

# The importance of understanding Indigenous employment in the Indigenous business sector

Christian Eva<sup>1</sup>  | Kerry Bodle<sup>2</sup>  | Dennis Foley<sup>3</sup>  |  
Jessica Harris<sup>4</sup>  | Boyd Hunter<sup>1</sup> 

<sup>1</sup>Centre for Social Research and Methods, The Australian National University, Canberra, Australian Capital Territory, Australia

<sup>2</sup>Department of Accounting Finance and Economics, Griffith University, Gold Coast Campus, Southport, Queensland, Australia

<sup>3</sup>National Centre for Reconciliation, Truth, and Justice, Federation University, Ballarat, Victoria, Australia

<sup>4</sup>Department of Accounting, Finance and Economics, Griffith University, Nathan, Queensland, Australia

## Correspondence

Christian Eva, Centre for Social Research and Methods, The Australian National University, Canberra (Ngunnawal/Ngambri) 0200, Australia.

Email: [christian.eva@anu.edu.au](mailto:christian.eva@anu.edu.au)

## Funding information

National Indigenous Australians Agency

## Abstract

Indigenous employment has been the subject of numerous policies in Australia, with governments aiming to increase the workforce participation rate amongst Indigenous people in recent years. Indigenous-owned businesses, formally defined as businesses that are at least 50% Indigenous-owned, have been demonstrated in previous research to maintain substantially higher levels of proportional Indigenous employment than non-Indigenous businesses. This suggests that Indigenous-owned businesses maintain work environments that are more supportive of and conducive to Indigenous employment, meriting the influence of Indigenous-owned businesses' workplace practices in future Indigenous employment policy design. Using administrative data from two Indigenous business registries (Black Business Finder and Supply Nation), this paper provides an updated empirical analysis of the Indigenous business sector. This paper demonstrates that Indigenous-owned businesses of all sizes, industries, locations and profit statuses consistently average proportional Indigenous employment rates higher than the Indigenous proportional population. Of all the people employed in Supply Nation-listed businesses, over 35% are Indigenous. The potential impact of the Indigenous Procurement Policy is illustrated by differentials in the size of businesses and their capacity to employ Indigenous staff. This paper provides analysis of the Indigenous business sector that can inform future policy direction for both Indigenous employment and Indigenous business policies.

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2023 The Authors. *Australian Journal of Social Issues* published by John Wiley & Sons Australia, Ltd on behalf of Australian Social Policy Association.

**KEY WORDS**

Aboriginal and Torres Strait Islander Peoples, Australian Labour Market, Indigenous Business, Indigenous Employment, Indigenous Entrepreneurship

## 1 | INTRODUCTION

The Indigenous business sector in Australia has been in a period of growth in recent decades, with an increase in the number of identified businesses and increased income and employment associated with these businesses (Evans et al., 2021; Hunter, 2015; Shirodkar et al., 2018). Indigenous-owned businesses, both in Australia and in other colonial countries, have been identified as important for the economic self-determination of Indigenous people, the utilisation of Indigenous knowledge, community development, and providing increased employment opportunities for Indigenous people (Blackwell et al., 2019; Bodle et al., 2018; Collins et al., 2017; Dockery & Milsom, 2007; Morrison et al., 2014; Stefanelli et al., 2019).

Existing research has demonstrated that Indigenous-owned businesses employ Indigenous people at much higher rates than non-Indigenous businesses (Hunter, 2015), indicating that Indigenous-owned businesses are creating work environments that are more supportive of and conducive to Indigenous employment. One can make inferences as to why Indigenous-owned businesses might provide a more conducive work environment for Indigenous employees than non-Indigenous-owned businesses. For example, employees would be less likely to face interpersonal or institutional discrimination and more likely to be able to perform work that aligns with community development aspirations and Indigenous values (Blackwell et al., 2019; Bodle et al., 2018; Dockery, 2010). Not-for-profits may also be able to privilege Indigenous employment through subsidised labour costs associated with various Indigenous employment policies, such as Community Development Employment Programs (CDEP) (Gray & Thacker, 2000; Smith, 1996, 2008). However, such policies have been subject to several criticisms pertaining to their efficacy, impact, framing, design and redevelopment, and categorisation as “employment” (for discussion, see Jordan, 2018). Indigenous employees may also be more encouraged to work in Indigenous-owned organisations, given Indigenous business owners may better understand the barriers to employment for Indigenous people (Mangan & Trendle, 2019; Schnepel, 2016).

Non-Indigenous businesses and organisations have in recent years undertaken steps such as implementing Reconciliation Action Plans (RAPs), cultural competency trainings and other workplace/organisational level practices, and government has implemented varied policy plans to increase Indigenous employment (e.g. subsidised labour programmes, cadetships/trainings, and Indigenous employment parity initiatives). There is, therefore, a growing appetite to ensure that non-Indigenous-owned businesses are creating Indigenous-friendly workplaces. However, the authors of this paper argue that the expertise and experience of the Indigenous business sector in this space may be better drawn upon to inform policy and practice.

This paper interrogates two Indigenous business datasets to generate hypotheses about characteristics of Indigenous businesses that foster relatively high rates of Indigenous employment. Scholars working in Indigenous business research have noted that the data environment regarding Indigenous-owned businesses in Australia is imperfect (Evans & Polidano, 2022). They surmise that there is an over-reliance on administrative datasets for analysis, and an incapacity for a detailed policy evaluation of the Indigenous Procurement Policy (IPP) without more detailed information regarding its impact pre- and postimplementation. This paper does indeed utilise two administrative datasets for its analysis, however, as will be demonstrated throughout this paper, the strengthening and development of these datasets across time merits updated analysis. This provides updated information on the Indigenous business sector and its role in Indigenous employment.

In theory, for-profit businesses are different from nonprofit businesses in that they have identified they are driven by a commercial objective. Not-for-profit businesses may have other objectives that may facilitate Indigenous employment and service the Indigenous community. If there is any conflict between the commercial objective and Indigenous employment, then we would expect there to be lower employment outcomes in such enterprises. This provides a prediction that can be tested empirically.

This paper interrogates these datasets to provide nuanced analysis of the Indigenous business sector and how factors such as location, industry, business size, profit status and access to government contracts are associated with Indigenous employment. In doing so, it answers the following research questions:

## 1.1 | Research questions

- What is the state of Indigenous employment across the Indigenous business sector?
- How has the Indigenous business sector changed over time, specifically pre- and postimplementation of the IPP?
- How does Indigenous employment differ across factors such as location, industry, business size, profit status and access to government contracts?
- What factors are correlated with enhanced Indigenous employment rates?

This paper contributes to the existing research in this field by providing updated analysis based on more recent and larger data, and thereby depicts in more detail the relationship between the Indigenous business sector and Indigenous employment. For example, where Hunter's (2015) analysis was based on a 2013 sample of 184 Indigenous businesses primarily located in Queensland, this paper uses data from two 2021 datasets with 742 and 3327 businesses, respectively, with the latter having an Australia-wide presence. This paper is also able to provide analysis of the potential impact of the IPP, given its implementation in 2015. This paper thereby adds to the existing research environment by providing detailed analysis of the state of Indigenous employment within the Indigenous business sector, which is key to understanding the sector's consistency in driving strong Indigenous employment outcomes, and the implications this has for policymakers.

## 1.2 | Defining Indigenous businesses

This paper draws data from two Indigenous business registries: Black Business Finder (BBF) and Supply Nation. There are a number of state-based Indigenous business registries (such as BBF), with Supply Nation being Australia's largest registry, maintaining a national footprint. For businesses to be listed within these registries, they are required to prove Indigenous ownership of the business. Maintaining measures such as this is important in ensuring that only businesses that are genuinely Indigenous-owned have access to any market advantage associated with publicly identifying (such as access to the IPP). Supply Nation defines a business as an Indigenous-owned business if the owning partnership, company or trust is at least 50% owned by an Aboriginal and/or Torres Strait Islander person/s (NIAA, 2018; Supply Nation, 2020). The Black Business Finder, a Queensland-based Indigenous business directory, also adopts this definitional standard, whilst expanding this definition to include “non-Indigenous business(es) that employ at least 75% of Aboriginal or Torres Strait Islander workers” (BBF, 2021).

It should be noted that there is contestation about these definitional standards, given the sometimes-complex ownership structures that exist within and between businesses. Some

members of the Indigenous business community argue the ownership criterion should be increased to 51% (i.e. majority ownership) (Wahlquist, 2021). This would align with some international approaches (Canadian Council for Aboriginal Businesses, 2021; Whāriki, 2022). However, Foley (2013) argues that whilst percentage criterion may seek to protect the integrity of Indigenous-owned businesses and prevent fraudulent claims of Indigenous authenticity (such as Black cladding) (Supply Nation, 2020), it leaves out complex business arrangements such as businesses where an Indigenous person owns 50% of equity (e.g. business partners where only one partner is Indigenous). Foley argues that relying on a definition of Indigenous businesses that focus only on businesses with more than 50% equity is restrictive, as “debates over Aboriginal identity have tended to disadvantage the majority of Aboriginal people” (Foley, 2013, p. 28). The Forrest Review (2014) recommended a definition of Indigenous businesses with lower Indigenous equity criteria of 25%, alongside other criteria, to be the benchmark to allow access to government procurement. Some commentators have expressed concern that a benchmark based on less than 50% Indigenous equity may enhance the capacity for “Black cladding” (Hunter, 2014). Notwithstanding, this research paper adopts the definitional standards accepted, scrutinised and validated by the data custodians for which this article's analysis utilises. It is also worth clarifying the definitional standards of a “business” of which BBF and Supply Nation adopt. Supply Nation notes that “sole traders, partnerships, incorporated companies (Pty Ltd or Ltd), not-for-profits, Aboriginal corporations, social enterprises and franchises can be registered with Supply Nation” (Supply Nation, 2023).

### 1.3 | Existing research into the Indigenous business sector in Australia

A number of recent publications provide quantitative research insights into the Indigenous business sector in Australia. Hunter (2015) undertook descriptive analysis of BBF data from 2013, which involved identifying and comparing trends between the 183 Indigenous businesses listed at the time with BBF and a sample of non-Indigenous businesses listed within the Industry Capability Network. Hunter's previous research is the catalyst for this current research paper, demonstrating that Indigenous-owned businesses, compared with a sample of non-Indigenous businesses, were up to 100 times more likely to employ Indigenous people. Hunter's findings, as demonstrated in this research paper, were an overestimate and need to be qualified. Both the datasets that are subject to this research paper were received in the late months of 2021 and contain 742 (BBF) and 3327 (Supply Nation) unique businesses. Hunter's analysis was thereby limited by a smaller dataset, illustrated by the inability to condition on variables such as profit status, location or detailed industry categories. This analysis was conducted prior to the implementation of the IPP and other Indigenous business support policies, which may have increased the number of businesses in Indigenous business registries since Hunter's analysis (either through new businesses or through existing businesses listed on these registries to access contracts, for example). This paper is able to build on Hunter (2015) by providing updated and more detailed analysis given the enhanced data environment.

