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Taking the Long View:

Indigenous Employment 1981–2021

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Taking the Long View: Indigenous Employment 1981–2021

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Abstract

There is a significant body of research which attempts to quantify rates of Indigenous employment. However, previous estimates offer an often-inconsistent depiction across recent decades, with the specifications of analysis both by researchers and government changing, and the data environment developing. An oversight in previous estimations has been failing to analyse Indigenous employment in the context of the machinations of the broader labour market, such as the increase of women in the workforce, changing education rates, and age profiles of employment. This paper produces the largest scale estimation of Indigenous employment to date, across the period of 1981–2021, using nine iterations of 5-yearly Census data. This analysis reaffirms the associations between factors such as geography and education with rates of employment but highlights the significant extent to which the increase of Indigenous women in the workforce has contributed to the overall increase in Indigenous employment. Overall, this paper provides a comprehensive view of the Indigenous labour market over a 40-year period in the context of the Australian labour market as a whole. Inevitably, the findings of this paper point to a lingering stagnation in employment in key areas, and the crucial need for more insightful and relevant data beyond the Census

1. Introduction

Improving the labour market outcomes of Aboriginal and Torres Strait Islander peoples has been an area of focus for Australian policymakers since at least the 1970s¹. This focus has been in part to address the systematic exclusion of Indigenous peoples from the mainstream labour market (Langton, 2011), in recognition of the enhanced socioeconomic outcomes associated with employment, and the direct or indirect costs to government in response to joblessness. Despite increases in the rates of employment in recent decades, in 2021 the Indigenous employment rate was 52.2 per cent compared to 74.6 per cent for the non-Indigenous population, for those aged between 15-64 (AIHW, 2023). The intergenerational consequences of the economic marginalisation of Indigenous peoples continue to be felt and are reflected in worse outcomes for a range of socio-economic indicators beyond employment (Productivity Commission, 2024).

There has been substantial research in quantifying, understanding, and analysing Indigenous employment rates and its influencers, given its policy focus over recent decades. Of the existing quantitative literature on Indigenous employment in Australia, most research papers undertake cross-sectional analysis, identifying rates of employment and its associated factors for individual years. Many of the existing publications use varied age ranges (i.e. 15-years-old and above, 15-64, 25-64, etc.), rely on different data sources, and take varied methodological approaches, for example relating to Community Development Employment Program (CDEP) scheme participation and its classification as employment. Inevitably, through the myriad methodological approaches, data sources, and research focuses, piecing together a consistent understanding of Indigenous employment across a longer period is significantly challenging by solely sifting through the existing literature. By providing consistent statistics on Indigenous and non-Indigenous employment across multiple decades, a better understanding of how Indigenous employment relates to broader trends in the Australian labour market can be developed.

This paper provides as comparable as possible estimates of the trends in Indigenous employment over the last four-decades using nine iterations of the Australian Censuses of Population and Housing collected from 1981 to 2021. The trends in employment for men and women, age groups, and geographic remoteness are reported. The paper also presents the changes to post-secondary educational attainment rates between 1981-2021, changes in CDEP participation, and an analysis of the age-employment profiles for different birth cohorts to help identify what is driving changes in employment rates. A key aspect of the paper is placing the trends in Indigenous employment in the context of trends in the broader Australian labour market over the longer-run.

The remainder of this paper is structured as follows. The next section provides an overview of the findings of existing analyses of Indigenous employment, including a discussion of the data sources it has primarily relied upon, and a summary of the CDEP scheme and its impact on Indigenous employment. This is followed by a brief discussion of the macroeconomic changes in the Australian

economy across the period on which this paper focuses. After discussing the data used for this paper, analyses of Indigenous and non-Indigenous employment across 1981-2021 are presented, followed by a brief discussion of its significance.

2. Literature Review

2.1 Research on Indigenous Employment

A significant amount of academic literature has been produced around the broad topics of Indigenous employment and labour market participation. This involves the history of Indigenous entrepreneurship and trade before European arrival (e.g. Macknight, 1976), eras of protectionism and indentured servitude (including that of children) (e.g. Huggins, 1995), stolen wages (Kidd, 2007), labour market discrimination and the workplace level determinants and influences of employment (e.g. Norris, 2001; Leroy-Dyer, 2021). Whilst acknowledging this diverse and relevant literature, this paper is focused on the data environment surrounding the quantification of Indigenous employment across recent decades, and the various approaches to disaggregated analysis. It is this analysis that has aimed to provide a detailed depiction of the Indigenous labour market, and the inhibitors to and markers of greater labour market participation.

The literature on Indigenous employment has been shaped by the relative paucity of the available data on Indigenous labour market outcomes compared to the data available for the entire Australian population. The main source of data on Indigenous employment is the five-yearly Australian Census of Population and Housing, which is relied on for annual reporting of Indigenous employment rates under The National Agreement on Closing the Gapⁱⁱ. The Census has two clear strengths for analysing Indigenous employment and labour market outcomes more broadly. First, it includes (in principle) all Indigenous peoples and thus the problems of small sample sizes that limit the utility of most surveys do not apply. Second, it provides comparable data over a long period of time. Data on Indigenous employment is first available from the 1971 Census which was the first Census that Indigenous peoples were purposefully counted towards the Australian population and not deliberately excluded (National Museum of Australia, 2024).

There are three main limitations of the census data for analysing Indigenous labour market outcomes. First, it is only collected every five years. Second, while it does provide a significant amount of labour market-related data (labour force status, hours worked, occupation, industry, as well as information on self-employment and business ownership) it does not have the level of detailed information available from labour market-specific surveys. Third, the Census does not collect information that is specific to the Indigenous population, and which may be important for understanding Indigenous labour market outcomes.

A second key source has been the Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Social Survey (NATSIS), which was conducted four times between 1994-2015 (ABS, 2016) but which is no longer collected. The NATSIS did address some of the limitations of the census data for measuring and understanding Indigenous employment. Being an Indigenous-specific survey, it gathered more detailed and specific data than what is captured within the census (Gray & Chapman, 2006; Biddle & Hunter, 2006) and arguably was more attuned to the specific circumstances of the Indigenous population (Smith 1994, Rowse 1997), although not without its criticisms of oversimplification (Walter, 2020).

Arguably the two key sources of survey data on the labour market for the population in addition to the Census, are the ABS monthly Labour Force Survey (LFS) and the Household, Income and Labour Dynamics in Australia (HILDA) survey. However, both the LFS and HILDA do not produce reliable estimates of Indigenous employment due to the monthly sample size being too small (Venn & Biddle, 2018). In addition, the HILDA does not provide data for remote areas of Australia (Wilkins et al., 2024). Notwithstanding these limitations, the HILDA survey has been used to undertake some analysis of Indigenous labour market outcomes (see for example Howlett et al. 2016).

