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Whose business is it to employ Indigenous workers?

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Abstract

Research about the demand for Indigenous labour and the relationship of Indigenous workers to their employers is relatively scarce. Even less is known about Indigenous businesses. Supply Nation defines an Indigenous business as those where Indigenous stakeholders hold majority equity, but some researchers have argued that this definition could be relaxed to include businesses in which Indigenous people hold only half the equity in the enterprise. This article uses data from the Industry Capability Network Queensland, which has collected basic business information on a large number of businesses operating in Queensland. The findings reveal that Indigenous businesses have substantially better outcomes for Indigenous employment than non-Indigenous businesses – a result that holds even when the definition of Indigenous business is relaxed. The article also documents how Indigenous employment is concentrated in larger businesses, in particular industry sectors. Non-Indigenous micro-businesses employ relatively few Indigenous workers, and future research can usefully explore why this is the case. To understand the issues involved, it will be necessary to collect multi-level data that link detailed information on employers and employees (including a substantial sample of Indigenous workers).

JEL Codes: J15, J21, J68

Keywords

Business and Indigenous employment, entrepreneurs, Indigenous-friendly workplaces

Introduction

Considerable economic research has been conducted into the determinants of Indigenous labour force status, but little is known about demand for Indigenous labour arising from the business sector, or the relationship of Indigenous workers to their employers.

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Understanding the demand side of the labour market is crucial because economic disadvantage partly reflects the interaction between Indigenous and non-Indigenous agents in the labour market and other markets – it is not solely a characteristic of Indigenous people. Research could usefully analyse the role of Indigenous businesses and entrepreneurs in driving Indigenous employment; however, it is also important to understand the relationship of all employers with their Indigenous workforce (and potential Indigenous workers).

The majority of economic research on Indigenous Australians focuses on workers and jobseekers (e.g. Hunter, 2004; Stephens, 2010). This focus is driven by data availability, since most surveys include Indigenous Australian workers. There is no large-scale dataset that collects substantial information on Indigenous businesses. As well, limited information has been collected on general Australian businesses and workplace practices with respect to Indigenous and other workers since the 1995 Australian Workplace Industrial Relations Survey (Hunter and Hawke, 2001, 2002). In particular, virtually no systematic large-scale information has been collected from, or by, Australian businesses about their Indigenous workforces. This article presents new data on businesses to provide greater insight into firm-level factors associated with Indigenous employment. The role of Indigenous businesses in driving Indigenous employment outcomes is particularly important because, if nothing else, the owners and managers of such businesses are likely to have an appreciation of Indigenous culture and history. Even non-Indigenous managers and equity holders of Indigenous businesses are more likely to understand the motivations, values and behaviours associated with being Indigenous because in theory they should be working towards the interests of the Indigenous owners of the business. Of course, there can always be disputes between the Indigenous and non-Indigenous equity holders, but the focus on businesses with at least half the equity being held by Indigenous parties will minimise the potential for conflict.

Existing studies have tended to focus on self-employment to make inferences about Indigenous business because of the relatively small number of Indigenous businesses. This approach is not ideal because self-employment is conceptually different from participation in a business: self-employment refers to an individual rather than a social organisation. The self-employed have to bear the risk of their own economic activities and hence are, by definition, entrepreneurial (see Cantillon, 1730). The number of Indigenous self-employed, and presumably the businesses they run, has increased dramatically in the past two decades.[1] Hunter (2013) provides evidence that the number of Indigenous self-employed almost tripled between 1991 and 2011, increasing from 4600 to 12,500. There are now substantial numbers of Indigenous self-employed, but they are still a relatively small component of overall Indigenous employment – only 3% of the working-age Indigenous population is self-employed (compared with >10% of the non-Indigenous population).

Even less is known about Indigenous businesses than about the Indigenous self-employed, partly because of an ongoing debate about what constitutes an Indigenous business. Following recommendations from research by Willmett (2009), Supply Nation adopted a definition based on whether Indigenous stakeholders have majority equity in the business.[2] However, Foley (2005) has convincingly argued that business partnerships with non-Indigenous entrepreneurs are particularly important avenues for Indigenous

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businesses. Recently, Foley and Hunter (2013) have argued that the majority-equity definition should be relaxed to include businesses in which Indigenous people hold only half the equity in the enterprise, because they will retain considerable control over the business operations. This debate matters because broader definitions of Indigenous business, based on self-employment data from the Australian Census, are associated with significantly higher rates of Indigenous employment than other businesses (Hunter, 2013). This article revisits this finding based on information provided directly by businesses on the nature of their business and the Indigenous status of their workforce.

This article addresses a gap in the literature using data provided by the Industry Capability Network (ICN) Queensland, which collected basic business information on a large number of businesses operating in Queensland. The database provides information on whether Indigenous people hold majority equity, whether a business has joint ownership by Indigenous and non-Indigenous people (i.e. with 50% equity held by Indigenous parties), the number of Indigenous and other workers, turnover by the business and a rudimentary indicator of the industrial activity undertaken in the enterprise (in an ICN service called the Black Business Finder). By late 2013, ICN Queensland had collected up-to-date information on more than 17,710 businesses in Queensland, with the majority of these businesses providing valid information on the main variables used in the analysis. Most importantly, 183 Indigenous businesses are included, with around one-third of these being partnerships in which Indigenous people hold half the equity in the company.[3] The ICN Queensland data provide a unique opportunity to analyse how Indigenous businesses differ from non-Indigenous businesses, and explore potential heterogeneity in two main categories of Indigenous businesses.

This research addresses three broad research issues:

- It provides some basic characteristics of Indigenous and other Australian businesses.
- It identifies what sorts of businesses employ Indigenous workers using firm-level data. For example, are Indigenous people employed in larger or smaller businesses (measured in terms of workforce size or turnover of revenue)?
- It explores whether the extent of Indigenous equity in a business matters for Indigenous employment outcomes, to inform the debate about the most appropriate definition of an Indigenous business.

