and u_{P_t} are 0.

In such a situation, Equation 3 collapses to

$$\frac{OM_t(1 + u_{OM_t})}{P_t(1 + u_{P_t})} = \frac{OM_t(1 + 0)}{P_t(1 + 0)} = \frac{OM_t}{P_t} = E_0(\beta_t),$$

which is just the unadjusted census rate of Indigenous business ownership. We will call it $E_0(\beta_t)$.

The ACLD shows that for the period between 2011 and 2016, $u_{OM_{11}}$ (41.7%) and $u_{P_{11}}$ (12.5%) are both positive values (Table A.1) and that $u_{OM_{11}} > u_{P_{11}}$. That means the net rate of switching to Indigenous status between the 2011 and 2016 censuses was higher for Indigenous owner-managers than for the general Indigenous 15+ population. Since we cannot estimate the actual values

Table A.1 Changes to identification of Indigenous status across the ACLD

	2006–11	2011–16	Projection
Base year	2006	2011	2016
Future year	2011	2016	2021
Indigenous general population			
Changed to Indigenous in future year	43 400	95 200	
Changed out of Indigenous in future year	22 600	37 600	
Net change	20 900	57 600	
Indigenous pop. that self-identified in base year	409 000	462 500	
% of Indigenous who did not identify in base year	5.1% ($u_{P_{06}}$)	12.5% ($u_{P_{11}}$)	12.5% ($u_{P_{16}}$)
Indigenous business population			
Changed to Indigenous	na	2 400	
Changed out of Indigenous	na	200	
Net change	na	2 000	
Indigenous pop. that self-identified in base year	na	5 008	
% of Indigenous who did not identify in base year	41.7% ^a ($u_{OM_{06}}$)	41.7% ($u_{OM_{11}}$)	41.7% ($u_{OM_{16}}$)

ACLD = Australian Census Longitudinal Dataset; na = not applicable

a The number of Indigenous owner-managers captured in the 5% sample that generated the 2006–11 ACLD was too small for the ABS to provide a reasonably accurate estimate. Hence, we assume that the propensity to identify for owner-managers in the 2006–11 ACLD was the same as that in the 2011–16 ACLD.

for u_{OM16} and u_{P16} until after the 2021 Census, we take a simplifying assumption that

$$u_{OM16} = u_{OM11} = 41.7\%$$

$$\text{and } u_{P16} = u_{P11} = 12.5\%.$$

Therefore, since $u_{OM16} > u_{P16}$, it follows that

$$\frac{OM_{16}(1 + 41.7\%)}{P_{16}(1 + 12.5\%)} = E(\beta_{16}) > E_0(\beta_{16}).$$

It means that, other things being equal, the estimated rate of Indigenous business ownership in 2016, $E(\beta_{16})$, is higher than the value obtained if one did not adjust for the ‘new’ Indigenous Australians who changed their status to Indigenous in the census between 2011 and 2016 – that is, $E_0(\beta_{16})$.

The results mean that an extra 41.7% of the 2016 Indigenous owner–manager population did not identify as Indigenous in 2011 (but were owner–managers across both periods). In comparison, only an extra 12.5% of the 2016 Indigenous 15+ population did not identify in 2011.

Bolded measurements in Table A.1 are assumptions, which are applied where we do not have data. Other estimates in Table A.1 are actual calculations from the ACLD for the censuses 2006–11 and 2011–16. The ABS has not yet released a version of the ACLD that follows a sample of the population over the three censuses.

Where information is unknown, we have assumed that the rate of non-identification for both populations remains constant between the two versions of the ACLD (2006–11 and 2011–16). Given the limited sample of observations from the ACLD, we did not attempt to undertake a sophisticated method of predicting the rate of ‘new’ Indigenous identification. We will only be able to verify this assumption following the release of the ACLD for 2016–21.

The 2006–11 ACLD’s sample of Indigenous Australians was not large enough to create an estimate of u_{OM06} , and as such, we apply another simplifying assumption: $u_{OM06} = u_{OM11}$. We note that the significant discrepancy between the *calculated* rate of u_{P06} and the *assumed* rate of u_{OM06} (5.1% and 41.7%, respectively) likely results in a higher estimate of the rate of Indigenous business ownership in 2006 than we would have expected. Further information in subsequent ACLDs may provide greater insight into the changes in u_{OM_t} over time, thereby enabling future research to retrospectively obtain a more accurate figure for u_{OM06} .

The assumptions behind the bold values in Table A.1 are largely conservative. For instance, we know that the proportion of the Indigenous 15+ population that did not identify as Indigenous in the base year but subsequently did increase from 5.1% between 2006 and 2011 to 12.5% between 2011 and 2016. One could, therefore, make an assumption that the propensity of Indigenous owner–managers to identify grew from 2006 to 2011 in line with the rate of growth in the Indigenous population more broadly, and therefore the trend would continue into the future, which, using our methodology, would result in a higher estimate of Indigenous business ownership in 2016. For the purposes of parsimony, we have not made such an assumption.