Evans et al. (2021) provide a longitudinal approach to capturing various metrics associated with the Indigenous business sector. It links information from the Australian Taxation Office's Business Longitudinal Analysis Data Environment (BLADE) with information from four business registries (Supply Nation, Office of the Registrar of Indigenous Corporations, ICN and the Victorian Aboriginal Business Directory). This research was embarked upon to dispel myths surrounding the breadth and success of Indigenous businesses. It can provide longitudinal information on (but not limited to) employment figures, business numbers, income and location. The number of businesses identified in this report for the financial year of 2018 was 3619, noting that the Supply Nation database subject to this research paper provided 3327 unique listings (indicating that the Evans' paper was able to identify additional

Indigenous businesses). At this juncture, the Indigenous Business Longitudinal Analysis Data Environment (I-BLADE) project does not provide information explicitly surrounding Indigenous employment within Indigenous businesses, which is a key pillar of this research paper, and a research gap that it fills.

Similarly, further research such as from Shirodkar et al. (2020) provides estimates of the number of Indigenous business owner-managers using the Australian Census Longitudinal Dataset. This demonstrated that in 2016, 19,400 Indigenous Australians noted that they were business owner-managers, almost double that from a decade earlier in 2006.<sup>1</sup> This then identifies the potential that this relates to a growth in the number of Indigenous-owned businesses. This study was able to identify the number of Indigenous people who own and/or manage a business; however, it is not an enumeration of the number of Indigenous-owned businesses, nor does it provide information on Indigenous employment. Therefore, this research paper can provide an up-to-date, disaggregated and detailed data analysis that builds on the existing research base.

## 1.4 | Indigenous employment in Australia

This research paper builds on the outlined existing research through the focus on how Indigenous employment actualises within different Indigenous business types, and offers an updated insight based on data post the implementation of the IPP. Given Hunter's (2015) previous insights suggest a trend in higher proportional Indigenous employment rates, it is important to demonstrate how Indigenous businesses support Indigenous employment. This is crucial given Indigenous employment is subject to an extended, ongoing policy and research history in Australia. Targets 7 and 8 of the Commonwealth government's objectives on Closing the Gap pertain to Indigenous employment and economic participation, respectively. These targets specifically aim to close the gap between Indigenous and non-Indigenous employment rates (NIAA, 2020b). The Closing the Gap Report outlines both supply and demand-side approaches to increasing Indigenous employment, both through increasing the demand for Indigenous employees through the IPP, and the supply of Indigenous employees through various Indigenous training and employment programmes/policies (NIAA, 2022). The NIAA, which oversees the IPP implemented in 2015, claims this policy has accumulatively generated over \$5 billion in economic activity for the Indigenous business sector since its inception (NIAA, 2021). An explicit aim of the implementation of the IPP was to impact Indigenous employment rates, citing the Hunter (2015) findings (The Australian Government, 2015). Meanwhile, business loans and grants made available by government (such as through IBA) also aim to encourage Indigenous economic participation (IBA, 2023). The implementation of RAPs by businesses since their foundation in 2006 has seen an enhanced focus on individual businesses' workplace practices regarding Indigenous people, with an increase from eight organisations with a formal RAP in 2006 to over 2200 in 2021 (Reconciliation Australia, 2022). There is therefore a demonstrated commitment both in policy and in private enterprises to ensure that businesses are both employing Indigenous people at greater rates and are creating workplaces that are more supportive of Indigenous employment. Despite this, numerous studies and reports document the barriers Indigenous people face both in entering the workplace and once in the workplace. This includes, but is not limited to a systematic, historic, and ongoing exclusion/under-representation from educational and vocational opportunities, experiences of racism, cultural exclusion, tokenism, pigeon-holing, cultural burdening, discrimination, unconscious bias, a lack of promotion opportunities and a lack of cultural safety in the workplace (Biddle & Lahn, 2016; Schnepel, 2016; Mangan & Trendle, 2019; Brown et al., 2020; Collins & Norman, 2018; Hunter & Hawke, 2001; Hunter & Gray, 2017a, 2017b; Shirodkar & Hunter, 2021; Minderoo Foundation, 2022). These barriers are not consequences

of Indigeneity but largely a function of historical and continuing discrimination based on Indigeneity, with many of the aforementioned employment policies aiming to remove barriers to employment.

It is a reasonable hypothesis to presume that Indigenous-owned businesses may provide workplaces that strip away some of these barriers and may have enhanced prioritisation in creating and sustaining Indigenous employment. This research paper demonstrates that Indigenous-owned businesses maintain proportional Indigenous employment rates at much higher levels than aspirational Indigenous employment targets that correlate with the Indigenous proportional population of approximately 3.8%.<sup>2</sup> The existing literature provides important foundations for this research paper, whilst also locating critical knowledge gaps that need to be filled.

## 2 | DATA AND METHODS

Two datasets are used in this study for analysis, both of which are administrative datasets of public registries of Aboriginal- and/or Torres Strait Islander-owned businesses. Data were provided in October 2021 by the BBF (<https://www.bbf.org.au>), a Queensland-based directory with 742 unique businesses, which was developed by the Industry Capability Network Queensland and launched in late 2012. Data were also provided in December 2021 by Supply Nation (<https://supplynation.org.au>), which is Australia's largest public registry of Aboriginal and/or Torres Strait Islander-owned businesses with 3327 unique listings Australia wide, having been founded in 2009. It should be noted that both of these datasets are business registries and not a definitive database of all Indigenous-owned businesses across Australia. Research from Shirodkar et al. (2020) and Evans et al. (2021) shows that registries such as these are likely to be an underestimation of the actual size of the Indigenous business sector. Despite this, they provide detailed data on employment, which is key for this paper. These data have been reported separately as some businesses are listed in both datasets, and whilst both datasets capture similar information, these data are sometimes captured in a different form or are maintained, verified and updated differently.

Furthermore, both datasets have unique data points that are valuable for analysis and which merit analysis of both datasets. Hunter (2015) undertook analysis on the BBF dataset, which was based on data from 2013, at which point there were only 184 businesses listed. The value of undertaking analysis on businesses within the BBF 8 years on is to afford the opportunity to track the changes in the data in the intervening years. This is especially useful given the implementation of the IPP in 2015, of which the BBF dataset has information on (which Supply Nation does not). Listed below in Table 1 are the variables utilised from both datasets.

Considerable time was invested in interpreting and investigating the datasets to ensure that appropriate analytical methods were undertaken. The distribution of Indigenous employment amongst different business types and sizes was analysed to rationalise, justify and maximise the information that was able to be obtained from the data. In the below analyses, businesses are separated into cohorts of single-employee businesses, businesses with 2–19 employees and employees of 20 or more employees. The cohort of 20 or more employees is chosen as such (instead of, say 20–99, 100–500, etc.) as the Supply Nation dataset (being the larger dataset) has listed only 302 businesses with 20 or more employees of the 3327 in the whole dataset.<sup>3</sup> Therefore, separating this cohort further would reduce the potential for analysis, and of the businesses with over 20 employees, 80% have less than 100 employees. Differing distributions of Indigenous employment were also found within not-for-profits and for-profits, showing that not-for-profits maintained higher proportional Indigenous employment. The relatively small number of not-for-profits in both datasets again justifies not diffusing the potential for analysis by separating them into further cohorts. Subsequently, empirical analysis was able to be

TABLE 1 Variables available for analysis.

Variables in dataset	BBF	Supply Nation
No. of employees	✓	X
No. of Indigenous employees*	✓	✓
Turnover	✓	X
Annual revenue	X	✓
Industry	X	✓
Business types (for-profit, not-for-profit, etc.)	✓	✓
Government supplier	✓	X
% of Indigenous ownership	✓	✓
Location data	✓	✓

Abbreviation: BBF, Black Business Finder.

\*Supply Nation stipulates this as number of full-time equivalent Indigenous employees, but BBF does not.

undertaken on the data as a result of these interpretations, and the findings have been presented in a way that accurately reflects the data. “Proportional Indigenous employment rate” is reported throughout the text, which for an individual business refers to the total percentage of employees who are Indigenous. The mean proportional Indigenous employment rate is thereby referring to the mean proportional Indigenous employment rate across a number of businesses.

## 2.1 | Limitations

Whilst the improved data environment merits updated analysis, it should be noted that the administrative datasets subject to analysis do not capture all factors that may influence Indigenous employment rates. These data were not collected with this purpose in mind, and as such provide information more broadly descriptive and demographic in nature. Whilst this does provide strong insights, it cannot provide information on further potential influencers of Indigenous employment rates such as business competition, the specific nature of goods/services provided or the supply/demand of potential Indigenous employees.

## 3 | FINDINGS: INDIGENOUS EMPLOYMENT IN INDIGENOUS BUSINESSES

Over 90% of the businesses listed in BBF are located within Queensland, with the second highest proportion sitting at just over 3% in New South Wales (NSW). Whilst this may not reflect nationwide trends in Indigenous businesses, it does provide the opportunity to make a direct comparison on Hunter's (2015) analysis and state-based data versus national data.

Table 2 provides comparative updates on the data from the BBF between 2013 and 2021 (i.e. with the 2013 data being drawn from Hunter, 2015). Notable from this table is the increase in the total number of businesses from 184 to 742 (403% increase). This increase in the total number of businesses has maintained a similar composition of 1, 2–19 and 20+ employee businesses. However, the large drop in annual turnover in single-employee businesses may indicate an increase in the proliferation of small businesses. Similarly, the increase in turnover in 20+ employee businesses indicates an increased proliferation of much larger businesses. This is corroborated by the increase in the average number of employees in 20+ employee businesses from 55.2 in 2013 to 110.2 in 2021, with the mean proportional Indigenous employment rate reducing consequently to 39.8% (from 50.1% in 2013, Table 2).

TABLE 2 Comparison between BBF businesses in 2013 and 2021 by number of employees.

	2013 BBF			2021 BBF				
	1 employee businesses (2013)	2–19 employee businesses (2013)	20+ employee businesses (2013)	All businesses (2013)	1 employee businesses (2021)	2–19 employee businesses (2021)	20+ employee businesses (2021)	All businesses (2021)
Number of businesses	30	108	46	184	117	456	169	742
Composition of businesses	16%	59%	25%	100%	16%	61%	23%	100%
Mean turnover	\$415,625	\$845,294	\$8.74 m	\$2.83 m	\$140,801	\$1.23 m	\$13 m	\$3.26 m
Mean no. employees	1	6.3	55.2	17.6	1	6.2	110.2	24.8
Mean no. Indigenous employees	1	3.6	24.7	8.5	1	3.5	27.8	7.9
Mean % of Indigenous employees	100%	59.9%	50.1%	64.1%	100%	59.2%	39.8%	61.8%

Note: 2013 data provided in Hunter (2015). Turnover for 2013 is expressed in 2021\$ using the Weighted Capital City CPI index.

Abbreviation: BBF, Black Business Finder.