The next section, ‘Background’, provides some further background on Indigenous businesses and entrepreneurs. This is followed by sections that introduce the ICN Queensland data and analyse the data using descriptive statistical techniques and some regression analysis. The final section, ‘Concluding remarks’, provides some concluding remarks that attempt to draw out the implications of the findings for policy-makers and future research.

Background

There is a growing literature on the economics of self-employment and entrepreneurship (Parker, 2004). These studies identify two main motivations for Indigenous people to

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start a business. One important motivation is to avoid discriminatory treatment by employers in the labour market, banks in the capital market or consumers in the product market. However, positive factors also attract Indigenous people to business. Working with people who share a similar ethnicity and culture can be a major motivation for starting a business. Indigenous business can reinforce Indigenous identity, and lead to a focus on specific goods and services that often involve Indigenous cultural activities.

As noted above, Supply Nation uses a majority-equity definition of an Indigenous business in which the business is 'at least 51% owned by Indigenous Australians and the principal executive officer is an Indigenous Australian and the key decisions in the business are made by Indigenous Australians'.[4] This definition excludes business partnerships between an Indigenous person and a non-Indigenous person, in which the Indigenous equity is only 50%; these partnerships could appear in census statistics as Indigenous self-employed.

Both the majority-owned and partnership definitions rely on the ability to identify whether the parties who own the equity are Indigenous. Many researchers have noted that there is a non-biological component to Indigenous population growth in the census (e.g. Biddle, 2012); the main implication is that a person may choose to identify as Indigenous at a particular time or in particular circumstances, but not in other contexts. Of course, if the people collecting the data can validate the acceptance of equity holders within Indigenous communities, this issue might not be important in practice.

Willmett (2009: 41) argues that some Australian contractors could identify as Indigenous businesses on the basis of participation of Indigenous people in providing services, even when no Indigenous people hold equity in the business. As Willmett notes, there is no statutory protection of the status of minority businesses in Australia, and hence anyone can claim to be an Indigenous business, even if actual Indigenous involvement is minimal or even non-existent.[5] Regardless of whether these misrepresentations are deliberate or a failure to realise an aspiration to involve Indigenous business, they mislead public debate. Clearly, in defining which businesses are Indigenous, researchers and data collectors need to exercise care in ensuring that the business can legitimately be called Indigenous.

Although a body of work attempts to analyse Indigenous self-employment, one study (Hunter, 2013) has implications for the research questions being studied in this article. Hunter (2013) conducted a regression analysis of census data on self-employment aggregated to Indigenous Area level (one of the standard units used by the Australian Bureau of Statistics (ABS) for Indigenous geography; ABS, 2011). The analysis was consistent with Indigenous businesses generating many more private sector jobs for Indigenous workers than other Australian businesses. One possibility is that Indigenous employers provide a more conducive working environment for Indigenous workers. Another possibility is that such businesses are involved in activities that are more likely to require Indigenous workers such as cultural tourism or the Indigenous art sector.

Historically, little research has been conducted on the nexus between businesses and Indigenous workers, but we would expect Indigenous employers to provide working conditions that are sympathetic to the needs and preferences of Indigenous workers (e.g. because of greater cultural awareness and cultural competency). Hunter and Hawke (2001) used linked employee–employer data from the mid-1990s to find that workplaces

with Indigenous employees were more likely than other workplaces to have a written policy on racial harassment, and a formal grievance procedure to resolve disputes that arise on either racial or sexual harassment grounds.

In 2006, Prime Minister John Howard and Indigenous leader Professor Mick Dodson launched the Reconciliation Action Plan (RAP) programme, which was administered by Reconciliation Australia (2015; see http://www.reconciliation.org.au/raphub/about/). The RAP programme was partly based on the desire to commemorate the 40th anniversary of the 1967 referendum, a watershed moment in Australian history that arguably symbolised the ideas and practise of reconciliation. The programme encourages organisations to develop a business plan that documents the 'actions' they will take to contribute to reconciliation. Many major Australian businesses, including Indigenous businesses and organisations, have RAPs; they generally include strategies and actions to create awareness of cultural issues in the workplace and community at large, and often include explicit targets for Indigenous employment. The increasing numbers of RAPs in Australian businesses means that Indigenous-friendly work environments are not confined to Indigenous businesses.

Hunter and Gray (2013) analysed all federal workplace agreements between 1997 and 2013 and found that there was a clear concentration of agreements with provisions for cultural or ceremonial leave in a relatively small number of workplaces where Indigenous participation is high. About 40% of agreements and 70% of employees are covered by such leave provisions in workplaces where the majority of employees identify as Indigenous. Of course, the more Indigenous workers employed in a business, the more likely the organisation is to know about the needs and preferences of Indigenous people (by critical mass and exposure to Indigenous culture). Clearly, Indigenous-specific award provisions are concentrated in workplaces that are already likely to be Indigenous-friendly. The positive effect of having a substantial cohort of Indigenous workers is likely to make it easier to employ additional Indigenous workers.

Another relevant issue for this article is that it might be difficult for businesses to identify all their Indigenous staff. This could even be an issue for Indigenous businesses; Foley (2005) interviewed numerous Indigenous businesses that were attractive to Aboriginal workers, including logging companies, oyster farmers and fishing trawlers, and found that the management sometimes had difficulty identifying Aboriginal people with some non-Indigenous heritage (also see Foley, 2000). It is also not possible to be confident that all Indigenous staff would openly identify as Aboriginal or Torres Strait Islander, especially if they believe that they might be discriminated against (Biddle et al., 2013). Despite these issues, the following data offer a unique opportunity to gain insight into an under-researched area.