Since the beginning of the 1990s, there have been over one hundred academic publications that utilise quantitative data to analyse Indigenous employment in Australiaⁱⁱⁱ. The majority of these papers have used either Census or NATSISS data although several papers have non-ABS surveys that have been run for specific geographic areas or industries in addition to some papers that have used the ABS LFS or the HILDA survey. When summarising the bulk of the quantitative analysis on Indigenous employment in Australia, there are some consistent undercurrents within the findings. Non-Indigenous employment rates are higher than Indigenous employment rates (e.g. Daly, 1991; Hunter 2001; Gray et al, 2014; AIHW, 2024a). Indigenous peoples in remote locations have lower rates of employment than Indigenous peoples in urban locations (e.g. Junankar & Kapuscinski, 1991; Altman & Gray, 2005). Higher rates of education are associated with higher rates of employment (Hunter, 1997; Biddle, 2007). Indigenous men have higher rates of employment than Indigenous women (e.g. Jones, 1993; Hunter & Gray, 1998). Analyses that use NATSISS data allow researchers to explore broader factors that influence Indigenous employment, such as labour market discrimination (Biddle et al., 2013; Duncan et al., 2019), participation in customary economic activities (Altman et al, 2006), and previous incarceration (Borland & Hunter, 2003). Similarly, studies have been designed and undertaken with the explicit purpose of understanding Indigenous employment within specific contexts such as within the public service (e.g. Biddle & Lahn, 2016; Faulkner & Lahn, 2019), or specific industries such as mining (e.g. O'Faircheallaigh & Corbett, 2005; Brereton & Parmenter, 2008), or to understand the interrelation of certain workplace factors and employment (e.g. Evans et al., 2021; Minderoo Foundation et al., 2022). The use of survey and qualitative data has provided for more textured, contextualised, and disaggregated analysis of Indigenous employment in Australia, however, none of these data sources maintain the longevity or consistency of the Census.

Since the discontinuation of the NATSISS, studies of the trends in Indigenous employment have relied upon Census data. Research into Indigenous employment trends that uses Census data includes: (i) the reporting of the national employment statistics by the Productivity Commission (2024); (ii) the use of data from multiple censuses to document trends in Indigenous employment (e.g. Junankar & Kapuscinski, 1991); undertaking synthetic cohort analyses (e.g. Gray & Hunter 2002, Venn & Biddle 2018) and in more recent Census years, the Australian Census Longitudinal Dataset (ACLID) has provided the opportunity to undertake longitudinal analysis (e.g. Hunter & Gray, 2017). Whilst many papers utilise Census data from 1971 through to 2011, relatively little research has been published using the 2016 or 2021 Censuses. Moreover, there are no academic publications that make use of more than 20 years of data, with this paper filling this gap by analysing the period of 1981-2021, the longest period possible whilst maintaining data quality.

While the focus of this paper is on the period since 1981, it is important to understand and acknowledge that the Indigenous labour market outcomes in 1981 resulted from a historical legacy of racist and discriminatory practices that inevitably limited Indigenous labour market participation (Leroy-Dyer, 2021). This included, for example, the forcible removal of Aboriginal children to provide indentured labour. Langton (2011) describes the 'near total exclusion' of the Indigenous population from mainstream education, training, and employment before the political shifts in Australia through the 1960s and 1970s. Since this period, perhaps the most significant and longest-running Indigenous labour market program was CDEP.

2.2 The CDEP Scheme

Commencing from 1977, CDEP was a multi-faceted program that converted unemployment benefit payments that had been directed to (primarily) Indigenous peoples in remote areas, to Indigenous organisations to employ these individuals part-time (Hunter, 2009). The CDEP Scheme maintained a wide range of aims and benefits (Altman, 2016), however, a main aim was to redress the imbalance of an oversupply of labour in remote labour markets with limited demand (Altman & Gray, 2000, p1). At its peak in 2002-03, there were over 35,000 CDEP participants (Hunter and Gray, 2012). The scheme continued to operate in some remote areas until June 2015 with significantly reduced numbers (Hunter 2019), at which time it was replaced by the Community Development Programme (CDP)^{iv}. Though similar programs, significant differences relevant to this paper are the extent of participation (CDEP participation being much higher at its peak), and the classification of participation as employment. There is extensive academic debate about the merits of the programs and how they should be classified (e.g. Hunter, 2002; Jordan, 2012), but ultimately from a statistical standpoint, CDEP participation between 1981-2011 was considered as employment within Census data, where CDP participation between 2016-2021 is not^v. This is crucial to keep in mind when attempting to analyse Indigenous employment trends over the lifespan of CDEP/CDP because they are significantly influenced by the rates of CDEP participation at each Census year. This is especially the case for remote parts of Australia where CDEP was most prominent, and similarly where Indigenous employment outcomes are at their

lowest. Arguments against the classification of CDEP as employment stem from the welfare-style rates of payment, and that though an aim of the CDEP scheme was to reduce various barriers to formal employment (Jordan, 2012), the classification of CDEP participation as employment would obscure the ongoing extent of these barriers (Hunter, 2002).

Attempts have been made to estimate what the rates of Indigenous employment would be should CDEP participation not be considered as employment (e.g. Taylor & Hunter, 1998), however, this comes with multiple assumptions and limitations. Perhaps most substantially, removing CDEP participants from employment statistics is effectively presuming that, if the CDEP scheme had not existed, all the participants would not be in any alternative form of employment. Moreover, removing CDEP participants from employment statistics relies on using administrative CDEP data external to the population Census, meaning these are imperfect re-estimation^{vi}. This paper does not adjust the Census employment data with changes in the level of CDEP participation. However, it does provide statistics on the changes in participation rates of CDEP over its lifespan to provide relevant texture to the analysis.

2.3 Changes in the Australian Labour Market

This paper analyses data spanning a period from 1981-2021, over such time there have been significant shifts in the Australian labour market. Whilst much analysis has detailed the impacts of Indigenous labour market programs and broader policies on Indigenous labour market outcomes, Indigenous peoples are not insulated from the machinations of the broader Australian labour market. For example, access to the age pension and the average retirement age have increased across the period of this analysis (Department of Social Security, 2023; ABS, 2024), similarly, the life expectancy of both the non-Indigenous and Indigenous populations have increased over this time (AIHW, 2024b, Productivity Commission, 2024a). Coupled with a significant increase in the proportion of those 15 and over with non-school qualifications (24.2% in 1981 v 54.7% in 2021, ABS, 2022), this is likely to translate into a characteristically older workforce in later decades. Finally, perhaps one of the most significant shifts in the Australian labour market over recent decades has been the increase of women in the workforce (National Skills Commission, 2022). Dominant societal attitudes that limited women's economic autonomy have shifted, and the educational and employment discrimination imposed on women has reduced over recent decades. The result is that the total share of women in the Australian workforce has increased from 30% in the 1960s to almost 50% in 2020 (ABS, 2021).

2.4 Summary

Existing research on Indigenous employment has primarily focused on point-in-time analyses of the characteristics of the Indigenous labour market. While valuable, they can't detail the potential interactions between the long-term trends in the Australian labour market and Indigenous (and non-Indigenous) employment. Furthermore, limited academic analysis has been undertaken on the more recent Census datasets from 2016 and 2021. Therefore, this paper provides consistent analysis of

Indigenous and non-Indigenous employment over the longest possible period using Census data, enabling a long-term analysis of employment over an extensive period of macroeconomic, societal, and policy change.