If general trends continue, then the proportion of Australians who identify as Indigenous could further increase in subsequent censuses. With that rise could also come a proportionate rise in the share of Indigenous owner–managers, many of whom do not currently identify, assuming the propensities of the two groups (Indigenous owner–managers and Indigenous 15+) to identify are positively correlated. Any proportionate rise in the sensitivities will result in an increase in the rate of Indigenous business ownership, $E(\beta_{16})$. But the trend cannot continue indefinitely, and a point in the future should arise where Indigenous Australians do not feel the burdens of discrimination as strongly as they currently do, and, as such, the propensity to accurately reveal one’s Indigenous status will become insensitive to issues of racial prejudice.

Calculating the number of Indigenous owner–managers

We can now calculate the census-based rate of Indigenous business ownership, which includes identified and unidentified Indigenous owner–managers:

$$\begin{aligned} E(\beta_{16}) &= \frac{OM_{16} \cdot (1 + u_{OM16})}{(P_{16} \cdot [1 + u_{P16}])} \\ &= \frac{11\,592 \times (1 + 41.7\%)}{(428\,772 \times [1 + 12.5\%])} \\ &= 3.4076444\%. \end{aligned}$$

Using the census-based rate of Indigenous business ownership, we can estimate the total number of Indigenous owner–managers in Australia as

$$\begin{aligned}\rho_{16} \times \beta_{16} &\approx E(\rho_{16}) \times E(\beta_{16}) \\ &= 523\,835 \times 3.4076444\% \\ &= 17\,850.\end{aligned}$$

In summary

Using this method, we estimate that there were around 17 900 Indigenous owner–managers operating in 2016.

Applying this method to 2011 data, we estimate that there were approximately 13 700 Indigenous owner–managers operating in 2011. Therefore, the number of Indigenous owner–managers grew by around 30% between 2011 and 2016. The estimate is 1200 more owner–managers than previously estimated by Hunter (2014) for that census year. And we estimate that there were around 10 400 Indigenous owner–managers in 2006, which is around 1500 more than the Hunter (2014) estimate for 2006.

Appendix B Census household form questions

Historic changes to the classification of owner–managers in the census

Changes to census classifications of owner–managers make timeseries comparisons difficult before and after 2001. The ABS has obtained information on status in employment in every census since 1911 and on all Indigenous Australians since 1971. The ABS made changes to the status in employment question for the 2001 Census to enable more accurate data collection. But the 2001 Census grouped individuals who owned their own limited liability company (Pty Ltd) as a wage or salary earner. As a result, the 2001 Census only collected information on unincorporated enterprises such as sole traders, partnerships and contractors (Figures B.1–B.4).

For the 2006 Census, the ABS changed the status in employment questions to make them consistent with questions used in the Labour Force Survey, and to provide more detail on people working in their own businesses. The census included a question about whether or not the person was working for an employer or working in their own business, which now included proprietary limited liability companies. The inclusion of companies into the owner–manager classification provided a much more accurate headcount of the number of people in business.

The status in employment questions for the 2011 and 2016 censuses are consistent and comparable with the 2006 Census. The main difference in 2016 is question 37, which clarifies that owner–managers must exclude themselves from the count of the number of people they employ.⁷ The difference has no impact on the comparability of the series across the last three censuses.

Social enterprises

A *social enterprise* is an organisation that applies commercial strategies to maximise financial, *social* and environmental wellbeing, which may include optimising *social* impact while also ensuring profits for stakeholders. By definition, such enterprises combine commercial and noncommercial objectives, and hence this probably excludes strictly nonprofit organisations. However, many Indigenous communities have stores

and enterprises that are owned and operated on behalf of the community. The analysis in this paper is looking at businesses for which Indigenous Australians identified themselves as owner–managers. The analysis is limited by the questions in the census, which since 2006 have asked respondents to answer whether they are ‘working for an employer’ or ‘working in own business’. The census does not provide any guidance as to whether social enterprises should be counted as one’s *own business*. Given the specific use of the term *own business*, many social enterprises are unlikely to fit the definition, because they generally do not have individual owners or are community organisations. An underlying assumption of this paper is that the businesspeople identified are owners of their business. Having said that, some people who run social enterprises may well have answered that they do own a business in the census. That could explain the high level of incorporation among Indigenous owners in parts of remote Australia, which is

explored in the section ‘Number of employees and incorporation status’ on page 12.

The status in employment questions from the 2016 Census form can be viewed online.⁸

These questions provide information about the employment status, in their main job, of people aged 15 years and over who were employed in the week before census night. Respondents were asked whether they were an employee, owner–manager of an incorporated or unincorporated enterprise (with a breakdown of whether the business had employees), or a contributing family worker. Information about status in employment is essential for a wide range of social and economic policy and planning purposes. The information is particularly important for distinguishing between employees and those who are self-employed.