Data

This article uses data from ICN Gateway (ICN, 2015), a comprehensive online system with around AUD247 billion worth of projects and more than 60,000 suppliers listed. The ICN can be characterised as a 'dating' agency for businesses trading in goods and services at various stages of the supply chain. It could therefore play a useful role in increasing participation of Indigenous businesses in supply chains. The Black Business

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Finder (BBF) is an organisational unit of the ICN that coordinates the validation of data on Indigenous equity, by making regular contact with businesses identified as Indigenous businesses. The BBF actively looks for potential Indigenous businesses and is also a platform for government or businesses looking to source goods and services from Indigenous suppliers. The BBF addresses this need by making information available in the market about the existence and capability of Indigenous businesses. This is good for Indigenous businesses and for industry at large. By integrating Indigenous businesses into private sector and government supply chains, the BBF encourages growth and development of these businesses. The ICN website claims that the network has helped local suppliers win more than AUD17 billion worth of contracts that might otherwise have gone overseas (http://www.icn.org.au).

In Queensland, the ICN is a division of QMI Solutions Limited, a not-for-profit organisation supported by the Queensland Government. ICN Queensland has offices in Brisbane, Townsville, Gladstone and Toowoomba; its team of specialist staff has a wide range of experience in engineering, technology and procurement.

Most businesses listed on the ICN Queensland database have information on the size of the workforce and the number of employees who have been identified as Indigenous. Many also have information on the annual turnover of the business operation. This article uses five categories of business size that may not align perfectly with standard Australian Bureau of Statistics (ABS) categories.[6] The reason for this empirical choice is to maximise the power of the statistical analysis when dealing with relatively small numbers of Indigenous businesses. Indigenous businesses were spread relatively evenly across the categories used in this article, with the exception of the largest businesses (which included relatively few Indigenous businesses). All other categories of workforce size have sufficient numbers of businesses to provide reliable results measured with reasonably accuracy (small confidence intervals).

The ICN data include basic information on the broad industry in which a business operates. These industries are not mutually exclusive or classified according to the standard ABS classification or the Australian and New Zealand Standard Industrial Classification (ANZSIC) (ABS, 2008). Instead, the industry data are identified by the businesses themselves – this facilitates matching of businesses that buy and supply goods and services. The staff responsible for the ICN database indicated that the nominated industries will be correlated with the ANZSIC classification. It should be noted that many businesses will have indicated more than one industry, to maximise their chances of linking with a suitable trading partner.

The ICN data also included information on the location of the headquarters of the business. Although it is important to understand the market conditions in which the business operates, that information was not available for analysis because most of the headquarters were located in Brisbane, which is not necessarily where the workers work or the business is conducted. Accordingly, information on the location of the business headquarters was not used in the analysis described in this article.

The following analysis also explores some implications of extending the definition of Indigenous business from the majority-equity definition to include equal partnerships between Indigenous and non-Indigenous people, where 50% equity in a business is held by Indigenous people. For the remainder of this article, we refer to these latter businesses

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Table 1. Business employment and turnover, by Indigenous status of business, 2013.

	Non-Indigenous businesses	Majority-owned Indigenous businesses	Joint-owned Indigenous businesses	All Indigenous businesses
Average size of workforce	187.2	17.5	18.4	17.6
Proportion of workforce identified as Indigenous (%)	0.7	72.4	46.9	64.0
Average turnover (AUD'000)	9896	3204	2222	2828
Number of businesses	14495	124	59	183

There are 17,710 businesses on the ICN database, but the following analysis uses only those businesses that employ some people, and indicate the numbers of Indigenous and other employees. Information on the Indigenous workforce is provided for a subset of businesses. However, the subset is substantial: 83% of non-Indigenous businesses provide information on both the size of the workforce and the number of Indigenous workers.

as joint-owned Indigenous businesses. For simplicity, all other businesses are called non-Indigenous, although Indigenous people may hold some equity in them as minority shareholders.

Descriptive analysis of ICN data

The final sample with complete information on all the variables used in the main analysis covered 14,495 non-Indigenous businesses and 183 Indigenous businesses. Only 18 of the majority-owned Indigenous businesses have indicated that they are certified as Indigenous businesses for the purposes of Supply Nation. This is only about 10% of all Indigenous businesses in the sample, but 15% of majority-owned Indigenous businesses that can theoretically use the services provided by Supply Nation. Therefore, even within the current definitions of Indigenous business used by Supply Nation, there may be considerable scope for increased coverage of services offered.

Table 1 summarises the workforce size and turnover of businesses, by Indigenous status, from the ICN Queensland data. This indicates that Indigenous businesses are more than 10 times smaller than non-Indigenous businesses in workforce size. For annual turnover, the differential is smaller. However, non-Indigenous businesses are at least three times larger, in terms of turnover, than both categories (majority-owned and joint-owned) of Indigenous businesses reported.

The main message from Table 1 is that the likelihood of Indigenous workers being employed is much higher for Indigenous businesses. This is particularly true for majority-owned businesses, which are around 100 times more likely to employ Indigenous workers than non-Indigenous businesses.

All the statistics in this article have standard errors estimated using jackknife estimators, which have the desirable property that the confidence intervals are robust even if the

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Table 2. Relative frequencies of businesses by proportion of workforce identified as Indigenous, 2013.

Proportion of workforce identified as Indigenous (%)	Proportion of businesses (%)		
	Majority-owned Indigenous businesses	Joint-owned Indigenous businesses	Non-Indigenous businesses
0 to <5	2.4	13.6	95.4
5 to <10	0.0	3.4	1.9
10 to <15	3.3	5.1	1.2
15 to <20	4.9	5.1	0.5
20 to <25	2.4	8.5	0.4
25 to <30	1.6	5.1	0.2
30 to <35	3.3	1.7	0.1
35 to <40	0.0	3.4	0.0
40 to <45	1.6	1.7	0.1
45 to <50	13.0	20.3	0.0
50 to <55	0.8	1.7	0.1
55 to <60	5.7	0.0	0.0
60 to <65	1.6	5.1	0.1
65 to <70	3.3	3.4	0.0
70 to <75	3.3	3.4	0.0
75 to <80	2.4	3.4	0.0
80 to <85	1.6	1.7	0.0
85 to <90	1.6	0.0	0.0
90 to <95	0.0	3.4	0.0
95 to 100	47.2	10.2	0.0

Source: ICN database.
The row entries may not sum precisely to 100 because of rounding errors.

underlying distribution of the random variable is not a normal distribution (Miller, 1974).[7] Any reference to significance in the text indicates that the difference between two statistics is statistically significant at the 5% level.