3. Data and Methods

Data from the nine censuses from 1981 to 2021 inclusive are used to estimate employment rates for the Indigenous and non-Indigenous population. The data from the 2006, 2011, 2016 and 2021 Censuses is extracted using the ABS Table Builder tool. The data from the 1981, 1986, 1991, 1996 and 2001 Censuses are derived from the original ABS data that was provided for the Hunter (2004) paper and was reanalysed to maintain consistent disaggregation across these 9 Census years. There is further data available for the 9 Census counts prior to 1981, spanning the period of 1911-1976 (ABS, 2025), but these cannot be included in this analysis for myriad reasons. Prior to the 1967 referendum and the subsequent amendment of Section 127 of the Constitution, 'Aboriginal natives' were excluded from population counts, with this being defined as 'persons that are more than 50 per cent Aboriginal'. The vile history of this exclusion, and the violent classification of Aboriginal identities on blood quantum (McCorquodale, 1997) are better explained elsewhere (e.g. Bond et al., 2014). In short, whilst some Indigenous peoples are enumerated in Censuses between 1911-1966 (those considered not to be 'Aboriginal natives'), this is an incomplete and incidental enumeration of the Indigenous population. Moreover, any employment data drawn from earlier Censuses overlap with the protectionist policy eras in Australia, meaning it would be inaccurate to classify unpaid or underpaid forced labour as employment^{vii}. From the 1971 Census onwards there is purposeful inclusion of Indigenous peoples in Census counts, however, the evidence is that there was a very significant under-enumeration in the 1971 and 1976 Censuses and that the data collection processes regarding enumerating the Indigenous population were much improved from 1981 onwards (Choi & Gray, 1985). Choi and Gray (1985) conclude, in relation to the 1971 and 1976 Censuses that the under-enumeration of the Indigenous population in these Census counts, especially those in remote areas, is likely to have produced overestimations of Indigenous employment rates^{viii}. It is for these reasons that the analysis in this paper uses Census data from 1981 onwards.

This paper restricts its analysis to those between the ages of 15-64 in each Census year. Whilst a narrower age range of 25-64 is used for reporting on Indigenous employment for the National Agreement on Closing the Gap, to understand longer-run trends it is important to use a wider age range to capture effects such as increases in educational attainment (i.e., leaving school at an older age) and increases in the retirement age. The analysis is restricted to respondents who either identified themselves as Aboriginal and/or Torres Strait Islander or as non-Indigenous in each Census, with those who did not answer excluded from the analysis. Also excluded are respondents whose employment status cannot be determined. Sex, as recorded within the Census (male or female), is used for disaggregation^{ix}.

For the period of 1981-2021, employment statistics are presented in this paper for each 5-yearly Census, disaggregated on Indigenous status, sex, and ten-year age range, as these are the variables captured consistently across all these Censuses. Synthetic cohort analyses were created via 10-year age cohorts for Census years 1981, 1991, 2001, 2011, and 2021, to track employment for Indigenous and non-Indigenous men and women over this period.

To illustrate the relationship between education and employment, post-secondary educational attainment rates and the employment rates of those with a post-secondary education are presented. Owing to limited data availability, this is only presented using 1981 Census data (as reported in The Miller Report, 1985), and 2021 Census data using the same stratifications.

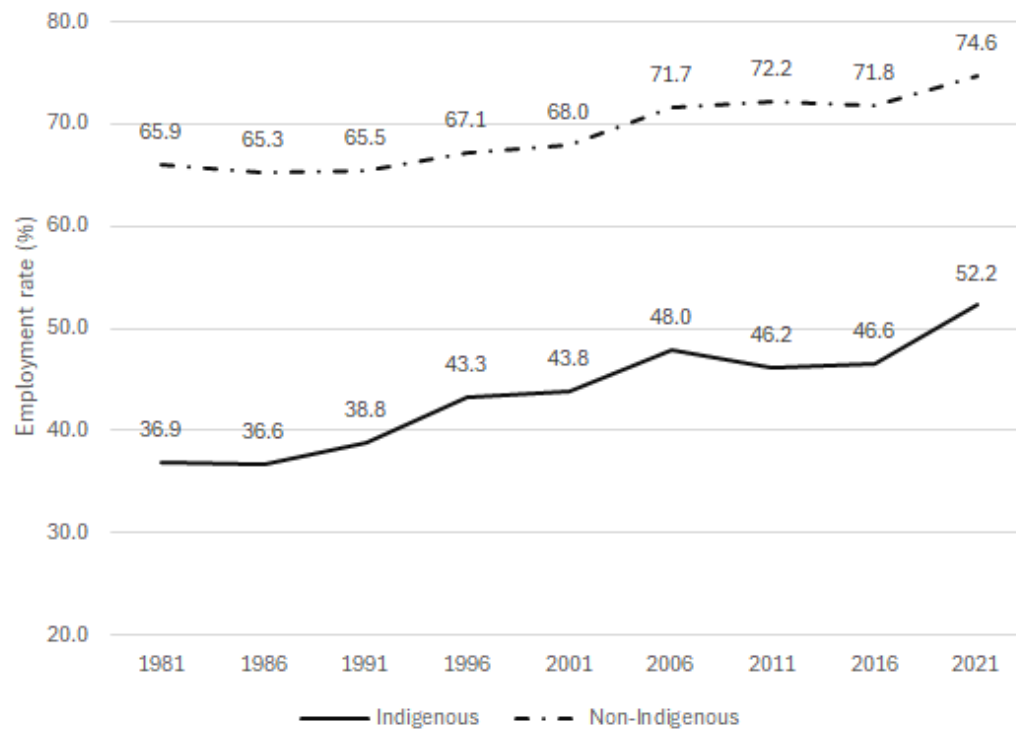
To illustrate the extent to which the rise and fall of the CDEP Scheme may help explain long-term trends in Indigenous employment, estimations of the proportion of the Indigenous working-age population that were CDEP participants are made for each Census year (1981-2021). Population data is drawn from the Census, and CDEP participation numbers are drawn from Aboriginal and Torres Strait Islander Commission (ATSIC) administrative data.

Finally, the extent of geographic disaggregation possible using Census data is broader for more recent Census datasets (2006-2021) than for earlier datasets (1981-2001). Employment statistics are therefore disaggregated by remoteness level for the 2006, 2011, 2016, and 2021 Censuses to detail differences in employment across geographies.

4. Employment Trends from 1981 to 2021

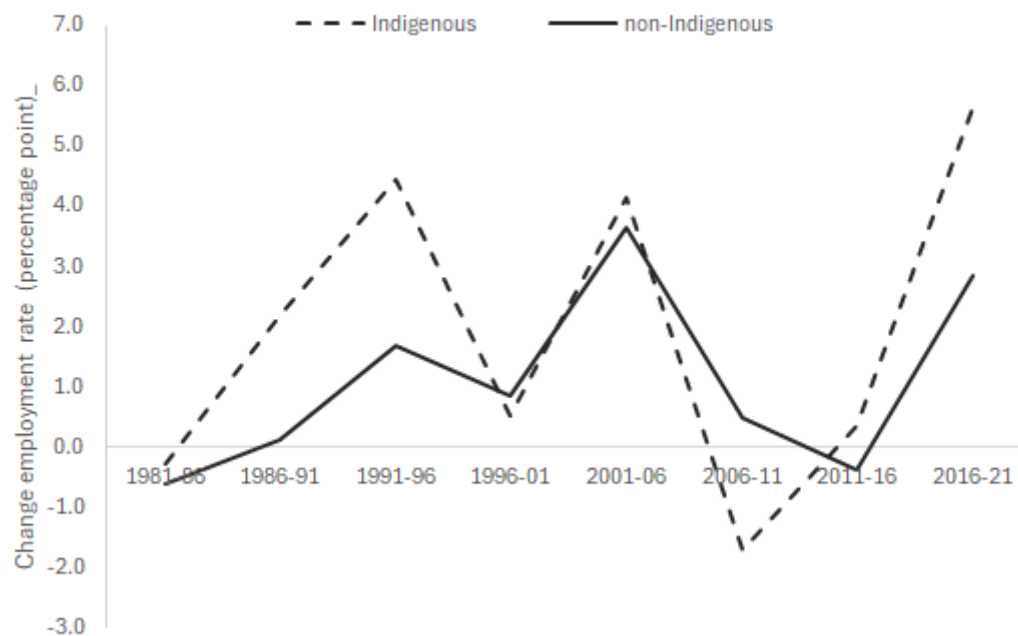
4.1 Indigenous and non-Indigenous employment rate