What is potentially most interesting about these data is that despite the growth in employee numbers in larger businesses, the proportional Indigenous employment rate remains at over a third of the workforce. It is important to condition on the number of employees (i.e. 1, 2–19 and 20+ as demonstrated in [Table 2](#)) when looking at the proportional Indigenous employment rate. The analysis presented in Hunter (2015) provided some analysis regarding business size; however, it did not condition on business size when calculating the proportional Indigenous employment rate. [Table 2](#) reports the main statistics by number of employees to highlight recent changes in Indigenous businesses. This paints a more nuanced picture of the proportional Indigenous employment rate amongst Indigenous businesses, where originally Hunter made comparison between the proportional Indigenous employment average of businesses of all sizes that were majority Indigenous-owned against that of non-Indigenous-owned businesses in the ICN database (i.e. 72.4% vs. 7%, respectively). One issue with this comparison is that it includes businesses with only one employee, which as [Table 2](#) demonstrates, maintain 100% proportional Indigenous employment. Failure to control for business size as measured by the number of employees provides a distorted analysis of the propensity of businesses to employ Indigenous workers. This needs to be considered in understanding the propensity to employ Indigenous people as sole traders may have a singular relationship to the business, being simultaneously both managers and employees. Moreover, where comparing the employment figures of Indigenous and non-Indigenous businesses, including single-employee businesses, is of little use given that non-Indigenous-owned businesses, by definition, cannot maintain those same levels of proportional Indigenous employment. This paper's remaining analysis focusses on businesses with two or more employees to prevent distortion.

By looking at larger businesses in isolation, we can see the trends between 2013 and 2021 that illustrate a growth in the employee numbers in these businesses. These datasets are not linked, so the changes between them do not necessarily represent change in individual businesses, but in the dynamics of the dataset as a whole. [Table 2](#) demonstrates that given that the average size of these businesses is getting larger, the subsequent drop in the proportional Indigenous employment rate may reflect the limitations of supply of potential Indigenous employees. Whilst it may be simpler for businesses of 20 employees to maintain 60% proportional Indigenous employment (i.e. 12 Indigenous employees), a business of 200 employees may find it more challenging to hire 120 Indigenous employees if the local labour market does not provide adequate access to a substantial Indigenous workforce. However, it may also be the case that there may be some selection bias in this breakdown, such as businesses who maintain a focus on Indigenous employment over business growth. It may also be the case that there are broader factors that influence the size of the business and their Indigenous employment rates (location, industry, workplace policies, etc.). The analysis in Hunter (2015) was confounded by the bimodal distribution of businesses with respect to the propensity of Indigenous employment. There were substantial concentrations of businesses, with about 100% and 50% Indigenous employment. Hunter argued that these concentrations were associated with the percentage of Indigenous equity, but [Table 2](#) illustrates it may simply reflect heterogeneity amongst businesses depending on the size of the business. [Table 2](#) shows that there has been a growth in the BBF businesses reflected in the increased number of businesses, employees per business and the average turnover. Despite this growth, the proportional Indigenous employment rate within these businesses remains high. The growth in the number of businesses listed in the BBF from 2013 to 2021 could have a number of causes, with the data unable to provide a definitive explanation. However, one possible explanation could be that the BBF was only launched in late 2012, with the smaller 2013 numbers reflecting the nascence of the dataset. A further explanation could lie in the motives of the launch of the BBF in providing Indigenous businesses to contracts and work opportunities, thereby encouraging businesses to list with the BBF.<sup>4</sup>

## 4 | Conditioning on profit status

**Table 3** shows comparisons between for-profit and not-for-profit businesses conditioned on business size, for both the BBF and Supply Nation 2021 datasets. It demonstrates that a large proportion of the businesses in both datasets are for-profits as opposed to not-for-profits. It also demonstrates that for-profits on average maintain a higher number of employees, but a smaller proportion of Indigenous employees than not-for-profits.

Whilst there are some variations in BBF and Supply Nation data, there too are some consistencies that speak to general demographics within Indigenous businesses. As a nationwide dataset, Supply Nation is considerably largely in scope than the BBF. We can see that the proportional Indigenous employment rate drops as businesses grow larger, in line with the general observations made from the BBF data (both 2013 and 2021). What is striking about Supply Nation businesses is the large proportion of single-employee businesses, making up 31% of all businesses in Supply Nation. There also appears to be some variation in the comparisons of for-profits and not-for-profits in the BBF and Supply Nation. This is likely due to the larger composition of single-employee businesses in the Supply Nation dataset (16% of businesses in BBF, 31% in SN). This increases the overall proportional Indigenous employment rate but reduces the average number of employees relative to the BBF data.

Looking at **Table 4**, Supply Nation-listed businesses employ almost 38,000 people. Of the 37,854 people employed in Indigenous businesses, 13,560 of them are Indigenous, equating to 35.8% of the total workforce. This means that Indigenous businesses employ Indigenous people at a rate almost 10times that of their proportion within the wider Australian

**TABLE 3** Descriptive statistics of BBF and Supply Nation businesses conditioned on business types, 2021.

	All businesses	Single employee businesses	2–19 employees (for-profits)	20+ employees (for-profits)	Nonprofits (2+ employees)	For-profits (2+ employees)
<b>BBF (2021)</b>						
No. of businesses	742	117	407	148	70	555
Composition of businesses	100%	16%	55%	20%	9%	75%
Average total employees	24.8	1	5.9	120.4	19.5	30.8
Average no. Indigenous employees	7.9	1	3.2	26.7	14	8.6
Average % of Indigenous employees	61.8%	100%	56.8%	35%	76.2%	52%
<b>Supply Nation (2021)</b>						
No. of businesses	3327	1018	1852	238	197	2090
Composition of businesses	100%	31%	56%	7%	6%	63%
Average total employees	11.4	1	4.8	94.6	29.2	14.9
Average no. Indigenous employees	4	0.97	2.4	20	17	4.4
Average % of Indigenous employees	68.4%	97.2%	57.2%	32%	67.8%	54.4%

*Note:* “Not for Profits” in the Supply Nation data include businesses that identified that they were an NFP or an “Aboriginal Corporation.” This decision was made as whilst Aboriginal Corporations may not operate strictly as NFPs, they do not operate with the same business structures as for-profits. Not-for-profits are quite large in this dataset with a mean of 36.7 employees, Aboriginal Corporations an average of 20.1 employees.

Abbreviation: BBF, Black Business Finder.

TABLE 4 Employees across Supply Nation businesses as a whole, 2021.

	All businesses	Single employee businesses	2–19 employees (for-profits)	20+ employees (for-profits)	2+ NFPs
No. of businesses	3327	1018	1852	238	197
No. of employees	37,854	1018	8824	22,228	5744
No. Indigenous employees	13,560	990	4477	4691	3360
% of Indigenous employees	35.80%	97.20%	50.70%	21.10%	58.50%

*Note:* Not all businesses provided data on profit status; therefore, the employee totals for not “all businesses” add up to the total of the remaining four columns.

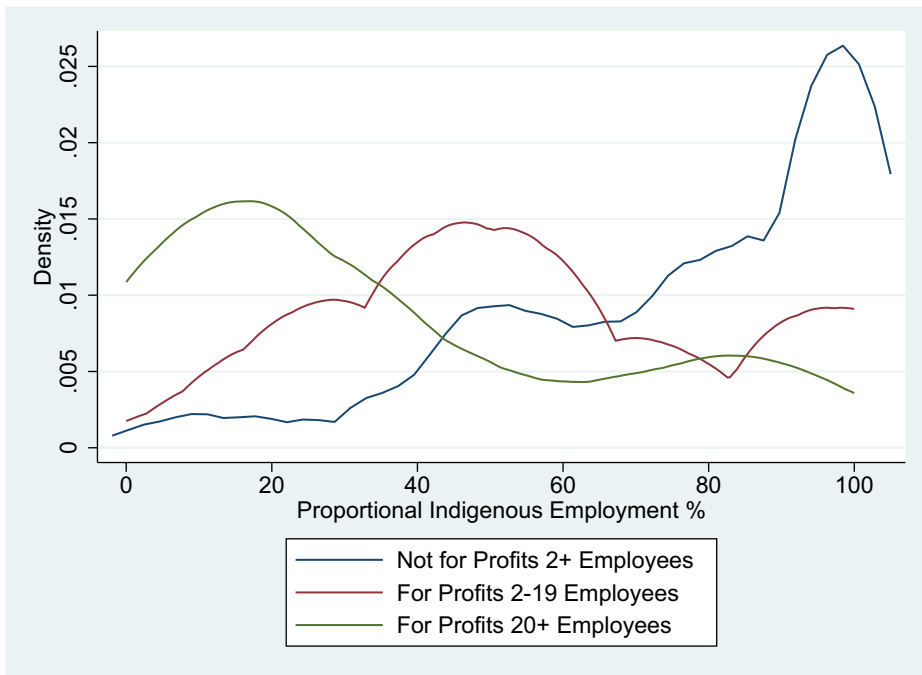
Abbreviation: NFPs, not for profits.

population (35.8% employment vs. 3.8% approximately population). The estimated 13,557 Indigenous people listed as employed within Indigenous businesses in Supply Nation still equate to only 2% of the 658,087 estimated Indigenous people 15 years and over in Australia per the 2021 estimated resident population data (ABS, 2021). The 3327 Supply Nation-listed businesses only equate to 0.14% of Australia's 2,402,254 estimated active businesses (as of 30 June 2022) (ABS Website, 2022). This demonstrates that even though Indigenous businesses support Indigenous employment at significantly high rates, Indigenous businesses cannot be the only avenue to Indigenous employment, and non-Indigenous businesses must still employ the vast majority of Indigenous people. The BBF and Supply Nation data show that Indigenous-owned businesses are prolific in maintaining high proportional Indigenous employment rates, which hints at the fact that they are doing something different to non-Indigenous businesses in this space.

Another way of looking at how Indigenous employment is distributed within Indigenous businesses is by using a Kernel Density Estimation. In our specific case, this demonstrates on a graph the proportional Indigenous employment rate amongst businesses, which demonstrates in which proportions Indigenous employment is most densely distributed. Looking at Figure 1, the x axis represents proportional Indigenous employment within businesses of each category, and the y axis represents the density of proportional Indigenous employment within each category. In Figure 1, the green line represents for-profit businesses that employ 20+ employees. From this, we can see the highest density at about 20% proportional Indigenous employment. This means that within this cohort of businesses, a large number of businesses maintain this level of proportional Indigenous employment. Conversely, for-profits of 2–19 employees see a larger density at 50% proportional Indigenous employment.

Figure 2 depicts the distribution of Indigenous employment using the same method used in Figure 1 but using the Supply Nation data. Whilst the two graphs are not uniform, they show concordance in the distributions within different business types across BBF and Supply Nation. Figures 1 and 2 demonstrate that the three identified groups have fundamentally different distributions of proportional Indigenous employment. As noted in Table 2, not-for-profits have a higher average of proportional Indigenous employment than all for-profits; in Figures 1 and 2, we can see that this is due to a large distribution of businesses with a close to a 100% figure of proportional Indigenous employment (despite the exclusion of single-employee businesses in these figures). In contrast, businesses of 20+ employees demonstrate the highest density just below the 20% ranges of proportional Indigenous employment before tapering off—almost the opposite distribution to the not-for-profits. This may represent that supply constraints for Indigenous employment limit the potential for larger businesses to hire a large proportion of Indigenous employees.