Table 2 reports the percentage of Indigenous and other businesses whose workforces have various proportions of Indigenous employees. That is, it presents the frequency distribution of the proportion of the workforce identified as Indigenous in different types of business. For example, 95.4% of non-Indigenous businesses have between 0% and 5% of the workforce identified as Indigenous employees. In contrast, only 2.4% of majority-owned Indigenous businesses are in the same category. Table 2 also indicates that there is a substantial clump of Indigenous businesses that have around half the workforce identified as Indigenous. This is true for both definitions of Indigenous businesses, but is particularly pronounced for joint-owned businesses – one-fifth of such businesses have between 45% and 50% of their workforce identified as Indigenous employees. This indicates that the variable is not normally distributed. There is also some evidence of another clump of Indigenous businesses that have between 95% and 100% of the workforce identified as Indigenous. Indeed, almost half of majority-owned Indigenous businesses have very high concentrations of Indigenous workers.

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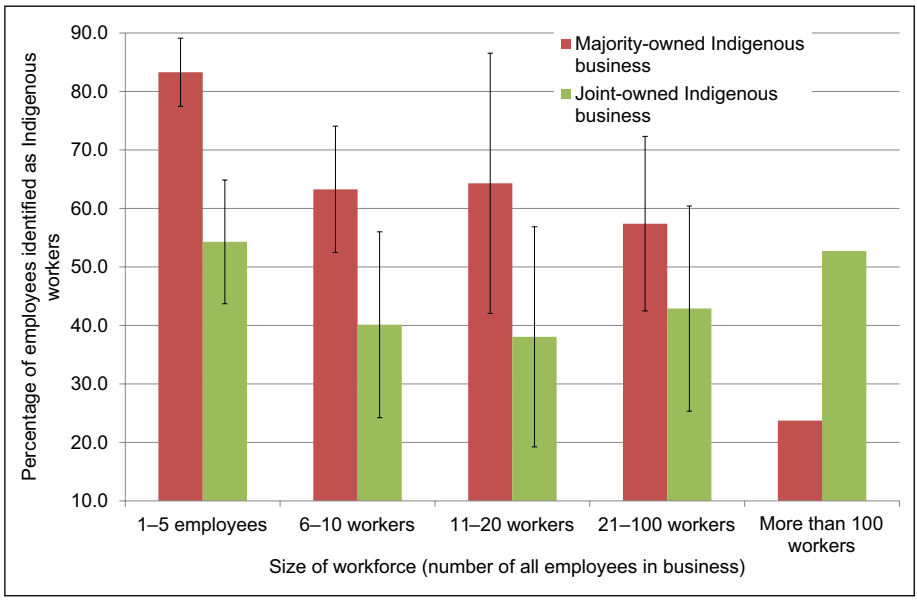

Figure 1. Proportion of workforce identified as Indigenous by size of workforce and extent of Indigenous equity in business, 2013.
Source: ICN database.
The 95% confidence intervals are shown for firms with 100 or fewer employees. It is not possible to estimate confidence intervals for Indigenous businesses with more than 101 workers because of the small number of such businesses.

Partnerships (joint-owned businesses) are more likely to be clustered at the half-way mark of the distribution, while majority-owned businesses have a cluster at the 95%–100% range (i.e. the workplace is dominated by Indigenous workers). The results for joint-owned businesses are not surprising, especially for micro-enterprises in which the Indigenous and non-Indigenous owners may both be classified as employees. Hence, in the absence of other employees, there would be a tendency to have 50% of employees being Indigenous. In terms of statistical distributions, the proportion of Indigenous workers is definitely not normally distributed and is multimodal for Indigenous businesses (at least three significant modes or 'lumps' in the distributions).

Despite the lack of an underlying normal distribution, it is clear that Indigenous businesses have a range of employment outcomes for Indigenous employees, but those outcomes are almost always substantially better than in non-Indigenous businesses. The important implication of the statistical distributions is that it is difficult to measure averages robustly when there is considerable heterogeneity among Indigenous businesses in the crucial parameter of Indigenous employment. The empirical techniques employed in the following analysis take into account this statistical distribution.

One of the most important drivers of workplace culture and management is the size of the workforce (Callus et al., 1991). Figure 1 shows the proportion of employees identified as Indigenous by workforce size. Non-Indigenous businesses are not reported in this figure; the proportions of Indigenous workers identified in such workplaces are close to

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Table 3. Proportion of workforce identified as Indigenous by size of workforce and broadest category of Indigenous status of business.

Number of workers	Non-Indigenous businesses	All Indigenous businesses
1–5	0.4 (0.1)	75.0 (2.9)
6–10	0.9 (0.1)	57.2 (4.8)
11–20	0.9 (0.1)	51.2 (7.8)
21–100	0.9 (0.1)	51.7 (5.8)
More than 100	0.7 (0.1)	31.0 (7.3)

Source: ICN database.
Standard errors were estimated using a jackknife estimator and are reported in brackets.

zero for all workforce sizes. Among small Indigenous businesses with 20 or fewer employees, the proportion of employees identified as Indigenous is significantly higher in majority-owned Indigenous businesses than in joint-owned Indigenous businesses. However, on balance, majority-owned businesses are more like joint-owned Indigenous businesses than non-Indigenous businesses.

Table 3 presents non-Indigenous results alongside the aggregated results for all Indigenous businesses. The standard errors for all Indigenous businesses are smaller when majority-owned and joint-owned Indigenous businesses are combined, and larger Indigenous businesses have significantly lower proportions of Indigenous workers than micro-businesses (i.e. with five or fewer employees).

Table 4 reports the relevant variables in the ICN Queensland data according to the main industrial activity of the business. Note that majority-owned and joint-owned Indigenous businesses are collapsed into one category to increase the number of businesses in certain industry categories and hence the reliability of the results. For oil and gas, construction and engineering, manufacturing and mining, it is clear that non-Indigenous businesses – which are around 10 times larger in both workforce size and turnover – are substantially (30–40 times) less likely than Indigenous businesses to employ Indigenous workers. In the professional services sector, non-Indigenous businesses are even larger relative to Indigenous businesses and a similarly low employment rate of Indigenous workers.