Figure 1 shows the rate of employment for the Indigenous and non-Indigenous population between the ages of 15-64 for each Census year from 1981 to 2021. Evidently, it demonstrates the employment 'gap' between the Indigenous and non-Indigenous population that has seen Indigenous employment become a target for policy. However there has been some reduction in the difference in employment rates. The Indigenous employment rate increased from 36.9 per cent in 1981 to 52.2 per cent in 2021, an increase of 15.3 percentage points. While the non-Indigenous employment rate also increased (from 65.9 per cent to 74.6 per cent), this increase was smaller than for the Indigenous employment rate.

Figure 1. Employment rate by Indigenous status, 15-64 years, 1981-2021 (%)

Source: 1981, 1986, 1991, 1996, 2001, 2006, 2011, 2016 and 2021 Censuses.

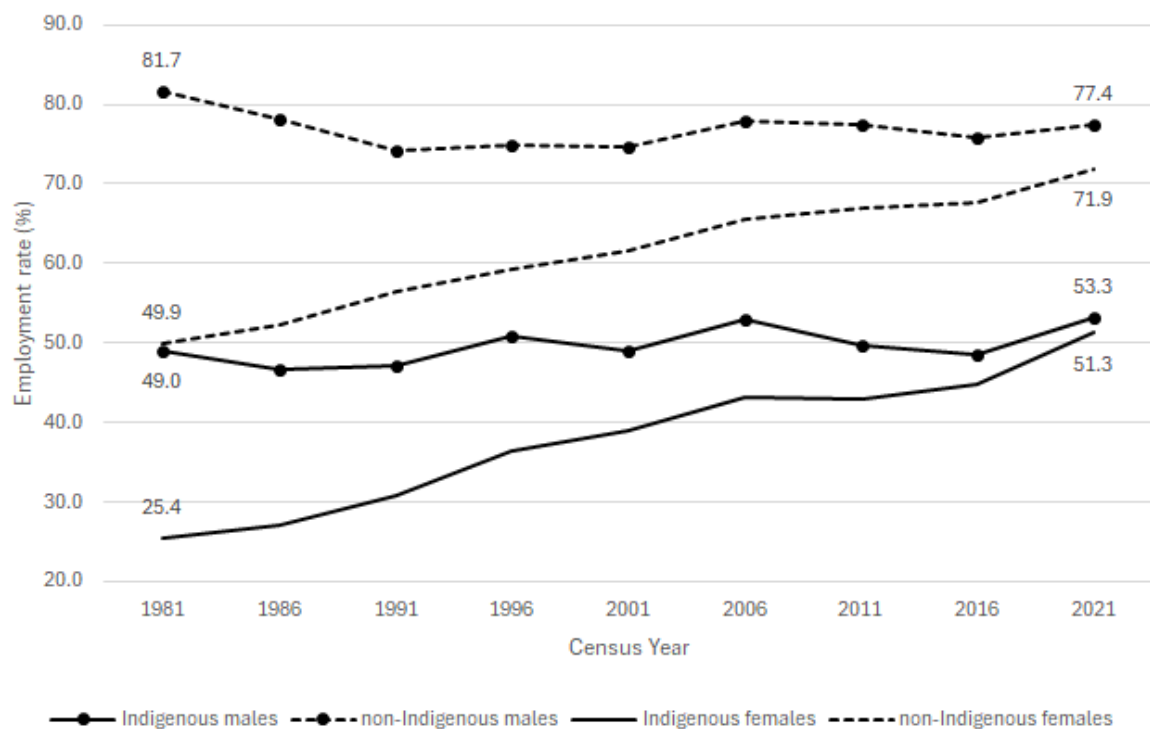
Figure 1 shows that though Indigenous and non-Indigenous employment rates are vastly different, they appear to be following similar trajectories across Census years. Building on this, the percentage point changes in employment rates between each Census are displayed in **Figure 2**. It demonstrates that Indigenous employment tends to increase during periods of employment growth and to decline (or have smaller increases) during periods of lower employment growth for the non-Indigenous population. It demonstrates that Indigenous employment is associated with the employment trends in the wider labour market. The substantive increase in the Indigenous employment rate between Census years 2016 and 2021 of 5.6 percentage points has resulted in Indigenous employment being highlighted as one of the few Closing the Gap targets on track (Productivity Commission, 2024). However, there has been no formal analysis to date that illustrates that this increase is indicative of sustainable gains specific to the Indigenous labour market, as opposed to the Indigenous employment rate following broader macroeconomic trends.

Figure 2. Intercensal change in the employment rate by Indigenous status, 15-64 years, 1981-2021.

Source: 1981, 1986, 1991, 1996, 2001, 2006, 2011, 2016 and 2021 Censuses.

4.2 Employment Trends by Sex

Figure 3 conditions Indigenous and non-Indigenous employment rates on sex (male or female as recorded in the Census). While **Figure 1** shows growth in employment for both the Indigenous and non-Indigenous cohorts across 1981-2021, **Figure 3** illustrates this is heavily influenced by the significantly increased employment rates of women. For the non-Indigenous population, despite an overall increase in employment (**Figure 1**), male employment has decreased by 4.3 percentage points, albeit from a considerably high base. For non-Indigenous women, the employment rate has increased 22.0 percentage points but is still below parity with male employment, with these trends similarly seen in many other OECD countries (Fluchtmann & Patrini, 2023). For Indigenous men, there has been an increase in the rate of employment, but this is modest at 4.3 percentage points over forty years. The employment rate of Indigenous women increased from 25.4 per cent to 51.3 per cent, an increase of 25.9 percentage points. The large increase in the employment rate for Indigenous women coupled with the much smaller increase in employment amongst Indigenous men means that by 2021 the rate of employment for Indigenous men and women are similar. Previous analyses of the Indigenous labour market have often identified Indigenous men as more likely to be in paid employment. However, it has failed to identify the broader trends within the Australian labour market that have had a significant impact on the employment outcomes of Indigenous women.

Figure 3. Employment rate by Indigenous status and sex, 15-64 years, 1981-2021 (%)

Source: 1981, 1986, 1991, 1996, 2001, 2006, 2011, 2016 and 2021 Censuses.