Figures 1 and 2 illustrate the importance of distinguishing between firms that explicitly identify as not-for-profit businesses from for-profits and the importance of conditioning for-profit

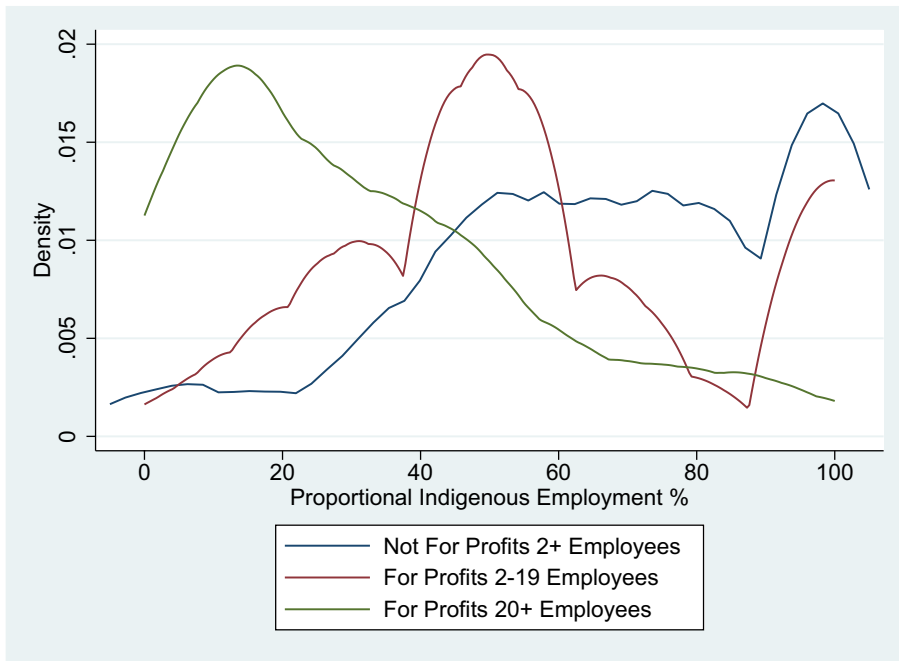


**FIGURE 1** Distribution of proportional Indigenous employment in BBF businesses, 2021. This graph presents a kernel density function, which details the distribution of the proportional Indigenous employment rates within different business types. It does not include businesses of less than two employees as this would create greater densities at 100%. The graph has a bandwidth of five.

businesses by size when analysing proportional Indigenous employment rates. [Figures 1 and 2](#) further confirm that it is important to control for the number of single-employee businesses when comparing datasets. It is one reason why [Hunter's \(2015\)](#) results and conclusion need to be qualified and conditioned.

What we can see from these figures is that there is significant variation in proportional Indigenous employment rates between our identified cohorts. It demonstrates that not-for-profits prioritise Indigenous employment compared with for-profits of both 2–19 and 20+ employees. This may be due to the motivations and priorities of not-for-profits, whilst [Table 2](#) also shows that they may be able to maintain these high proportional Indigenous employment rates in part too due to their smaller number of total employees on average compared with all BBF/Supply Nation businesses. The larger for-profit Indigenous businesses are the least likely to employ Indigenous workers, which is likely to be a consequence of a growing workforce. However, even these larger businesses are far more likely to employ Indigenous workers than non-Indigenous businesses (see [Hunter, 2015](#)). This alludes to the fact that Indigenous businesses are prioritising hiring Indigenous employees and/or Indigenous employees are prioritising working for Indigenous businesses.

Given the constraints of a for-profit business in that its primary objective is to maintain profit, they may not specifically require Indigenous employees as might a not-for-profit whose objectives may be to support Indigenous employment as a priority, and/or provide a product or service that specifically requires Indigenous employees, expertise and knowledge. Products or services that have embedded Indigenous knowledge can provide comparative advantage for employment for Indigenous people with that relevant knowledge and/or skills ([Blackwell et al., 2019](#)). Similarly, Indigenous-owned not-for-profits also include



**FIGURE 2** Distribution of proportional Indigenous employment in Supply Nation businesses, 2021. This graph presents a kernel density function, which details the distribution of the proportional Indigenous employment rates within different business types. It does not include businesses of less than two employees as this would create greater densities at 100%. The graph has a bandwidth of five.

organisations that specifically service Indigenous communities and specifically require Indigenous staff.

One reason to look at Indigenous employment in for-profit and not-for-profit organisations is for further demonstrating the propensity of the Indigenous business sector to successfully maintain high proportions of Indigenous employees. Whilst Indigenous-owned not-for-profits may have additional purposes for hiring Indigenous staff, Indigenous-owned for-profit businesses still maintain strong Indigenous employment rates. This is important, as it helps to further illustrate that the nature of the work is not a sole driver behind successful Indigenous employment.

Moreover, as non-Indigenous businesses are becoming more actively invested in specifically hiring greater numbers of Indigenous employees, this may again be squeezing the potential supply of Indigenous employees for Indigenous-owned businesses as the demand is increasing. These assumptions are unable to be tested with administrative datasets but are a task for researchers to be able to articulate better the differing motivations or practices of Indigenous for-profits and not-for-profits regarding Indigenous employment.

## 5 | Businesses that supply goods and services to government

When businesses sign up to the BBF website, one of the questions asked is “Do you supply government?” An explicit goal of IPPs both at a federal and state-level is to increase and set targets for procurement from Indigenous businesses that can supply goods and services to government. However, not all goods and services provided to government by Indigenous businesses will be a result of an IPP. For example, businesses in this dataset may have supplied government prior to the introduction of the IPP. Hence, this variable may be able to provide

insight into how many businesses do supply government, and what association that has on the characteristics of those businesses, but its interpretations regarding the impacts of IPPs should be caveated.

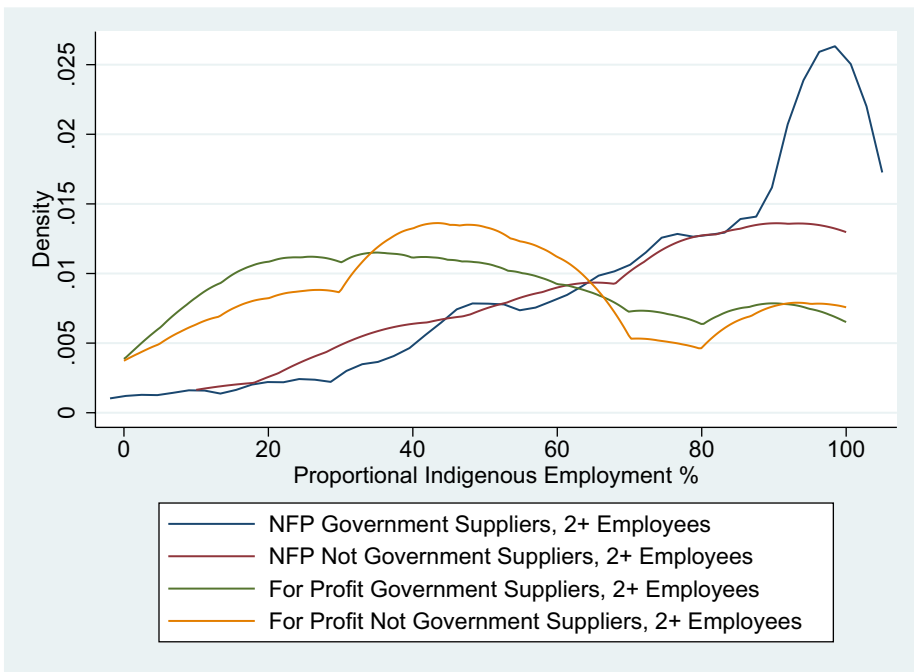
What [Table 5](#) demonstrates is that almost half of the BBF businesses supply government and that these businesses maintain a much higher mean number of employees than their counterparts. Despite their size, government suppliers still maintain a strong proportional Indigenous employment figure, which goes against the general trend we see amongst all businesses in BBF/Supply Nation—which is that where businesses increase in the number of employees, the proportional Indigenous employment rate goes down. What is unknown is which direction this association stems from. For example, is the design of the IPP privileging businesses that have the largest proportions of Indigenous employees? Or does participation in the IPP allow for growth in the business? If the latter, why is it that these businesses are seeking out larger numbers of Indigenous employees? If the former, why is it that the IPP provides contracts to businesses with high proportional Indigenous employment?

Unfortunately, a weakness of the BBF data is that it provides limited information to be able to analyse. Whilst [Table 5](#) demonstrates an interesting point of difference between businesses that supply government and those that do not, it is hard to analyse why this difference occurs. Information on what industry these businesses are operating within might demonstrate that government contracts flow to specific industries. Unfortunately, less than 50 businesses in the dataset provide reliable information on their industry type. Another factor may be that larger businesses are more able to enter the tender process, already meeting the criteria set for participation. However, this still does not explain why the proportional Indigenous employment remains close to parity between businesses that supply government and those that do not, despite government suppliers having almost double the number of average employees. Where there seems to be a large divergence between the two groups is that government suppliers appear to be much more likely to work in remote locations (not exclusively, but do operate in remote locations). A potential driver may be the mandatory set asides (MSAs), which are built into IPPs at a federal level and within Queensland, where the bulk of the BBF businesses are located. These MSAs ensure that some contracts (or portions of contracts) are offered to Indigenous businesses in the first instance. In the case of the Queensland IPP, this involves set asides that:

*“The goods or services being purchased will be delivered to Aboriginal people or Torres Strait Islander people in discrete locations, or in other locations that have a high Aboriginal population*

**TABLE 5** Descriptive statistics for government and not government suppliers, BBF, 2021.

	Government suppliers			Not government suppliers		
	All	2+ employees, for-profit	2+ employees, not-for-profit	All	2+ employees, for-profit	2+ employees, not-for-profit
Number of businesses	363	268	54	379	287	16
Mean number of employees per business	34.3	40.7	21.3	16.2	20.5	13.3
Mean proportion of Indigenous employees	60.3%	51%	76.8%	63.2%	53.1%	74.8%
Total no. of Indigenous employees	3698	2838	819	1828	1620	136
% of businesses that work in remote locations	68%	71.6%	63%	37.2%	36.9%	56.3%



**FIGURE 3** Distribution of proportional Indigenous employment between the BBF government and not government suppliers, 2021. This graph presents a kernel density function, which details the distribution of the proportional Indigenous employment rates within different business types. It does not include businesses of less than two employees as this would create greater densities at 100%. The graph has a bandwidth of five.

*and/or Torres Strait Islander population...*" (Department of Aboriginal and Torres Strait Islander Partnerships and Queensland Government, 2019, p. 10).

This would help to explain (a) why a large proportion of government suppliers operate in remote locations and (b) why those businesses may be able to maintain high-proportional Indigenous employment. The federal IPP also stipulates that departments must approach Indigenous businesses for contracts located in remote locations regardless of size, where for other areas, this stipulation is only necessary for contract between \$80,000 and 200,004 (Department of Prime Minister and Cabinet, 2018; NIAA, 2020a). This could therefore provide further explanation as to why government suppliers are more likely to operate in remote locations, given these businesses may have enhanced opportunities for engagement (though the size of the contracts may be smaller). Figure 3 demonstrates that the distribution of proportional Indigenous employment remains similar across government suppliers and businesses that do not supply government. It also demonstrates that for-profits and not-for-profits maintain different distributions of proportional Indigenous employment from each other, yet still maintain similar distributions where split into businesses that do and do not supply government.