The number of businesses in each category indicates the distribution of businesses across industries. There are substantial numbers of businesses in each industry category, but the majority of businesses are in the 'other industries' category. Ideally, it would be desirable to disaggregate all industrial activities recorded, but these other industries include relatively small numbers of Indigenous businesses.[8] In Table 4, 'other industries' is a residual category, which covers businesses that do not have industrial activities associated with oil and gas, construction and engineering, manufacturing, mining or professional services.

Non-Indigenous businesses were again much larger in terms of both workforce size and turnover, especially in the professional services sector, where the overall workforce was more than 20 times larger and the turnover was close to 30 times that in Indigenous businesses.

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Table 4. Characteristics of businesses by Indigenous status and industrial activity, 2013.

	Non-Indigenous businesses	Indigenous businesses
Oil and gas sector		
Average proportion of workforce who are Indigenous (%)	1.7	51.1
Average size of workforce	506.0	30.9
Average turnover (AUD'000)	38,600	4138
Number of businesses	2652	40
Construction and engineering sector		
Average proportion of workforce who are Indigenous (%)	1.9	51.1
Average size of workforce	344.8	26.7
Average turnover (AUD'000)	29,300	4621
Number of businesses	3381	73
Manufacturing sector		
Average proportion of workforce who are Indigenous (%)	1.2	50.5
Average size of workforce	268.4	25.6
Average turnover (AUD'000)	29,100	2604
Number of businesses	1511	26
Mining sector		
Average proportion of workforce who are Indigenous (%)	1.6	55.0
Average size of workforce	424.1	31.2
Average turnover (AUD'000)	40,600	4279
Number of businesses	2342	47
Professional services sector		
Average proportion of workforce who are Indigenous (%)	1.3	63.8
Average size of workforce	381.1	18.4
Average turnover (AUD'000)	24,800	875
Number of businesses	1257	52
Other industrial activities		
Average proportion of workforce who are Indigenous (%)	0.2	74.8
Average size of workforce	78.5	10.6
Average turnover (AUD'000)	2053	1185
Number of businesses	8763	58

Source: ICN database.
Indigenous businesses include both majority-owned and joint-owned Indigenous businesses.

The author worked iteratively with ICN staff to ensure that these data were clean and credible, and excluded outliers. For example, almost all Australian businesses employ less than 50,000 workers and hence ICN businesses were excluded if they employed more than this number of workers. Note that this assumption is justified by the fact that none of the businesses retained in the analysis were among the 200 largest Australian companies (see http://www.asx200list.com/). If a company actually did employ over 50,000 workers, it is reasonable to expect them to be listed among the 200 largest Australian companies. Since the ICN businesses with such large numbers of employees

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are not identified among the largest Australian companies, their information was deemed to be unreliable and was excluded from the final sample used in the following analysis.

In the course of cleaning the data, it also became clear that turnover was likely to be measured with even more error than workforce size. Accordingly, the most reliable indicator of the size of a business is the number of employees, which is used in the remainder of the analysis (instead of the ICN measure of turnover).

What characterises businesses that have Indigenous stakeholders?

The ICN Queensland data provide a unique opportunity to gain insight into what sort of businesses are Indigenous businesses. Given how little is known about Indigenous businesses, it is useful to supplement the above cross-tabulations with a multivariate analysis of Indigenous businesses to provide a summary of characteristics that predict whether a business is Indigenous, including whether it is a joint-owned or a majority-owned business. Since this involves modelling a limited dependent variable – that is, whether a business is Indigenous – it is appropriate to use a logistic regression model (Hosmer and Lemeshow, 2000). The main advantage of this type of model is that the effects of various characteristics can be expressed in terms of the likelihood of the business being an Indigenous business (i.e. the odds ratio).

Table 5 reports the odds ratios for a logistic model, which predicts which businesses are likely to be Indigenous businesses, according to the various definitions used in this article. The table reports the odds of a business being an Indigenous business relative to micro-businesses (1–5 employees) that do not engage in any of the industrial activities listed in Table 5. Indigenous businesses are significantly less likely than non-Indigenous businesses to have more than six employees. The odds of being an Indigenous business are 1/13 times those of being a non-Indigenous business for a business that has more than 101 workers. If a business involves construction activities, it is twice as likely to be an Indigenous business, while businesses involving professional activities are close to 3–4 times as likely to be an Indigenous business.

Note that the findings from this logistic analysis are robust to the use of turnover, instead of workforce, to identify the size of the business. However, as indicated above, the following regression analysis uses the number of workers to measure the size of the business operations because the industrial relations literature has long recognised that workplace size is a key driver of management strategies, behaviours and businesses outcomes (Callus et al., 1991).

An omission from the logistic regression is the proportion of workers identified as Indigenous. This article assumes that Indigenous employment outcomes are driven by Indigenous businesses, rather than the reverse.

Multivariate analysis of number of Indigenous workers a business employs

The multimodal distribution of the proportion of Indigenous workers (see Table 2) means that this is not a normally distributed variable, and hence it is not appropriate to use ordinary least squares (OLS) techniques to analyse this dependent variable. However, the

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Table 5. Estimation of odds ratios for a business being an Indigenous business, logistic regression.