Given that the rate of employment of non-Indigenous men decreased over the period of 1981-2021, the overall increase in the employment rate of the non-Indigenous population is due to the increase in women's employment. For the Indigenous population, while both men and women have increased their rates of employment, much of the overall increase in Indigenous employment is due to the substantial growth in the employment rate of Indigenous women. The total Indigenous employment rate has increased by 15.3 percentage points across the period of 1981-2021. Were Indigenous men to have maintained the same rate of employment in 2021 as they did in 1981, the total Indigenous employment rate in 2021 would be 51.3% (0.9 percentage points lower). If Indigenous women were to have maintained the same rate of employment in 2021 as they did in 1981, the total Indigenous employment rate in 2021 would be 39.0% (13.2 percentage points lower). The increase in the employment rate of Indigenous women accounted for over 93% of the total increase in Indigenous employment over the period of 1981-2021. This is significant, as it highlights that shifts in Indigenous employment rates over this forty-year period are likely due to changes in the broader Australian labour market, rather than gains specific to the Indigenous labour market.

4.3 Education Changes

Another potential explanation for the narrowing of the employment gap between the Indigenous and non-Indigenous populations is the increase in educational attainment relative to the non-Indigenous population. There are challenges to obtaining comparable measures of educational attainment from 1981 to 2021 because there have been significant changes to the census questions on educational attainment. It is possible to compare changes in the rate of post-secondary educational attainment over this period.

The data on educational attainment in 1981 is drawn from the report of Committee of Review of Aboriginal Employment and Training Programs (1985). This reports data for the Indigenous population and the Australian population as a whole but not specifically for the non-Indigenous population. It also reports educational attainment for the population aged 15 years plus. Given the focus on identifying the trends in the changes in educational attainment over time as accurately as possible, educational attainment in 2021 is also reported for the Indigenous population and the Australian population as a whole and for the population aged 15 years plus. Post-secondary education is measured by the proportion with a diploma, the proportion with a bachelor's degree and the proportion with a higher degree or graduate diploma.

Table 1 shows that there were large increases in post-secondary educational attainment between 1981 and 2021 for the Australian population. For men, the proportion with a post-secondary qualification increased from 8.6 per cent in 1981 to 33.3 per cent in 2021 and for women, the increase was even bigger from 6.8 per cent in 1981 to 41.2 per cent in 2021. The proportion of Indigenous men with a post-secondary qualification increased from 0.6 per cent to 9.3 per cent and for Indigenous women, the increase was from 0.7 per cent to 18.0 per cent. Women have significantly outpaced men in post-secondary attainment over the period of 1981-2021, which likely contributes to the increasing employment rate of Indigenous and non-Indigenous women. The final row of **Table 1** reports the ratio of post-secondary educational attainment for Indigenous men and women in relation to the Australian population. In 1981 the ratio of post-secondary education for Indigenous men to Australian men as a whole was 0.064, and by 2021 this had increased to 0.279. For women, the ratio of Indigenous post-secondary education to Australian women as a whole was 0.096, and by 2021 had increased to 0.437. Thus, while a very large gap in the rates of post-secondary education between the Indigenous and the Australian population as a whole remains in 2021, between 1981 and 2021 the gap narrowed considerably.

Table 1. Post-secondary education by Indigenous status and sex, 15 years plus, 1981-2021 (%)

	Indigenous Population				Australian population			
	Male		Female		Male		Female	
	1981	2021	1981	2021	1981	2021	1981	2021
	%							
Higher Degree/ Graduate Diploma	>0.05	1.6	>0.05	2.8	1.5	8.6	0.9	10.1
Bachelor's degree	0.1	3.5	0.1	6.8	3.9	16.2	1.9	20.1
Diploma	0.4	4.2	0.5	8.4	3.2	8.5	4.0	11.0
Total with post-secondary qualification	0.6	9.3	0.7	18.0	8.6	33.3	6.8	41.2
Ratio of Indigenous to Australia as a whole	0.064	0.279	0.096	0.437				

Note: The data for 1981 are drawn from Committee of Review of Aboriginal Employment and Training Programs (1985). The 1981 Census captured less detailed information on education than in subsequent Censuses, hence post-secondary education rates are shown only. 'Population' is inclusive of Indigenous peoples. Population aged 15 years plus. To calculate the values of the total with post-secondary education and ratio, values of '>0.05' are presumed to be 0.05.

Source: 1981 and 2021 Censuses

The much faster rate of increase in post-secondary education for Indigenous women compared to Indigenous men appears to be a key reason for the strong growth in employment for Indigenous women as compared to Indigenous men. As demonstrated in **Table 2**, in 2021 the employment rate for Indigenous peoples with a post-secondary education is higher than that for non-Indigenous peoples with a post-secondary education, with Indigenous women represented in this cohort at twice the rate of Indigenous men.

Table 2. Employment Rate Post-secondary education and Indigenous status, 15 years plus, 1981-2021 (%)

	Indigenous Population		Australian Population	
	1981	2021	1981	2021
	%			
Higher Degree/ Graduate Diploma	82.4	80.9	84.6	79.4
Bachelor's degree	81.1	80.4	83.9	77.7
Diploma	74.4	71.9	75.1	68.9

Note: The data for 1981 are drawn from Committee of Review of Aboriginal Employment and Training Programs (1985), with the 2021 data presented as per the same specifications.

Source: 1981 and 2021 Censuses

4.4 Changes in employment rates by age group

There are differences in the extent to which the employment rate of different age groups changed over the period 1981 to 2021. **Table 3** reports employment rates for ten-year age groups in 1981 and 2021. For non-Indigenous men, all age groups experienced a decline in employment rates except for 55-64 years who had a small increase in employment rate. The decrease in employment rate is largest for those aged 15-24 years (9.3 percentage points) and decreases with age. For Indigenous men, there are modest increases in employment for the 15-24 years, 25-34 years, and 35-44 years age cohorts, with the largest increases seen in the older aged cohorts of 45-54 years (6.9 percentage points) and 55-64 years (13.2 percentage points). For both Indigenous and non-Indigenous women, there are substantial increases in the employment rate for all age cohorts, with the largest increases experienced by the older age groups. The larger increases in the employment rate for the older age groups are due to increases in the retirement age and longer life expectancy. Whilst the older demographics for Indigenous men see the most substantial increase in their employment, in 2021 there were over 170,000 Indigenous men included in the employment statistics within the 15-44 age range in 2021, compared to just over 65,000 in the 45-64 age range. This means that whilst the increased rate of employment for older Indigenous men is significant, it does not account for most of the overall increase in employment for Indigenous men.

Table 3. Employment rates by 10-year age group, sex, and Indigenous Status, 1981 and 2021 (%)

Age (years)					
	15-24	25-34	35-44	45-54	55-64
%					
Indigenous males					
1981	41.5	58	58.3	51.2	35.9
2021	43.5	60.5	59.4	58.1	49.1
Change	2.0	2.5	1.1	6.9	13.2
Indigenous females					
1981	25.9	27.6	27.2	23.2	12.6
2021	45	54.6	57.1	56.8	43.9
Change	19.1	27	29.9	33.6	31.3
non-Indigenous males					
1981	68.4	91.2	92.3	88.6	66.9
2021	59.1	84.8	87	83.7	69.7
Change	-9.3	-6.4	-5.3	-4.9	2.8
non-Indigenous females					
1981	56.1	51.6	57.6	50.2	24.4
2021	62.6	78.2	78	77.7	60.2
Change	6.5	26.6	20.4	27.5	35.8