## 6 | Industry of Supply Nation businesses

Supply Nation provides detailed industry information for individual businesses, with which the authors have constructed a concordance with the ANZSIC industrial classification used by the ABS.<sup>5</sup> This was performed as the reduced number of ANZSIC industry classifications (19) in comparison with Supply Nation's (35) industry provides opportunity for more detailed analysis, and easier comparison with all Australian businesses. This process brought with it assumptions

and generalisations,<sup>6</sup> but it provides a broad picture of patterns of Indigenous employment in relation to industry. It should be noted that this is an aggregated representation of industry categories and that a finer categorisation of industry type may reveal enhanced detail.

Figure 4 shows the average proportional Indigenous employment rates across the ANZSIC industry types, in businesses of two or more employees (regardless of for-profit status). It demonstrates that there is some variation in the average proportional Indigenous employment rates across industries. The overall average across all industries sits at 55.6%, with variation in averages from 40% to 73%. Despite this variation, all industries maintain consistently strong average proportional Indigenous employment rates. Figure 4 does have its limitations however, given that it is not conditioned on our identified business cohorts (i.e. for-profit status and employee numbers). This is a limitation of the growing, but still small Supply Nation dataset. Nevertheless, Figure 4 demonstrates that all industries can maintain relatively high average proportional Indigenous employment rates, indicating that the industries in which the Indigenous business sector operates are not the driving factor behind the overall high proportional Indigenous employment rate of the sector.

Using the Supply Nation and Census 2021 data (ABS Website, 2022), Figure 5 shows the proportions of businesses within each ANZIC category, comparing Supply Nation-listed businesses to all businesses Australia wide. Generally, the distribution of businesses in Supply Nation is broadly similar to that of all Australian businesses. However, there does appear to be an over-representation in Education and Training in Supply Nation businesses, and an under-representation in Rental, Hiring and Real Estate. Whilst Figure 5 does depict some of the specific dynamics of Supply Nation businesses, what it shows more broadly is that Supply Nation businesses are not divergent to the same trends Australia wide. Paired with Figure 4, this shows

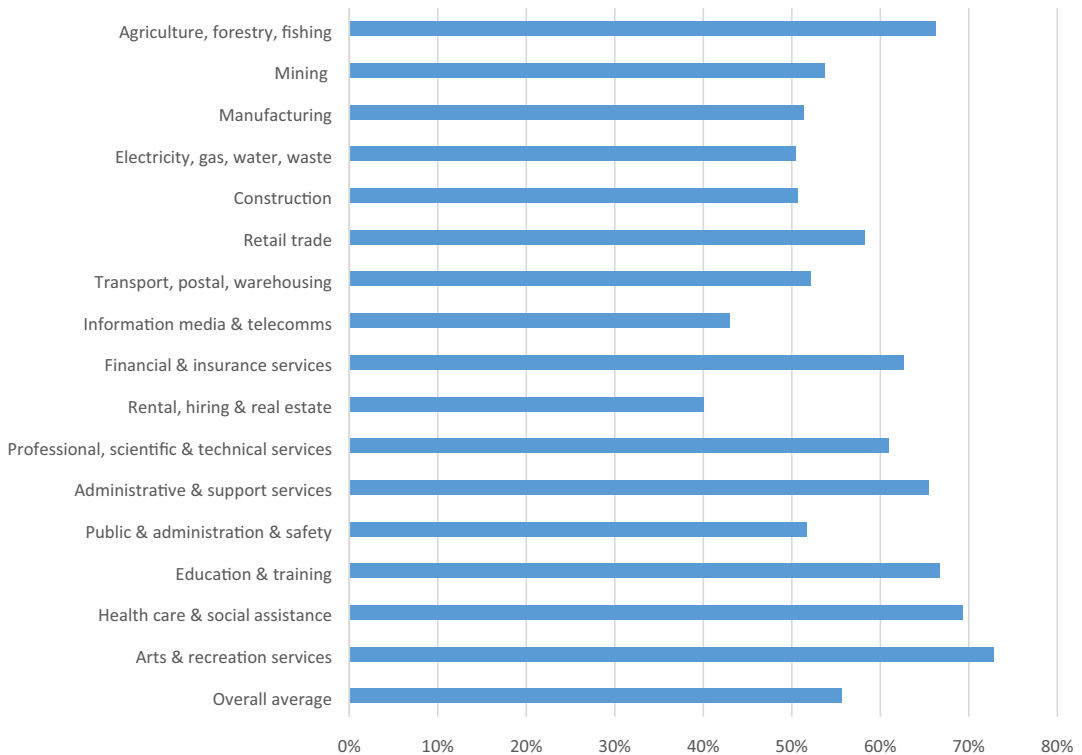
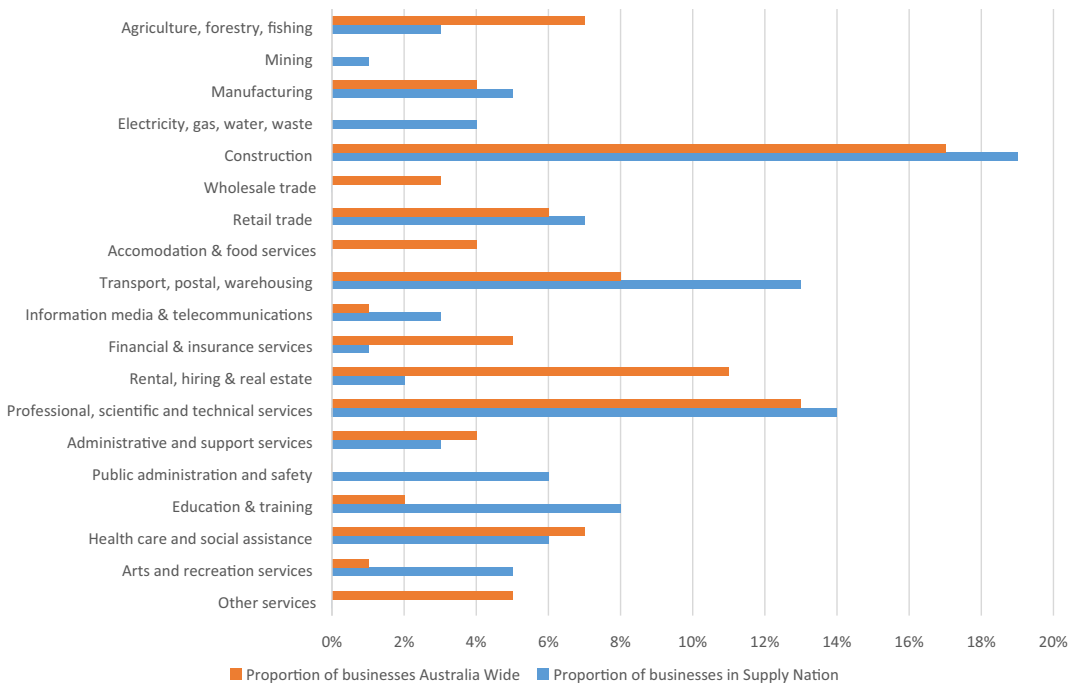


FIGURE 4 Proportional Indigenous employment rates across industry in businesses of two or more employees, Supply Nation businesses, 2021. ANZSIC categories “Wholesale Trade,” “Accommodation & Food Services” and “Other Services” are excluded, as no businesses were coded into these categories.





**FIGURE 5** Comparison of industry proportions between Supply Nation businesses and Australia-wide businesses, 2021. ANZSIC categories “Wholesale Trade,” “Accommodation & Food Services” and “Other Services” are excluded, as no Supply Nation businesses were coded into these categories.

that the Indigenous business sector does not operate within industries that are divergent from broader trends across Australia, and across these industries, the sector can maintain strong proportional Indigenous employment rates.

## 7 | Mapping out Supply Nation businesses

**Table 6** presents data from Supply Nation and 2021 Census data (ABS Website, 2022). It shows a breakdown of which states and territories that Supply Nation businesses list as their primary location (though many may operate in multiple states and territories). **Table 6** shows that the proportion of Supply Nation businesses largely tracks with the proportion of Australia's Indigenous population. For example, per the 2021 Census, 74% of Australia's Indigenous population were located in Queensland, NSW and Western Australia. In comparison, 73% of Supply Nation businesses are primarily located in these states, and these states employ 69% of the Indigenous employees listed in Supply Nation. Overall, what **Table 6** does show is that Supply Nation businesses have a footprint across the country. With the exception of Tasmania (who has a small number of Supply Nation businesses), the distribution of the proportional Indigenous employment rate remains similar across the country. This indicates that the employment patterns of Indigenous businesses are not constrained by state/territory location.

Both datasets provide information as to whether businesses operate in remote locations (though not exclusively in remote locations). **Table 7** shows how businesses that operate in remote locations maintain somewhat divergent employment outcomes to businesses that do not. This is especially so in regard to not-for-profits, which in both datasets are larger on average in terms of total employees and Indigenous employees, and despite their size maintain a large average proportional Indigenous employment rate. Evans et al. (2021) identified that

**TABLE 6** Breakdown of businesses across Australian States and Territories juxtaposed with census population data, 2021.

Primary location of businesses	No. businesses	Proportion of SN businesses	Proportion of Australia's Indigenous population	Proportion of Indigenous employees within SN
Australian Capital Territory	197	6%	1%	3.2%
New South Wales	1058	32%	34%	25.2%
Northern Territory	277	8%	8%	17.6%
Queensland	728	22%	29%	20.0%
South Australia	156	5%	5%	5.1%
Tasmania	19	1%	4%	0.2%
Victoria	244	7%	8%	5.1%
Western Australia	648	19%	11%	23.7%
Total	3327	100%	100%	100%

Per Supply Nation and Census 2021 Data.

Indigenous-owned not-for-profits were more likely to operate in remote locations, in which the workforce and clientele may consist of larger numbers of Indigenous people (and the express purpose of the not-for-profit may be to serve the Indigenous community).

## 8 | Multivariate analysis of Indigenous employment

The tables and figures above have demonstrated the substantial variation in Indigenous employment across business size, profit status, primary location, access to government contracts and industry. The benefit of an enhanced and large dataset such as Supply Nation is that it facilitates a multivariate analyses of Indigenous employment outcomes to identify statistically significant factors (these analyses and further discussion can be viewed in the Appendix A). A negative binomial regression (Table A3) on the number of Indigenous employees reveals that not-for-profit status, remoteness and business size are all significantly associated with enhanced Indigenous employment numbers, whilst industry and location do not provide significant results. An analogous OLS regression (Table A2) on the proportion of Indigenous employees confirms for-profit status and business size have a negative relationship with the proportional Indigenous employment rate, whilst remoteness remains positive.

## 9 | DISCUSSION

The analysis within this paper has demonstrated several key findings. The for-profits have a significantly lower rate of Indigenous employment than not-for-profits businesses, which is consistent with the existence of a trade-off between the commercial objectives and Indigenous employment. As the number of Indigenous businesses expands, the competition for scarce Indigenous employees will increase the costs of hiring and retaining Indigenous labour (i.e. increases in wages or search costs for finding suitable Indigenous workers). The above findings suggest that not-for-profit businesses privilege higher rates of Indigenous employment potentially through being able to bear the additional costs through funding provided for noncommercial objective, specifically requiring Indigenous staff, and/or having a greater supply of local Indigenous workers to fill the vacancies. Whatever the explanation

TABLE 7 Business type and remoteness, BBF and Supply Nation 2021.