	Odds ratio		
	All Indigenous businesses	Joint-owned businesses	Majority-owned businesses
Workplace size 6–10	0.389***	0.340**	0.395***
	(−4.15)	(−2.37)	(−3.46)
Workplace size 11–20	0.416***	0.758	0.292***
	(−3.64)	(−0.76)	(−3.74)
Workplace size 21–100	0.443***	0.644	0.373***
	(−4.08)	(1.32)	(−3.95)
Workplace size 101+	0.072***	0.072***	0.073***
	(−5.10)	(−2.57)	(−4.38)
Oil and gas	0.985	1.084	0.959
	(−0.07)	(0.21)	(−0.15)
Construction	1.984***	2.984***	1.618**
	(3.85)	(3.68)	(2.17)
Manufacturing	1.075	1.025	1.110
	(0.31)	(0.06)	(0.37)
Professional services	3.510***	2.223**	4.040***
	(7.19)	(2.37)	(6.78)
Mining	1.329	0.779	1.713**
	(1.23)	(−0.60)	(1.96)
Constant	0.015***	0.004***	0.010***
	(−34.80)	(−24.30)	(−31.61)
Pseudo R^2	0.070	0.049	0.078
No. of observations	14,679	14,679	14,679

The reference group is non-Indigenous micro-businesses (1–5 workers) that do not engage in any of the industrial activities listed. T-values for estimates are provided in brackets.*, ** and *** denote that the odds ratio is statistically significant at the 10%, 5% and 1% level of significance, respectively. All Indigenous businesses include both majority-owned and joint-owned Indigenous businesses.

count data of the number of Indigenous workers in a business broadly follow the Poisson distribution, with some evidence of over-dispersion (Figure 2). The number of Indigenous employees is heavily skewed towards zero, especially among non-Indigenous businesses. Accordingly, it is appropriate to use a negative binomial regression model or another count data regression model.

Figure 2 confirms that non-Indigenous businesses have many fewer Indigenous workers than Indigenous businesses: most non-Indigenous businesses have no Indigenous workers, but all Indigenous businesses have at least one Indigenous worker. The relative frequencies for Indigenous and non-Indigenous businesses barely overlap, and they are clearly drawn from different populations with respect to Indigenous employment.

Table 6 reports the results from a negative binomial regression model of the number of Indigenous employees. The likelihood-ratio test of over-dispersion is significant at the conventional levels, and hence the negative binomial model is preferred to the other

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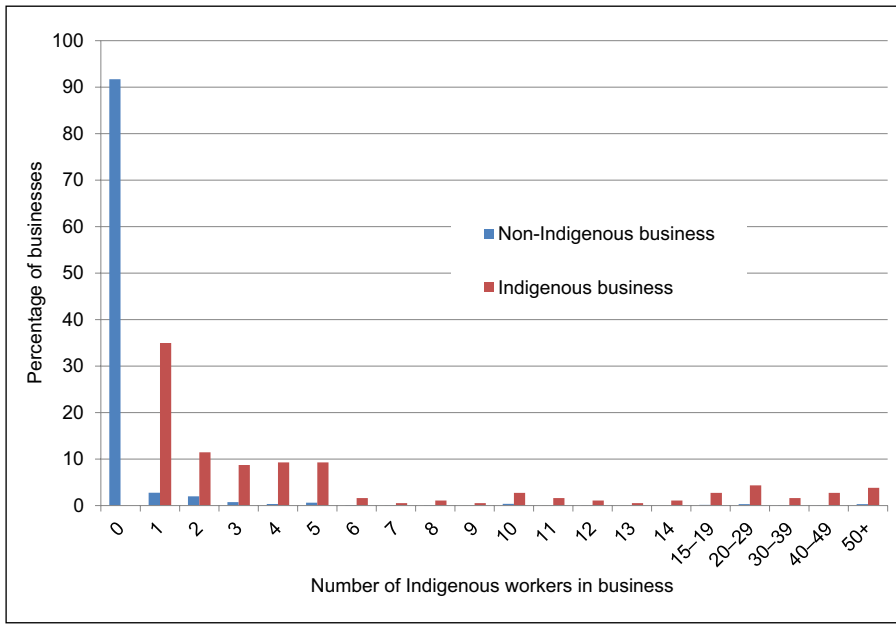

Figure 2. Numbers of Indigenous workers in businesses, by Indigenous business status, 2013.
Source: ICN database.
Indigenous businesses include both majority-owned and joint-owned Indigenous businesses.

standard count data models. Notwithstanding, alternative regression models (including Poisson, Tobit and OLS models) were estimated using suitably transformed dependent variables, but all the analyses point to the same basic result: even after controlling for workplace size and industry activities, Indigenous businesses are significantly more likely to be associated with more Indigenous workers.

Another consistent finding in Table 6 is that large businesses are less likely to employ additional Indigenous workers overall. This is probably because such workplaces are constrained by the supply of suitably skilled Indigenous workers, but this is a question for future research. Regression models document the statistical significance, but not the importance, of the observation. Table 7 addresses the latter by asking which sorts of businesses actually employ most Indigenous workers.

Although the above analysis demonstrates that small Indigenous businesses are the most likely to employ Indigenous workers, policy needs to take account of where most Indigenous people are currently employed to ensure that balanced policy settings are in place. Table 7 shows that, although the average non-Indigenous business is not performing well in terms of Indigenous employment, almost 89% of Indigenous workers in the ICN Queensland sample are employed in non-Indigenous businesses, with the vast majority of these being in large businesses (74% in the 101+ workers category). Clearly, the overall predominance of non-Indigenous businesses in the labour market means that policy needs to take into account the socioeconomic environment in such businesses when attempting to close the gap for Indigenous employment. Encouraging Indigenous

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Table 6. Prediction of the number of Indigenous workers employed in a workplace, negative binomial model.