Source: 1981 and 2021 Censuses

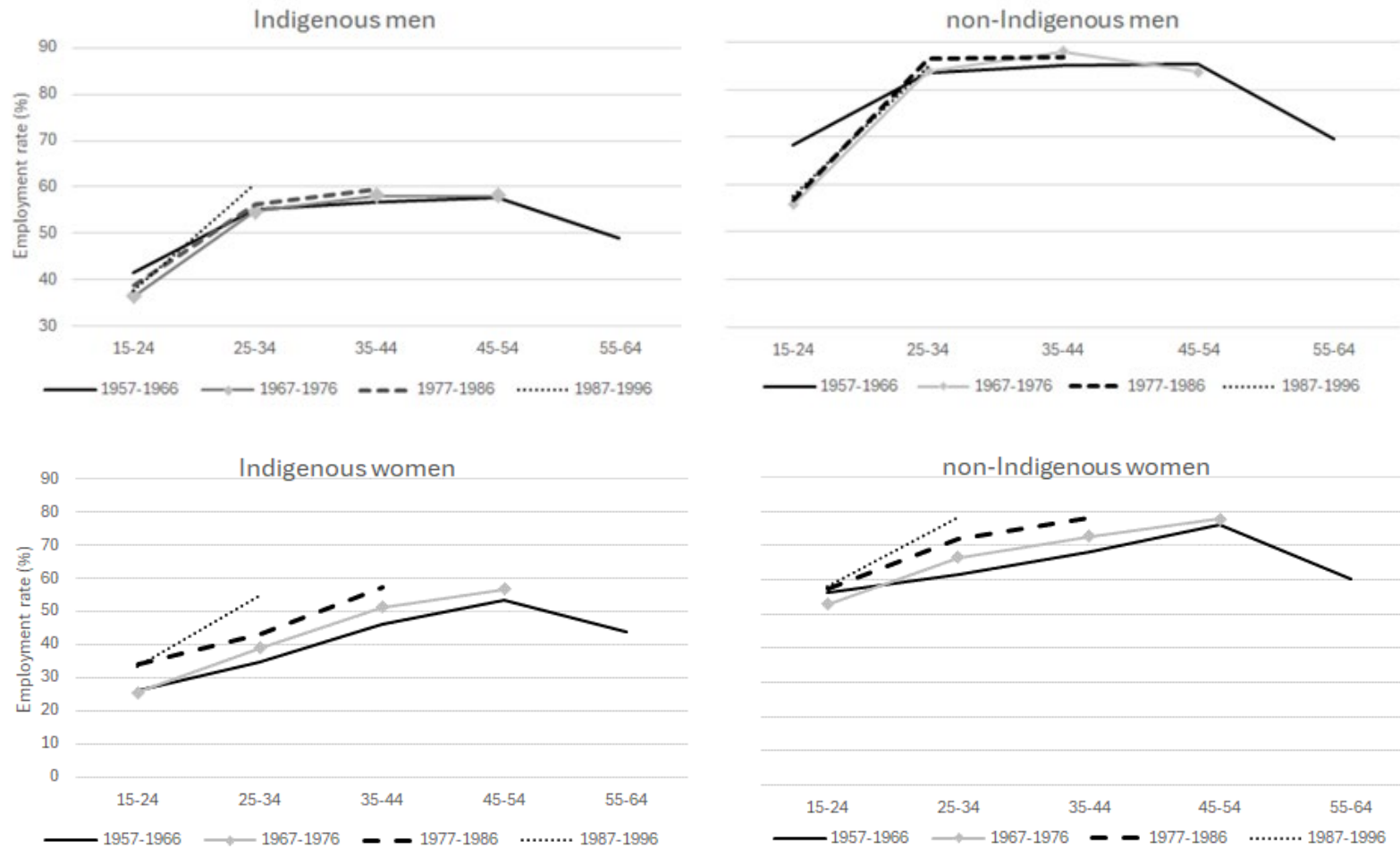
4.5 Cohort Analysis of Employment Rates

This section uses a synthetic cohort analysis to document in more detail how employment rates are changing for different birth cohorts. This analysis is useful for both understanding some of the drivers for Indigenous (and non-Indigenous) employment outcomes over time, how employment has changed for specific cohorts over their lifetimes and provides some insights into possible future changes in Indigenous employment.

The analysis is based on data from the 1981, 1991, 2001, 2011 and 2021 Censuses which are used to track labour market outcomes for ten-year birth cohorts. Thus, the unit of analysis is a 'cohort' which is uniquely identified in successive censuses by its sex, age, and Indigenous status. The birth cohorts used in the paper are people born in the following range of years: 1957-1966; 1967-1976; 1977-1986; and 1987-1996. In 2021 these birth cohorts were aged 55-64 years, 45-54 years, 35-44 years, and 25-34 years*. These cohorts are presented for Indigenous and non-Indigenous men and women in **Figure 4**.

The three cohorts of Indigenous men born between 1957 and 1986 have very similar age-employment trends, the main difference being that Indigenous men born between 1957-1966 had a higher employment rate when aged 15-24 years than the subsequent birth cohorts. The youngest cohort, those born in 1987-1996, have a higher employment rate aged 25-34 years than do the older birth cohorts. This means that the increases in employment rates for Indigenous men are largely being driven by increases in employment amongst younger Indigenous men and not increases by older birth cohorts. For non-Indigenous men, the employment rate at age 15-24 years were much higher for those born 1957-1966 with little difference in employment rate at this age for subsequent birth cohorts. There are relatively small differences in the age-employment profile from 25-34 years between the birth cohorts.

For Indigenous women, the age-employment profiles are quite different between the birth cohorts. The large increase in Indigenous women's employment since 1981 is being driven by the employment rate of each birth cohort being higher at any given age than the employment rate of the preceding birth cohort. The only exception is that there is no difference in the employment rate for Indigenous women born 1977-1986 and those born 1987-1996 at age 15-24 years. This analysis suggests that the employment rate of Indigenous women is likely to continue to increase in coming decades. For non-Indigenous women the pattern is similar with employment rates increasing for each birth cohort at age compared to the preceding birth cohort except for at age 15-24.

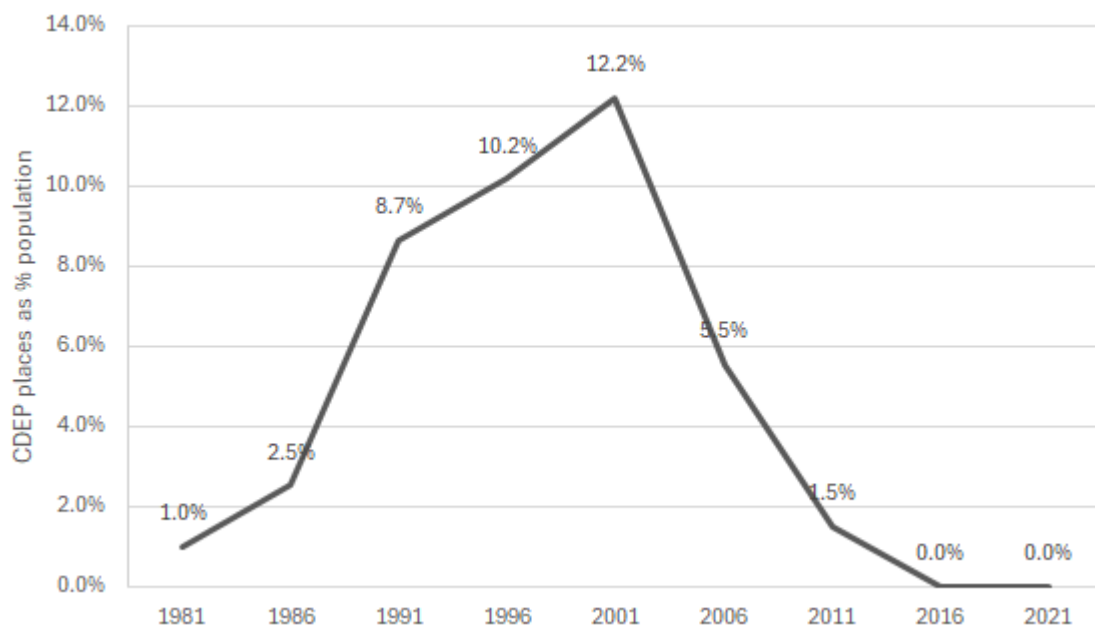
Figure 4. Age profile of employment rate by birth cohort, Indigenous status and sex (%)