	All businesses		2–19 employees (for-profits)		20+ employees (for profits)		2+ NFPs	
	Nonremote	Remote	Nonremote	Remote	Nonremote	Remote	Nonremote	Remote
<b>BBF (2021)</b>								
No. businesses	354	388	191	216	35	78	26	42
Mean no. employees	17.5	30.9	5.2	6.6	121.3	120	12.7	23.6
Mean no. Indigenous employees	4.5	10.7	2.5	3.8	18.3	30.7	7.8	17.9
Mean % Indigenous employees	61.3%	62.1%	54.0%	59.2%	22.4%	40.7%	75.2%	76.8%
<b>Supply Nation (2021)</b>								
No. businesses	2753	574	1526	326	189	46	124	73
Mean no. employees	10.7	14.6	4.7	5.3	102.4	62.5	17	49.8
Mean no. indigenous employees	3.3	7.8	2.3	3	18.2	27.3	10.3	28.5
Mean % Indigenous employees	68.7%	67.0%	56.2%	61.8%	29.0%	44.3%	72.0%	60.6%

Abbreviation: NFPs, not for profits.

for the differences in employment rates between for-profit and not-for-profits businesses, more research is needed into the different factors affecting various business to facilitate ongoing successes in maintaining strong Indigenous employment rates in Indigenous businesses. Furthermore, understanding the different factors that affect Indigenous employment in for-profit and not-for-profits businesses can better inform how policymakers can enhance Indigenous employment in non-Indigenous businesses that are predominantly concentrated in the private sector.

Second, it shows that across all industries, revenues, sizes, business types and locations, Indigenous-owned businesses employ Indigenous people at much higher proportions than those of their population share. Looking at the distribution of proportional Indigenous employment in subcategories of 2–19 employee for-profits, 20+ employee for-profits and 2+ employee not-for-profits, we can see that across the 2013 BBF data, the 2021 BBF data, and the 2021 Supply Nation data, distributions within these categories are consistent.

This analysis hints at the potential impact of the IPP; businesses that supply government are larger in terms of revenue and employee numbers, and despite this maintain high levels of proportional Indigenous employment. In fact, government suppliers employ twice the number of Indigenous employees (and total employees) as their counterparts in the BBF data, and almost twice the average annual turnover.<sup>7</sup> Indigenous businesses have a footprint across Australia, maintaining consistent distributions of proportional Indigenous employment (aside from Tasmania).

The findings presented in this analysis show the successes of the Indigenous business sector in supporting Indigenous employment. It too points to the success of the Indigenous business sector in spanning industry, and in growing revenue. These findings reiterate that with the growth in the Indigenous business sector comes with it a growth in support of Indigenous employment. Therefore, the IPP, and other procurement policies be they public or enterprise level policy, is key in continuing to support this growth. However, as noted in the paper, Indigenous businesses cannot maintain Indigenous employment on their own—nor should they. Where Indigenous-owned businesses may provide workplaces that are more supportive of Indigenous people, all workplaces and businesses must be more supportive of Indigenous people. Moreover, it is imperative that the under-representation of Indigenous people within non-Indigenous businesses and Australian institutions is remedied. However, to do so may require more explicit work in creating workplaces that support, rather than actively exclude, Indigenous people, perspective, excellence and knowledge. Whilst much of the framing concerning the under-representation of Indigenous people in the labour market focusses on Indigenous people, there should be an increasing focus on the labour market and why it is unable to sufficiently engage with Indigenous people. This analysis shows that Indigenous people are over-represented within the workforce of Indigenous-owned businesses, which demonstrates neither equal limitations of supply nor demand for Indigenous staff in comparison with non-Indigenous businesses. Indigenous-owned businesses are clearly creating work environments that are more conducive to Indigenous employment—however, this paper cannot answer why or how that is. This then merits further research that refocusses the attention from the employee to the employer.

Evans and Polidano (2022) discuss Australia's racist past as an ongoing legacy that impacts the capacity for “trust” that Indigenous-owned businesses can reliably access—which is a key pillar in maintaining customers and suppliers, and accessing financing and contracts. This trust deficit facing Indigenous people therefore represents a barrier to business ownership and stifles opportunity for economic development. This argument from Evans and Polidano falls within the bounds of social capital theory that posits the importance of social relationships in the development and accumulation of capital. In this case, the long colonial history of the denial of education, finance, opportunity and intergenerational advantage that have been violently imposed upon Indigenous people, in turn leading to a limited or unequal access to market or economic opportunities. Framing it this way builds

an economic rationalisation for these barriers as it represents a market failure (notwithstanding the existing ethical, moral and legal justifications). The implementation of the IPP then is carried out in part to support Indigenous-owned businesses, build trust within the sector and aid in the inclusion of Indigenous-owned businesses within the institutional economic framework of the country more readily. The above analysis shows that there may be an association with the IPP and the observed increased size of businesses, as well as demonstrating how these businesses also maintain strong Indigenous employment rates. Cutcher et al. (2020) argue that Indigenous businesses are in effect being “double-taxed” in the expectations placed upon them to not only be economically viable but also be providing “social profits to their communities.” This they argue is a function of the introduction of the IPP and its morphing from a policy programme aimed to support Indigenous entrepreneurs, to an expectation that Indigenous businesses will resolve problems with Indigenous employment outcomes. This would help explain the divergence in employee trends within government suppliers as shown in this paper—a consequence of demand for more Indigenous employees.

What Evans and Polidano describe boils down to a trust deficit on the part of non-Indigenous people in regard to the capacity for Indigenous people to operate within the workforce—which is blatantly discriminatory. In terms of employment, Indigenous-owned businesses are employing much higher proportions of Indigenous people than non-Indigenous businesses. This indicates this trust deficit does not operate within Indigenous-owned businesses. What the findings may also indicate is not only this trust deficit on behalf of non-Indigenous businesses toward Indigenous employees but also conversely on the part of Indigenous employees toward non-Indigenous businesses. Previous research has depicted the role of social capital in influencing Indigenous employment, with Indigenous employees sourcing employment through their family networks. Similarly, participants in this same study expressed the challenges associated in working in non-Indigenous organisations, where Indigenous organisations were more accommodating of cultural and familial obligations (Lahn, 2012).

The Closing the Gap Report (NIAA, 2020b) notes that the Indigenous employment rate as of 2018 sat at 49% compared to 75% of non-Indigenous Australians.<sup>8</sup> The large number of policies and programmes to help support Indigenous employment is evidence of an existing and continuing policy imperative to increase this Indigenous employment rate. Whilst much of existing policy places the imperative on the Indigenous individual to fit into the framework of employers, future research and future policy must assess the rigour and effectiveness of this framework. Removing the deficit lens from Indigenous employees to non-Indigenous employers, it is clear that non-Indigenous employers are not doing enough to successfully employ Indigenous people. The gap between the aspirational 3% Indigenous employment targets for many non-Indigenous businesses and the 30+% proportional Indigenous employment rates in Indigenous businesses needs to close.

## 10 | CONCLUSION

This paper establishes that Indigenous employment remains high in Indigenous businesses irrespective of industry, location, profit orientation or size. Whilst this propensity to employ Indigenous workers varies by profit orientation and size of the businesses, the proportional averages still remain high. It is important to understand Indigenous employment in the Indigenous business sector, as it is clear from this analysis that Indigenous-owned businesses are consistent in enhanced Indigenous employment outcomes. Therefore, it is important for future research to unpack the workplace conditions of Indigenous-owned businesses to inform employment and workplace policies that better support Indigenous employment. What is still evident however is although the data environment surrounding the Indigenous business sector has improved,

it is still partial and imperfect. As has been discussed elsewhere (Evans & Polidano, 2022), the over-reliance on administrative datasets that are themselves still developing is limited in the insights they can provide. Future data collection could involve constructing a survey panel of Indigenous businesses that does not require membership of a register, and data linkage projects such as the posited by Evans and Polidano (2022) will provide enhanced analysis.

## AUTHOR CONTRIBUTIONS

**Christian Eva:** Conceptualization; investigation; writing – original draft; methodology; visualization; formal analysis. **Kerry Bodle:** Conceptualization; investigation; methodology; validation; project administration; supervision. **Dennis Foley:** Conceptualization; investigation; methodology; validation; supervision; project administration. **Jessica Harris:** Methodology; validation; resources; project administration. **Boyd Hunter:** Funding acquisition; methodology; formal analysis; supervision; project administration; writing – original draft.

## ACKNOWLEDGEMENTS

This paper is the first in a series of studies undertaken by the research team as part of a larger research project into Indigenous-owned businesses and Indigenous employment. The research project “Making Indigenous Friendly Businesses” is supported by funding from the NIAA and maintains stakeholder support from Supply Nation and Indigenous Business, Australia. The research was undertaken within the Centre for Social Research and Methods at the Australian National University. Open access publishing facilitated by Australian National University, as part of the Wiley - Australian National University agreement via the Council of Australian University Librarians.

## CONFLICT OF INTEREST STATEMENT

At the time of publication, lead author CE was the Editorial Officer at the Australian Journal of Social Issues. However, in accordance with the policy of AJSI, CE was not involved in any aspects of the administrative processes in regard to this manuscript, nor in the editorial review of the manuscript and nor in the choice of reviewers, and had no input into the decision to publish the article. BH was also a member of the Editorial Board at the time of publication; however, he was not involved in any aspects of the administrative processes in regard to this manuscript, nor in the editorial review of the manuscript and nor in the choice of reviewers, and had no input into the decision to publish the article.

## ORCID

*Christian Eva*  <https://orcid.org/0000-0002-9141-4350>

*Kerry Bodle*  <https://orcid.org/0000-0002-4263-3207>

*Dennis Foley*  <https://orcid.org/0000-0002-0364-8246>

*Jessica Harris*  <https://orcid.org/0000-0002-5548-0027>

*Boyd Hunter*  <https://orcid.org/0000-0003-0362-4882>

## ENDNOTES

- <sup>1</sup> Preliminary reestimates using the 2021 Census data indicate that there are now probably more than 25,000 Indigenous owner managers of enterprises.
- <sup>2</sup> Per ABS 2021 estimate <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/latest-release>.
- <sup>3</sup> NB, there are even fewer larger businesses in the BBF data.
- <sup>4</sup> See the BBF website for further detail (<https://www.bbf.org.au/about/case-studies.html>).
- <sup>5</sup> The ABS provides a search facility, which provides the capacity to search for keywords in order to determine which ANZSIC primary division, subdivision and group a business may fall under (see <https://www.abs.gov.au/statistics/classifications/australian-and-new-zealand-standard-industrial-classification-anzsic/latest-release>). For the purposes

of this research, rather than coding each individual business one-by-one to an ANZSIC category, the existing Supply Nation industry categories were coded into corresponding ANZSIC categories. This was performed by utilising the search facility and undertaking a keyword search based on the Supply Nation industry categories and recoding the Supply Nation industry categories into ANZSIC categories based on which category provided the largest proportion of results.