	Incidence rate ratio			
	No control for Indigenous businesses	All Indigenous-owned businesses	Joint-owned businesses	Majority-owned businesses
Indigenous businesses		129.57***	43.98***	94.59***
		(19.5)	(8.1)	(14.5)
Workplace size 6–10	0.68***	1.59***	0.80	1.07
	(−2.8)	(2.8)	(−1.6)	(0.5)
Workplace size 11–20	0.69***	1.56***	0.73**	1.18
	(−2.8)	(2.8)	(−2.4)	(1.1)
Workplace size 21–100	0.63***	1.31*	0.68	0.98
	(−3.9)	(1.8)	(−3.2)***	(−0.1)
Workplace size 101+	0.25***	0.77*	0.27	0.53***
	(−10.5)	(−1.7)	(−9.9)	(−4.5)
Oil and gas	1.57***	1.96***	1.69***	1.75***
	(4.2)	(7.2)	(5.2)	(5.7)
Construction	3.10***	3.79***	3.23***	3.54***
	(13.1)	(17.1)	(13.9)	(15.6)
Manufacturing	0.94	0.93	0.85	1.03
	(−0.5)	(−0.7)	(−1.4)	(0.3)
Professional services	2.89***	1.79***	2.85***	2.06***
	(8.4)	(5.0)	(8.5)	(6.1)
Mining	1.49***	1.41***	1.61***	1.30**
	(3.7)	(3.6)	(4.7)	(2.6)
Constant	0.01***	0.00***	0.01***	0.00***
	(−46.8)	(−42.9)	(−47.1)	(−45.7)
Pseudo R^2	0.027	0.092	0.041	0.066
Number of observations	14678	14678	14678	14678

Offset variable is the log of number of employees, which we expect to be directly associated with the number of Indigenous employees. Incidence rate ratio indicates the incidence rate for people with a particular characteristic relative to the reference group. The reference group is non-Indigenous micro-businesses (1–5 workers) that do not engage in any of the industrial activities listed above. *T*-values for estimates are provided in brackets. *, ** and *** denote that the Incidence rate ratio is statistically significant at the 10%, 5% and 1% level of significance, respectively.

businesses may substantially improve Indigenous employment outcomes, but it cannot be the only strategy to reduce Indigenous employment disadvantage.

There are large numbers of small non-Indigenous businesses – almost one-third have five or fewer employees; however, they employ only 0.4% of Indigenous workers and 0.5% of all workers. If the goal of policy is to improve Indigenous employment outcomes, policy must encourage Indigenous employment in medium to large non-Indigenous businesses as well as Indigenous businesses.

The analysis in this article has so far focussed on analysing outcomes at a business level – that is, using information on individual businesses. However, Tables 7 and 8 provide information across businesses on the relationships between categories of

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Table 7. Percentage of Indigenous workers by Indigenous status of business and workforce size.

Workforce size	Indigenous workers		All workers	
	Indigenous businesses	Non-Indigenous businesses	Indigenous businesses	Non-Indigenous businesses
1–5	1.20	0.44	0.01	0.51
6–10	0.84	1.53	0.01	0.86
11–20	1.18	2.43	0.01	1.32
20–100 workers	6.69	10.29	0.07	5.79
More than 100 workers	1.26	74.13	0.02	91.40
Total		100		100

Source: ICN database.
Indigenous businesses include both majority-owned and joint-owned Indigenous businesses.

Table 8. Indigenous employment by Indigenous business status.

	Non-Indigenous businesses	Indigenous business	
		Joint-owned businesses	Majority-owned businesses
Number of Indigenous employees	12,221	476	1058
Indigenous employment rate (%)	0.45	43.9	49.4
Indigenous employment relative to non-Indigenous business	1	97	110
Indigenous employment in sample (%)	89	3	8

Source: ICN database.
Employment rate is calculated as the percentage of Indigenous workers among the total workforce of all businesses in that category of business.

businesses and workers. The ICN database contains data on more than 13,700 Indigenous workers employed in businesses; most are in non-Indigenous businesses. When the Indigenous workforce is expressed as a percentage of all workers, only 0.45% of workers in non-Indigenous businesses are Indigenous (Table 8). This estimate varies from the estimate in Table 1 because, as noted above, the distribution of the proportion of Indigenous workers in each business is highly non-normal. However, the underlying conclusion from this article is robust; the effect is even stronger when we examine individual employment within various business categories. Indigenous businesses are still about 100 times more likely to employ an Indigenous Australian than non-Indigenous businesses. Majority-owned Indigenous businesses have only a slightly higher rate of Indigenous employment than joint-owned Indigenous businesses (with 50% Indigenous equity).

The unresolved question that arises from this article is: why are many non-Indigenous businesses so poor at employing Indigenous people? The next section, ‘Concluding remarks’, addresses this question.

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Concluding remarks

One of the motivations for this article was to explore whether majority-owned Indigenous businesses are categorically different from joint-owned Indigenous businesses. These two categories of businesses are not very different from one another; almost all tend to have a substantially higher probability of employing Indigenous people than non-Indigenous businesses. Hence, this article provides evidence that policy should relax the definition of Indigenous businesses and not solely focus on majority-owned businesses. Since both categories of Indigenous businesses are associated with good Indigenous employment outcomes, they could both be encouraged via procurement policies and contracts to larger organisations (via RAPs or other policy strategies). The 'New Indigenous Procurement Policy', implemented on 1 July 2015, does relax the definition of Indigenous Business in terms of the level of Indigenous equity required. Note that this policy is explicitly motivated by the statistic that 'Indigenous businesses are 100 times more likely to employ Indigenous people' (Table 8 and a preliminary version of this article, Hunter (2014), which was provided in draft form to the Forrest (2014) Review).

RAPs may also have a role to play, especially for non-Indigenous businesses. However, most RAPs are in larger businesses because the fixed costs of establishing and monitoring the plans may not be justifiable in smaller businesses with tighter profit margins.

Another effective strategy could be to extend the coverage of policies that support Indigenous businesses to include joint-owned Indigenous businesses. For example, Supply Nation could relax the definition of Indigenous businesses to include partnerships between Indigenous and non-Indigenous stakeholders. This could facilitate more extensive engagement of Indigenous businesses in the supply chain.

Of course, to encourage Indigenous businesses, we need to understand what makes a successful Indigenous entrepreneur. Foley and Hunter (2014) demonstrate that several issues need to be addressed:

- Suitable business-related qualifications may be an impediment for many Indigenous entrepreneurs.
- Social capital, especially bridging social capital, is likely to be important. Indigenous businesses need to have extensive social connections with potential trading partners, including non-Indigenous businesses and customers.
- Access to financial capital may be a constraint for some Indigenous businesses.