Source: 1981, 1991, 2001, 2011, and 2021 Censuses

4.6 Considering CDEP

Given the significance of the CDEP scheme over multiple decades, it is important to understand the extent to which it may have contributed to Indigenous employment rates over the period of 1981-2021. This can be detailed by expressing the number of CDEP participants as a proportion of the Indigenous working population for each Census year. The proportion of the Indigenous population aged 15-64 years who were CDEP participants increased from 2.5 per cent in 1986 to 12.2 per cent in 2001 before falling to just 1.5 per cent in 2011 (**Figure 5**). The fall in Indigenous employment between 2006 and 2011 which was maintained through to 2016 (**Figure 1**) is due in part to the substantial reduction in the number of CDEP participants from 2006 through to its ceasing operation in 2015. However, the reduction in the CDEP scheme appears to be only a partial explanation given the impacts of the 2008 economic downturn (Global Financial Crisis) on the broader labour market.

Figure 5. CDEP participants as a proportion of the working-age population, 1981-2021 (%)



Source: 1981, 1986, 1991, 1996, 2001, 2006, 2011, 2016 and 2021 Censuses. CDEP program administrative data.

4.7 Employment Trends and Geographic Remoteness

Policymakers have struggled to develop effective Indigenous economic development and labour market policies and programs in remote areas. As detailed in section 2.2, the CDEP scheme was an important labour market program, generating employment opportunities primarily for Indigenous peoples in remote areas during the period of its operation (1977-2015). Given the demise of CDEP, it is important to understand the extent of the impact this has had, specifically on remote Indigenous employment.

Due to a lack of availability of comparable data on employment rates by geographic remoteness prior to 2006, the analysis of changes in employment rates by geographic remoteness is restricted to the period 2006 to 2021. The measure of geographic remoteness used is the Australian Standard Geographical Classification for Remoteness Areas (major city, inner regional, outer regional, remote and very remote).

Table 4 shows employment rates for the Indigenous and non-Indigenous populations by geographic remoteness in 2006, 2011, 2016 and 2021. As has been well established in the literature, the rate of Indigenous employment is highest in major cities, and trends increasingly lower as the geographic area becomes more remote. The opposite is true for the non-Indigenous population. To illustrate, in 2021 the employment rate for the Indigenous population was 58.1 per cent in major cities and 30.4 per cent in very remote, whereas for the non-Indigenous population, the employment rate was 74.4 per cent in major cities, and 86.1 per cent in very remote areas. Between 2006 and 2021 the Indigenous employment rate increased from 48.0 per cent to 52.2 per cent (**Figure 1**), but changes in employment rate are not consistent across geographic areas. Where most cohorts see variable increases in the employment rate across the period, the only cohorts to see a decrease in the employment rate were Indigenous remote (-3.9) and very remote (-16.8) populations. As depicted in **Figure 5**, CDEP participation peaked in 2001 before steadily declining through to its demise in 2015, indicating the concurrent drop in remote/very remote Indigenous employment is due to the demise of CDEP.

Table 4. Indigenous and non-Indigenous employment rates by geographic remoteness, 2006-2021, 15-64-year-olds (%)

	2006	2011	2016	2021	Change_2006 to 2021
	%				
	Major city				
non-Indigenous	72.2	72.4	71.8	74.4	2.2
Indigenous	51.8	52.3	54.1	58.1	6.3
	Inner regional				
non-Indigenous	69.2	70.5	70.7	74.6	5.4
Indigenous	45.9	45.9	47.2	54.8	8.9
	Outer regional				
non-Indigenous	71.6	72.4	72.3	76.3	4.7
Indigenous	45.5	42.8	43.5	50.9	5.4
	Remote				
non-Indigenous	78.2	79.7	79.3	82.4	4.2
Indigenous	45.6	42.3	39.9	41.7	-3.9
	Very remote				
non-Indigenous	83.4	82.6	85.3	86.1	2.8
Indigenous	47.2	39.4	30.8	30.4	-16.8

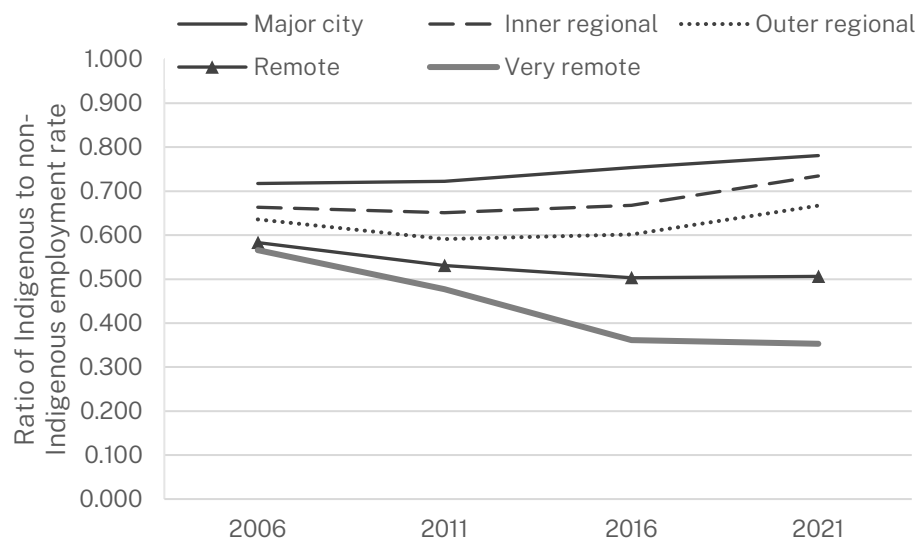
Note: Population aged 15-64 years.

Source: 2006, 2011, 2016 and 2021 Censuses.

Figure 6 shows the ratio of Indigenous to non-Indigenous employment by geographic remoteness over the period 2006 to 2021. This clearly shows some narrowing of the employment gap in major cities, inner regional and remote areas, and a substantial widening of the employment gap in remote and very remote areas. By 2021 the ratio of Indigenous to non-Indigenous employment was 0.506 in remote areas meaning that the Indigenous employment rate in these areas was half that of the non-Indigenous population and in very remote areas it was 0.353, just over one-third that of the non-Indigenous employment rate.

Although the Indigenous population is a higher proportion of the population in remote and very remote regions in comparison to other areas of Australia, most of the Indigenous population live in major cities and regional areas. This means that the employment story for remote Indigenous peoples is being masked by the national level employment statistics.