<sup>6</sup> For example, no businesses were coded to the ANZSIC categories “Wholesale Trade,” “Accommodation & Food Services” and “Other Services.” This is not because there are 0 Supply Nation businesses that would fit into those categories, but that the Supply Nation industry categories were in greater concordance to other ANZSIC categories.

<sup>7</sup> As the analysis caveats, businesses may have maintained government contracts prior to the implementation of the IPP in 2015, so this data may not necessarily measure the impact of the IPP alone.

<sup>8</sup> At time of writing, whilst the 2022 Closing the Gap Report has been released, the relevant 2021 Census data to update these statistics have not yet been released.

## REFERENCES

- ABS Website. (2022) *Counts of Australian Businesses, including entries and exits*. Canberra, Australia: ABS. Available from: <https://www.abs.gov.au/statistics/economy/business-indicators/counts-australian-businesses-including-entries-and-exits/latest-release#cite-window1> [Accessed: 10th October 2022].
- Australian Bureau of Statistics. (2021) *Estimates of aboriginal and torres strait islander Australians*. Canberra, Australia: ABS. Available from: <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/latest-release>
- Biddle, N. and Lahn, J. (2016) Understanding Aboriginal and Torres Strait Islander Employee Decisions to Exit the Australian Public Service.
- Black Business Finder. (2021) *Businesses registered on Black Business Finder must fit one of the following categories*. Available from: <http://www.bbf.org.au/about/definition-of-an-indigenous-business.html> [Accessed 23rd March 2021].
- Blackwell, B.D., Bodle, K., Hunt, J., Hunter, B., Stratton, J. & Woods, K. (2019) Methods for Estimating the Market Value of Indigenous Knowledge, report commissioned by IP Australia, Canberra.
- Bodle, K., Brimble, M., Weaven, S., Frazer, L. & Blue, L. (2018) Critical success factors in managing sustainable Indigenous businesses in Australia. *Pacific Accounting Review*, 30(1), 35–51.
- Brown, C., D'Almada-Remedios, R., Gilbert, J., O'Leary, J., and Young, N. (2020) Gari Yala (Speak the Truth): Centring the Work Experiences of Aboriginal and/or Torres Strait Islander Australians.
- Cameron, A. & Trivedi, P. (2013) *Regression analysis of count data (2nd ed., Econometric Society Monographs)*. Cambridge: Cambridge University Press. Available from: <https://doi.org/10.1017/CBO9781139013567>
- Canadian Council for Aboriginal Businesses. (2021) Certified Aboriginal Business (CAB). Available from: <https://www.ccab.com/membership/certified-aboriginal-business-cab/> [Accessed: 23rd April 2021]
- Collins, J., Morrison, M., Basu, P.K. & Krivokapic-Skoko, B. (2017) Indigenous Culture and Entrepreneurship in Small Businesses in Australia. *Small Enterprise Research*, 24(1), 36–48.
- Collins, J. & Norman, H. (2018) Indigenous entrepreneurship and indigenous employment in Australia. *Journal of Australian Political Economy*, 82, 149–170.
- Cutcher, L., Ormiston, J. & Gardner, C. (2020) ‘Double-taxing’ Indigenous business: exploring the effects of political discourse on the transfer of public procurement policy. *Public Management Review*, 22(9), 1398–1422.
- Department of Aboriginal and Torres Strait Islander Partnerships and Queensland Government. (2019) *Indigenous business procurement guide*. Brisbane: Queensland Government. Available from: <https://www.dsdsatsip.qld.gov.au/resources/dsdsatsip/work/atsip/business-economic-development/qipp/indigenous-business-procurement-guide.pdf> [Accessed: 10th October 2022]
- Department of Prime Minister and cabinet. (2018) Indigenous procurement policy factsheet. Available from: <https://apo.org.au/sites/default/files/resource-files/2018-11/apo-nid208171.pdf>
- Dockery, A.M. (2010) Culture and wellbeing: the case of Indigenous Australians. *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement*, 99(2), 315–332.
- Dockery, M. & Milsom, N. (2007) A review of indigenous employment programs.
- Evans, M. & Polidano, C. (2022) *First Nations businesses: progress, challenges and opportunities*. Canberra, Australia: Reserve Bank of Australia Bulletin. Available from: <https://www.rba.gov.au/publications/bulletin/2022/jun/pdf/first-nations-businesses-progress-challenges-and-opportunities.pdf>
- Evans, M., Polidano, C., Moschion, J., Langton, M., Storey, M., Jensen, P. et al. (2021) *Indigenous business sector snapshot study, insights from I-BLADE 1.0*. Melbourne, Australia: The University of Melbourne.
- Gray, M.C., Elaine, T. & Australian National University, Centre for Aboriginal Economic Policy Research. (2000) *A case study of the Bungala CDEP: Economic and social impacts*. Canberra, Australia: Centre for Aboriginal Economic Policy Research.

- Hunter, B. (2014) Reflecting on the growth of indigenous self-employment. *Agenda – A Journal of Policy Analysis and Reform*.
- Hunter, B. (2015) Whose business is it to employ Indigenous workers? *The Economic and Labour Relations Review*, 26(4), 631–651.
- Hunter, B. & Gray, M. (2017a) Dynamics of indigenous and non-indigenous labour markets. *Australian Journal of Labour Economics*, 20(1), 207–226.
- Hunter, B. & Gray, M. (2017b) Occupational mobility of indigenous and other Australians. *Australian Journal of Labour Economics*, 20(2), 149–165.
- Hunter, B. & Hawke, A.E. (2001) A comparative analysis of the industrial relations experiences of Indigenous and other Australian workers. *Journal of Industrial Relations*, 43(1), 44–65.
- Indigenous Business Australia. (2023) Business finance. Available from: <https://iba.gov.au/business/finance>
- Jordan, K. (2018) Aboriginal and Torres Strait Islander employment: issues for policy, practice and research. *Journal of Australian Political Economy*, 82, 9–36.
- Lahn, J. (2012) Poverty, work and social networks: The role of social capital for aboriginal people in Urban Australian locales. *Urban Policy and Research*, 30(3), 293–308.
- Mangan, J. & Trendle, B. (2019) Evaluating the effectiveness of a mentoring program for Indigenous trainees in Australia using propensity score analysis. *Education Economics*, 27(3), 308–322.
- Minderoo Foundation, Bankwest Curtin Economics Centre (BCEC) at Curtin University, and Murawin. (2022) Koorliny W. Australian Indigenous Employment Index 2022 National Report. Minderoo Foundation.
- Morrison, M., Collins, J., Basu, P. & Krivokapic-Skoko, B. (2014) Determining the factors influencing the success of private and community-owned indigenous businesses across remote, regional and urban Australia.
- NIAA. (2018) *Tips for indigenous business*. Canberra, Australia: National Indigenous Australians Agency. Available from: <https://www.niaa.gov.au/resource-centre/indigenous-affairs/tips-indigenous-business>
- NIAA (2020a) Indigenous Procurement Policy: Indigenous Participation in high value Government contracts (\$7.5 million or more). Available at: <https://www.niaa.gov.au/resource-centre/indigenous-affairs/ipp-guide2-suppliers> [Accessed: 10th October 2022].
- NIAA. (2020b) Closing the gap report 2020. Available from: <https://ctgreport.niaa.gov.au/employment>
- NIAA. (2021) Procurement policy generates \$5.3 billion in contracts for over 2,600 Indigenous businesses. Available from: <https://www.niaa.gov.au/news-centre/indigenous-affairs/procurement-policy-generates-53-billion-contracts-over-2600-indigenous-businesses>
- NIAA. (2022) Employment. Available from: <https://www.niaa.gov.au/indigenous-affairs/employment#programmes-and-policies>
- Reconciliation Australia. (2022) 2021 RAP impact report. Available from: <https://www.reconciliation.org.au/wp-content/uploads/2022/06/2021-RAP-Impact-Report.pdf>
- Schnepel, K.T. (2016) Economics of incarceration. *The Australian Economic Review*, 49(4), 515–523.
- Shirodkar, S. & Hunter, B. (2021) The Impact of Implicit Bias on Indigenous Business Ownership. *Australian Journal of Labour Economics*, 24(1), 1–24.
- Shirodkar, S., Hunter, B. & Foley, D. (2018) Ongoing growth in the number of Indigenous Australians in business.
- Shirodkar, S., Hunter, B. & Foley, D. (2020) A new method of estimating the number of Indigenous business owner-managers. CSRM & SRC Methods Paper. <https://csrcm.cass.anu.edu.au/research/publications/new-method-estimating-number-indigenous-business-owner-managers>
- Smith, D., Australian National University, Centre for Aboriginal Economic Policy Research, Aboriginal, Y. & Torres Strait Islanders Corporation. (1996) *CDEP as urban enterprise: the case of Yarrteen Aboriginal and Torres Strait Islanders Corporation*. Newcastle. Canberra: Australian National University, Centre for Aboriginal Economic Policy Research.
- Smith, D. (2008) The business of governing: building institutional capital in an urban enterprise. In: Hunt, J., Smith, D., Garling, S. & Sanders, W. (Eds.) *Contested Governance: culture, power and institutions in Indigenous Australia*. Canberra: Centre for Aboriginal Economic Policy Research (CAEPR).
- Stefanelli, R., Walker, C., Kornelsen, D., Lewis, D., Martin, D.H., Masuda, J. et al. (2019) Renewable energy and energy autonomy: how Indigenous peoples in Canada are shaping an energy future. *Environmental Review*, 27, 95–105.
- Supply Nation. (2020) Black cladding. Available from: <https://supplynation.org.au/about-us/black-cladding/>
- Supply Nation. (2023) FAQs – Indigenous business. Available from: <https://supplynation.org.au/resources/faqs/faqs-indigenous-business>
- The Australian Government. (2015) Commonwealth Indigenous Procurement Policy. Available from: <https://www.niaa.gov.au/sites/default/files/publications/indigenous-procurement-policy.pdf>
- Wahlquist, C. (2021) Indigenous entrepreneurs urged to verify their business to weed out ‘black-cladding’, The Guardian Australia. Available from: <https://www.theguardian.com/australia-news/2021/mar/22/indigenous-entrepreneurs-urged-to-verify-their-business-to-weed-out-black-cladding> [Accessed: 10th October 2022]
- Whāriki. (2022) Frequently asked questions. Available from: [https://www.whariki.co.nz/assets/documents/FAQs\\_Whariki.co.nz\\_May%202021.pdf](https://www.whariki.co.nz/assets/documents/FAQs_Whariki.co.nz_May%202021.pdf) [Accessed: 10th October 2022]



Foley, D. (2013) Jus Sanguinis: The root of contention in determining what is an Australian aboriginal business. *Indigenous Law Bulletin*, 8(8), 25–29.