Instead of focussing solely on individual Indigenous entrepreneurs, it might be necessary to ask another question: what makes a business a friendly place for Indigenous workers? Hunter and Gray (2013) argue that substantial cohorts of Indigenous workers are associated with more culturally appropriate workplace conditions. Of course, having large numbers of Indigenous workers may facilitate a sympathetic management. However, if the fixed costs associated with creating Indigenous-friendly working conditions are substantial, there would be limits to the extent to which smaller non-Indigenous businesses could be encouraged to foster a positive working environment.

One complicating factor in the relationship between the size of businesses and Indigenous employment is that larger businesses can require a range of skills because

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they are more likely to employ both specialised (or skilled) and unskilled staff. Since potential Indigenous staff is less likely to have high levels of educational attainment or skills, larger businesses may be more likely to employ Indigenous staff (all else being equal). Any attempt to compare similar businesses with respect to how Indigenous-friendly they are will need to conduct a skills audit of the organisations.

The analysis in this article has largely focussed on business-level data. In contrast, Hunter (2013) used aggregated census data to illustrate that the more Indigenous entrepreneurs in an area, the better the overall Indigenous employment outcomes. However, to make progress in understanding the underlying issues, we need to collect more detailed information on individual workers (including their strengths and weaknesses). Data on how the business is organised and operates are also needed, in order to understand the whole social and economic relationship of Indigenous workers and their employers. That is, we need linked employer–employee data. Given that representative data do not exist in the context of Indigenous workers and employers or businesses, any such information will probably have to be collected by researchers.

Labour market discrimination is all too common for many Indigenous people (Biddle et al., 2013). The nature of labour market discrimination means that potential workers or jobseekers may have been denied employment; thus researchers and policy-makers also need to look outside the workforce. Clearly, there are limits to the research questions that can be addressed using linked employer–employee data. Audit-based analysis of discrimination studies is likely to be another constructive avenue for research on the issues that need to be addressed to maximise employment outcomes for Indigenous Australians.

Although it is beyond the scope of the current research to resolve such issues, it is reasonable to speculate on at least three possible explanations for the observations in this article.[9] First, there may be fixed costs of hiring culturally diverse workers – this would discourage smaller non-Indigenous businesses from employing Indigenous workers. Second, micro-businesses have specific skill requirements that most Indigenous workers do not have – for example, small businesses need a flexible workforce with multiple skills to deal with challenges that may be met by specialised professional staff in a larger organisation. Third, discrimination may be a more important problem in a smaller non-Indigenous business because friction between staff, between customers and staff and between management and staff, are more likely to undermine the operation of the business.

Rather than focussing on the role of non-Indigenous businesses, the hypothesis raised above is that Indigenous employees choose to work in organisations that understand their culture. Arguably, one of the mechanisms by which Indigenous workers self-select into their current jobs is by the way they look for jobs. Indigenous jobseekers are more likely than other Australian jobseekers to look for jobs using friends and relatives (Gray and Hunter, 2005). Because Indigenous social networks are highly likely to know about job opportunities in Indigenous businesses, friends and families will be more likely to direct Indigenous jobseekers into such businesses. It is probably not surprising to find concentrations of Indigenous workers in Indigenous-owned businesses. The unresolved issue is whether it is possible to substantially improve workplace environments in non-Indigenous businesses so that more Indigenous workers want to work in these enterprises.

One way of extracting further value from data in the ICN Gateway, or potentially other data provided by similar organisations, would be to use the ICN database as a sampling

frame to collect data on a representative sample of Indigenous and other businesses to address these complex issues.[10] That is, such data could theoretically be used to identify businesses that could be surveyed when collecting linked employer–employee data, or even to study discrimination. This article has demonstrated that such research would be useful for designing policy that is effective in reducing Indigenous employment disadvantage.

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Notes

1. One limitation of using the 'self-employed' census data proxy for identifying businesses is that it may understate the number of businesses (including Indigenous businesses), that is, census data will not identify Indigenous corporations in which no individuals identify as self-employed. For example, the chief executive or chair of the board of a corporation may see themselves as employees who manage, or may have multiple roles across several businesses that may not easily be classified as self-employed.
2. Supply Nation was formerly known as the Australian Indigenous Minority Supplier Council.
3. There has been a substantial recent growth in the number of Indigenous businesses; by early July 2014, 274 Indigenous businesses were identified in the ICN data. That is an increase in the overall number of Indigenous businesses of just under 50% since the data in this article were extracted in November 2013.
4. Available at Supply Nation (accessed 15 October 2014).
5. In some states of the United States, it is a felony to fraudulently claim certification as a minority business enterprise.
6. For example, the following analysis groups together businesses with 6–10 workers instead of the more standard statistical category in ABS publications, which examines workplaces with 5–9 workers (Callus et al., 1991).
7. This is just as well, since Table 2 clearly indicates that the frequency of the proportion of the business workforce identified as Indigenous is trimodal. That is, in contrast to a normal distribution, it has three 'humps' instead of one cluster centred on the mean.
8. Disaggregated information on all industrial activities was not collected because the coding would take additional resources that were not available for this research. Hence, the empirical strategy focussed on industries where there were substantial numbers of Indigenous businesses.
9. Some non-Indigenous employers may not consider the indigeneity of employees (i.e. they do not ask about indigeneity or collect usable data). As a result, there could be under-enumeration of Indigenous employees by non-Indigenous businesses in this study. A countervailing factor is that businesses looking for supply opportunities through ICN have an incentive to identify any potential Indigenous workers in order to secure contracts with public or private sector organisations where Indigenous employment is deemed as a priority (e.g. in RAPs). On balance, the size of the differential in Indigenous employment documented in this study cannot be explained solely by under-enumeration. Also, if employers do not see the value of collecting information on the Indigenous status of employees, they are unlikely to consider the needs of Indigenous employees.
10. In January 2015, the NSW Indigenous Chamber of Commerce established the NSW Aboriginal Business Portal to support the growth of Aboriginal business by linking private and public sector procurers with certified Aboriginal suppliers.

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