Figure B.1 2001 Census household form question 33

<p>33 In the main job held <i>last week</i> was the person:</p> <ul style="list-style-type: none"> • Mark one box only. • If the person had more than one job last week then ‘main job’ refers to the job in which the person usually works the most hours. • For a person working in their own limited liability (or Pty Ltd) company mark the first box. • See page 11 of the Census Guide for more information. 	<ul style="list-style-type: none"> <input type="radio"/> A wage or salary earner? <input type="radio"/> Conducting own business with employees? <input type="radio"/> Conducting own business without employees? <input type="radio"/> A helper not receiving wages?
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Figure B.2 2006 Census household form questions 35–37

<p>35 In the main job held <i>last week</i>, was the person:</p> <ul style="list-style-type: none"> • Mark one box only. • If the person had more than one job last week, then ‘main job’ refers to the job in which the person usually works the most hours. • For all persons conducting their own business, including those with their own incorporated (e.g. Pty Ltd) company, as well as sole traders, partnerships and contractors, mark the second box. 	<ul style="list-style-type: none"> <input type="radio"/> Working for an employer? ▶ Go to 38 <input type="radio"/> Working in own business? ▶ Go to 36
<p>36 Was the person’s business:</p> <ul style="list-style-type: none"> • Mark one box only. • Incorporated means a limited liability company. 	<ul style="list-style-type: none"> <input type="radio"/> Unincorporated? <input type="radio"/> Incorporated (e.g. Pty Ltd)?
<p>37 Does the person’s business employ people?</p> <ul style="list-style-type: none"> • Mark one box only. 	<ul style="list-style-type: none"> <input type="radio"/> No, no employees <input type="radio"/> Yes, 1 - 19 employees <input type="radio"/> Yes, 20 or more employees

Figure B.3 2011 Census household form questions 35–37

<p>35 In the main job held <i>last week</i>, was the person:</p> <ul style="list-style-type: none"> • Mark one box only. • If the person had more than one job last week, then 'main job' refers to the job in which the person usually works the most hours. • For all persons conducting their own business, including those with their own incorporated (e.g. Pty Ltd) company, as well as sole traders, partnerships and contractors, mark the second box. 	<p><input type="radio"/> Working for an employer? ▶ Go to 38</p> <p><input type="radio"/> Working in own business? ▶ Go to 36</p>
<p>36 Was the person's business:</p> <ul style="list-style-type: none"> • Mark one box only. • Incorporated means a limited liability company. 	<p><input type="radio"/> Unincorporated?</p> <p><input type="radio"/> Incorporated (e.g. Pty Ltd)?</p>
<p>37 Does the person's business employ people?</p> <ul style="list-style-type: none"> • Mark one box only. 	<p><input type="radio"/> No, no employees</p> <p><input type="radio"/> Yes, 1 - 19 employees</p> <p><input type="radio"/> Yes, 20 or more employees</p>

Figure B.4 2016 Census household form questions 35–37

<p>35 In the main job held <i>last week</i>, was the person:</p> <ul style="list-style-type: none"> • Mark one box only. • If the person had more than one job last week, then 'main job' refers to the job in which the person usually works the most hours. • For all persons conducting their own business, including those with their own incorporated (e.g. Pty Ltd) company, as well as sole traders, partnerships and contractors, mark the second box. 	<p><input type="checkbox"/> Working for an employer? ▶ Go to 38</p> <p><input type="checkbox"/> Working in own business? ▶ Go to 36</p>
<p>36 Was the person's business:</p> <ul style="list-style-type: none"> • Mark one box only. • Incorporated means a limited liability company. 	<p><input type="checkbox"/> Unincorporated?</p> <p><input type="checkbox"/> Incorporated (e.g. Pty Ltd)?</p>
<p>37 Does the person's business employ people?</p> <ul style="list-style-type: none"> • Mark one box only. • Exclude owner/s of the business. 	<p><input type="checkbox"/> No, no employees (other than owner/s)</p> <p><input type="checkbox"/> Yes, 1 - 19 employees</p> <p><input type="checkbox"/> Yes, 20 or more employees</p>

Notes

1. Hunter (2015) shows that joint-owned Indigenous businesses were around 70 times more likely to hire Indigenous employees than non-Indigenous businesses, while majority-owned Indigenous businesses were around 100 times more likely.
2. The ABS provided the maps to Hunter and Foley on specific request.
3. Detailed information on geographic locations of Indigenous businesses will be published in Hunter et al. (forthcoming).
4. Other Services combines the following ABS Census categories: Accommodation and Food Services; Information Media and Telecommunications; Financial and Insurance Services; Rental, Hiring and Real Estate Services; Professional, Scientific and Technical Services; Administrative and Support Services; and Other Services.
5. The category 'Art' encompasses the ABS classification 'Arts and Recreation Services'.
6. The first iteration of the ACLD linked 2006 Census records to 2011 records. Although all the information is digitally available, the ABS has yet to link records across the three censuses.
7. An additional minor change is that the 2016 Census relates to the output classification. Output classification for this topic and the former Employment type topic have been combined into one: Status in employment. The ABS made the decision following a review of labour statistics standards. As a result, Employment type is no longer treated as a separate topic.
8. www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2008.0~2016~Main%20Features~Status%20in%20employment~119

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