**How to cite this article:** Eva, C., Bodle, K., Foley, D., Harris, J. & Hunter, B. (2023) The importance of understanding Indigenous employment in the Indigenous business sector. *Australian Journal of Social Issues*, 00, 1–29. Available from: <https://doi.org/10.1002/ajs4.271>

## APPENDIX A

### A.1 | Multivariate analysis of indigenous employment outcome in Supply Nation businesses

This appendix presents the multivariate analysis of Indigenous employment outcomes using data provided by Supply Nation in 2022. Employment outcomes can be analysed using two variables: the proportion of employees who identify as Indigenous people, measured as the per cent of a business's workforce, and the number of Indigenous employees measured as the number of full-time equivalent (FTE) workers. The paper provides a detailed description and bivariate presentations of all the factors used to explain Indigenous employment. The descriptive statistics for the sample of data on 3,297 businesses that provided all the information required for the analysis is presented in Table A1.

In the original dataset, there are 3327 businesses.

- Eighteen businesses were excluded as they had 0 employees or missing data, (the zero-inflated binomial regression required an exposure of one employee).
- Three businesses were excluded as their proportional Indigenous employment rate was over 100% (indicating a data input error and artificially inflating the OLS regression using this as the dependent variable).
- Nine businesses were excluded as they had missing profit status data (and as such these businesses were not categorised as profits or not-for-profits).

The basic regression method is OLS that can be used to provide an initial insight into the multiple factors associated with the proportion of Indigenous workers in Indigenous businesses (Table A2). All the models reported in this section need to be interpreted relative to the reference business that is defined by the omitted dummy variables. The omitted category is a Sole Trader Business in Retail Trade sector with one employee and operating in NSW. The significance of statistics use is a robust estimator of the covariance matrix. The coefficient of variation is remarkably high for a cross-sectional analysis and can be interpreted as indicating that this model explains over one-half of the observed variation in the proportion Indigenous employees in Supply Nation businesses.

The OLS coefficient measures the marginal effect of a unit change in the explanatory variables, which are all entered as dummy variables. For example, in Table A2, after we condition on the industry and geography of the business, for-proportion of Indigenous employment is significantly less in large businesses compared with sole traders (i.e. over 60% points less). The proportion of Indigenous employees in small businesses with between two and 19 workers is almost 40% points lower than sole traders. The difference between the coefficients for small and large businesses is significant at the conventional levels and may indicate that human resources (HR) and organisational practices differ substantially by workforce size and there is differential success in securing Indigenous workers. Another plausible explanation is that Indigenous workers are attracted to working in smaller organisations with high levels of Indigenous input.

TABLE A1 Descriptive statistics for regression analysis Supply Nation businesses, 2022.

Variable	Mean	SD	Min	Max
Number of FTE Indigenous employees	4.178	14.28	1	450
Total number of employees	11.597	71.68	1	2700
Proportion Indigenous employees (%)	69.658	30.95	1.83	100
For-profits	0.932	0.25	0	1
Agriculture, forestry and fishing	0.027	0.16	0	1
Mining	0.010	0.10	0	1
Manufacturing	0.054	0.23	0	1
Electricity, gas, water and waste services	0.042	0.20	0	1
Construction	0.188	0.39	0	1
Transport, postal and warehousing	0.134	0.34	0	1
Information media and telecommunications	0.031	0.17	0	1
Financial and insurance services	0.007	0.08	0	1
Rental, hiring and real estate services	0.015	0.12	0	1
Professional, scientific and technical services	0.139	0.35	0	1
Public administration and safety	0.062	0.24	0	1
Education and training	0.084	0.28	0	1
Healthcare and social assistance	0.056	0.23	0	1
Arts and recreation services	0.047	0.21	0	1
Administrative and support services	0.033	0.18	0	1
ACT	0.060	0.24	0	1
NT	0.081	0.27	0	1
QLD	0.220	0.41	0	1
SA	0.046	0.21	0	1
TAS	0.006	0.07	0	1
VIC	0.074	0.26	0	1
WA	0.194	0.40	0	1
Small businesses (2–19)	0.603	0.49	0	1
Large businesses (20+)	0.092	0.29	0	1
Remote rural	0.170	0.38	0	1
Number of observations	3297			

The other major finding is that for-profit businesses have 12.4% lower proportion of Indigenous employment.

However, count data such as the number of Indigenous workers are highly non-normal and are not well-estimated by OLS regression (Cameron & Trivedi, 2013). Preliminary analysis revealed that there was significant overdispersion, and hence the empirical strategy adopted was to use a negative binomial regression model (Table A3).

The results indicate a similar pattern of significant results to that observed for the OLS analysis. The effect of explanatory variables is reported as incidence rate ratios and refers to the rate at which Indigenous employment occurs over a specified period of time (in the reporting period of the cross section). The ratio referred to is comparing this incidence rate relative to that for the reference business identified by the omitted category for the regression.

TABLE A2 OLS regression of proportion of employees that are Indigenous, Supply Nation businesses, 2022.

	Coefficient	SE	t-statistic
For-profits businesses	-11.415	1.81	-6.3
Industry sector			
Agriculture, Forestry and Fishing	6.983	3.09	2.26
Mining	0.474	4.70	0.1
Manufacturing	-5.078	2.43	-2.09
Electricity, gas, water and waste services	-5.122	2.63	-1.95
Construction	-4.042	1.90	-2.13
Transport, postal and warehousing	-3.295	1.99	-1.66
Information media and telecommunications	-9.945	2.92	-3.4
Financial and insurance services	6.344	5.25	1.21
Rental, hiring and real estate services	-11.424	3.79	-3.02
Professional, scientific and technical services	2.605	1.97	1.32
Public administration and safety	-3.328	2.35	-1.41
Education and training	3.566	2.17	1.64
Healthcare and social assistance	6.820	2.45	2.79
Arts and recreation services	5.058	2.57	1.97
Administrative and support services	4.999	2.83	1.77
Geography			
ACT	-3.891	1.92	-2.02
NT	-6.660	2.21	-3.02
QLD	0.439	1.20	0.37
SA	-3.625	2.12	-1.71
TAS	1.295	5.83	0.22
VIC	-1.799	1.75	-1.03
WA	-1.074	1.33	-0.8
Remote/rural area	6.251	1.56	4
Size of business			
Small businesses (2–19 employees)	-37.591	1.00	-37.76
Large businesses (20+ employees)	-59.204	1.72	-34.52
Constant	107.720	2.58	41.71
Number of responses	3297		
$F(26, 3270)$	93.46		
R-Squared	0.426		

Note: Businesses with no employees were excluded. The Omitted category is Sole Trader Business working as a nonprofit business in the Retail Trade sector with one employee and operating in NSW.

After controlling for industry and geography in the negative binomial regression model, relative to sole traders, the incidence of Indigenous employment is significantly less for both large businesses and small businesses (with ratios of 0.343 and 0.560, respectively). Again, working in a for-profit business is significantly less likely to employ Indigenous workers. This confirms the findings of the OLS analysis and reinforces the need for future research to understand the processes that determine Indigenous employment as businesses size increases and when the commercial objectives of the business are paramount.

**TABLE A3** Negative binomial regression of number full-time equivalent Indigenous employees, Supply Nation businesses, 2022.

	IRR	Robust SE	z-statistic
For-profits businesses	0.732	0.034	-6.8
<b>Industry sector</b>			
Agriculture, forestry and fishing	1.192	0.085	2.47
Mining	1.049	0.114	0.44
Manufacturing	0.873	0.062	-1.92
Electricity, gas, water and waste services	0.846	0.063	-2.23
Construction	0.913	0.047	-1.76
Transport, postal and warehousing	0.928	0.053	-1.32
Information media and telecommunications	0.812	0.090	-1.87
Financial and insurance services	1.144	0.148	1.04
Rental, hiring and real estate services	0.627	0.135	-2.17
Professional, scientific and technical services	1.116	0.059	2.08
Public administration and safety	0.986	0.065	-0.21
Education and training	1.126	0.054	2.45
Healthcare and social assistance	1.177	0.066	2.91
Arts and recreation services	1.164	0.080	2.21
Administrative and support services	1.099	0.101	1.03
<b>Geography</b>			
ACT	0.884	0.050	-2.16
NT	0.911	0.057	-1.49
QLD	1.083	0.039	2.19
SA	0.915	0.070	-1.14
TAS	0.863	0.229	-0.56
VIC	0.932	0.059	-1.11
WA	1.005	0.039	0.13
Remote/rural area	0.884	0.050	-2.16
<b>Size of business</b>			
Small businesses (2–19 employees)	0.570	0.010	-31.49
Large businesses (20+ employees)	0.355	0.018	-20.48
Constant	1.235	0.077	3.37
Exposure valuable: In(Employees)	1.000		
Number of responses	3297		
Wald chi2(25)	2103.01		

*Note:* The negative binomial regression uses the number of full-time equivalent Indigenous employees as its dependent variable and total number of employees is the exposure variable. Businesses with no employees were excluded. The omitted category is Sole Trader Business in Retail Trade sector with one employee and operating in NSW. Overdispersion is significant at the 1% level.

## AUTHOR BIOGRAPHIES

**Christian Eva** is a PhD candidate at the Centre for Social Research and Methods at the Australian National University, supervised and supported by the members of this research team. Christian maintains a passion for and research interests in areas of Indigenous economic self-determination, sovereignty and environmental justice. Christian is from a White settler background, living and working on unceded Boonwurrung country.

**Kerry Bodle** contributes to the ongoing development of research into First Peoples with the attraction of several research grants including an ARC Indigenous Discovery and a NIAA-funded grant that support her work in areas including business failure, Aboriginal and Torres Strait Islander financial literacy, Indigenous employment as well as education fields. Associate Professor Bodle's contributions to the current project involves providing Indigenous knowledge on cultural protocols to engage with Aboriginal individuals, businesses and the wider communities. Kerry's impact in the research arena has influenced industry professionals, government policy-makers and educators around Australia.

**Dennis Foley** helped establish the research area that is Indigenous Entrepreneurship in the Pacifica some thirty years ago. He has researched and taught extensively in Australia and internationally. Amongst his credits is the establishment of Carranggal Consulting and working with numerous other Indigenous consultancy companies and Universities in both Australia, New Zealand, and Canada. As a foundational Board member of the NSW Indigenous Chamber of Commerce and for many years a Board member of AHURI he has been involved in numerous commercial and social enterprise initiatives in both the private and public sectors. He has research links to The ANU, University of Canberra, University of Sydney, and Federation University. Professor Foley is a Fulbright Scholar and dual Endeavour Fellow. His publications focus on social inclusion and cross disciplines such as Indigenous Literature, Indigenous History, Indigenous Studies, Business Management (Entrepreneurship) and Indigenous Epistemology and Pedagogy.

**Jessica Harris**, a Darkinjung woman, is a social marketer offering extensive experience in changing behaviour through designing, implementing and evaluating behaviour change programmes. Jess offers extensive experience in research design using quantitative and qualitative research to cocreate, build and engage with stakeholders to deliver programmes on time and within budget. Her work designs evidence-based programmes using theoretical models to measure outcomes appropriately. Jess has published in several high-ranking journals and book chapters in workplace institutional feeding, conservation and Indigenous health and well-being.

**Boyd Hunter** is an Emeritus Professor associated with the Centre for Social Research and Methods, Australian National University. He has been President of the Australian Society of Labour Economics and is a Fellow of IZA. Boyd has been the Managing Editor and Editor of the Australian Journal of Labour Economics and the Australian Journal of Social Issues. His main area of research involve the economic history of 'The Indigenous Economy' and the implications for contemporaneous social and economic policy.