Figure 6. Ratio of Indigenous to non-Indigenous employment by geographic remoteness, 15-64 years, 2006-2021



Note: Population aged 15-64 years.

Source: 2006, 2011, 2016 and 2021 Censuses.

As described, the decrease in remote/very remote Indigenous employment is likely evident of the demise of CDEP. The explanation as to why non-Indigenous employment is at its highest in these areas where Indigenous employment is more nuanced. **Table A2** shows that the Indigenous unemployment rate (those not employed, but who are looking for work) remains relatively consistent across geographies, albeit slightly higher in remote/very remote areas. However, the proportion of Indigenous peoples not in the labour force (those not employed and not looking for and/or unable to work) is significantly high in remote (51%) and very remote (60.5%) locations. The reasons for this are nuanced, with Census data unable to provide detailed analysis (see Seet et al., 2018). For example, while the high proportion of those not in the labour force may be reflective of differing aspirations to work (and indeed, different classifications of what represents formal employment), inevitably it is difficult to be employed and fruitless to look for work if there are limited employment opportunities in the local labour market. Moreover, many Indigenous peoples in remote and very remote areas are living on Country and are far less likely to move than non-Indigenous populations to seek employment elsewhere given their connection to these locations. This may help explain why non-Indigenous peoples do not also maintain lower rates of employment in remote/very remote areas. This alongside other supply-side constraints to remote Indigenous labour market participation (e.g. education rates, health outcomes, housing stress, etc.) demonstrates that there are not just demand-side constraints (such as through the repeal of CDEP) in remote areas.

5. Discussion

This paper provides estimates of Indigenous employment in Australia over the four decades from 1981 to 2021. While the trends in employment for the Australian population are well understood, the longer-term trends in Indigenous employment specifically are not as well understood and are difficult to discern from the existing literature. This paper shows that there has been a substantial increase in Indigenous employment since 1981 (15.3 percentage points), about double that experienced by the non-Indigenous population (8.7 percentage points). Despite the vast differences in the rate of Indigenous and non-Indigenous employment in 1981, broad trends in employment gains and losses between Census years are relatively consistent between the Indigenous and non-Indigenous populations. This paper has shown that the increases in Indigenous employment have resulted primarily from strong increases in women's employment, with Indigenous men's employment only increasing marginally since 1981. The increase in women's employment may be partially attributable to the substantial increases in post-secondary educational attainment, which this paper shows has far outpaced that of men. In totality, these factors indicate that gains in the rate of Indigenous employment are more likely reflective of gendered macroeconomic trends, rather than factors specific to the Indigenous labour market.

A birth cohort analyses reveal that whilst for Indigenous and non-Indigenous women there are increasing rates of employment for more recent generations, this is not similarly reflected for Indigenous and non-Indigenous men. For non-Indigenous men, this is of less concern given the significantly high baseline of employment from which they started in 1981, but for Indigenous men, it paints a pessimistic picture for the prospects of a rapid increase in Indigenous men's employment.

The demise of CDEP resulted in a very big decline in Indigenous employment in very remote areas, and a smaller decline in remote areas. Despite a significant increase in Indigenous employment between 2016 to 2021, there is no evidence of an increase in Indigenous employment in remote and very areas. The repeal of CDEP has no doubt exacerbated demand-side labour market constraints in remote/very remote areas that subsequent labour market programs have aimed to address, but there may need to be more done to address supply-side factors given the high proportion of people outside of the labour force. This is not to ignore the majority of the Indigenous population that live in urban and regional areas, however there is evidently a need to generate enhanced labour market opportunities in remote areas to ensure equitable opportunity for economic development while recognising that the Indigenous labour market in remote areas may always have different levels, patterns and nature of employment which reflects different aspirations and economic constraints.

Whilst there have been significant gains in the overall rate of Indigenous employment over four decades, the fact that these can't be decoupled from broader macroeconomic trends does not reflect the outcomes that may have been aspired to through decades of specific policy focus. However, that is not to ignore the wider gains in Indigenous labour market experience over this period (i.e. the extent to

which individuals face discrimination in the workplace, earnings, seniority level, industry representation, etc.).

Finally, in collating the data, research, and policy information relevant to this analysis, it is worth highlighting that the vast majority of the data collection, design, and analysis surrounding Indigenous employment has stemmed from non-Indigenous-led institutions and non-Indigenous researchers. Coupled with criticism of the measurement approach of the National Agreement on Closing the Gap, this has led to calls for Indigenous-led data collection and analysis in line with principles of Indigenous data governance. Such an approach may see the return of a survey such as the NATSISS that contains detailed variables of Indigenous-defined relevance and importance. The Census maintains its critics for accurate enumeration not depiction of the Indigenous population (Williamson et al., 2021), yet it remains the most reliable resource for analysis of Indigenous employment. Whilst this paper can provide broad depictions of labour market outcomes for the Indigenous and non-Indigenous populations, a more dedicated data resource may provide richer analysis. Given the significant political focus on employment and the associations between employment and a multitude of socio-economic outcomes, the hyperfocus on Indigenous employment outcomes will continue. Without deliberative data collection, analysis, policymaking, and Indigenous community-level decision-making, this hyperfocus will continue to be pontification rather than progress.

Overall, the paper provides a consistent, and disaggregated view of Indigenous employment over an extensive period which covers significant shifts in the Australian labour market. Going forward, the research environment needs to be a broader focus that involves richer data sources, more textured analyses, and an increasing proportion of Indigenous researchers.

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Appendix Table A1. Employment Rate by Indigenous Status, Sex, and 10-Year Age Cohort, 1981-2021 (%)

Employment Rate (M)												
	15-24		25-34		35-44		45-54		55-64		15-64	
	Indigenous	Non	Indigenous	Non	Indigenous	Non	Indigenous	Non	Indigenous	Non	Indigenous	Non
1981	41.5	68.4	58.0	91.2	58.3	92.3	51.2	88.6	35.9	66.9	49.0	81.7
1986	35.9	62.4	55.7	88.0	58.7	90.1	54.4	86.0	37.4	59.4	46.7	78.0
1991	36.4	55.8	55.2	83.6	59.4	86.5	50.9	83.1	34.9	57.1	47.2	74.3
1996	40.8	58.1	58.0	83.9	60.5	85.6	54.8	82.3	34.3	55.3	50.8	74.8
2001	38.8	56.8	54.7	84.0	56.8	85.2	55.5	82.1	36.9	58.3	48.9	74.6
2006	42.9	60.7	59.0	87.1	60.1	88.0	60.8	85.4	45.0	65.2	53.0	77.8
2011	37.6	57.4	56.3	86.5	58.2	88.0	57.7	85.3	46.9	68.2	49.7	77.5
2016	37.1	54.1	55.6	84.7	55.8	86.8	55.2	83.7	46.4	68.2	48.5	75.9
2021	43.5	59.1	60.5	84.8	59.4	87.0	58.1	83.7	49.1	69.7	53.3	77.4
Employment Rate (F)												
	15-24		25-34		35-44		45-54		55-64		15-64	
	Indigenous	Non	Indigenous	Non	Indigenous	Non	Indigenous	Non	Indigenous	Non	Indigenous	Non
1981	25.9	56.1	27.6	51.6	27.2	57.6	23.2	50.2	12.6	24.4	25.4	49.9
1986	24.9	55.5	29.1	56.5	33.5	61.3	26.8	53.0	14.1	22.9	27.1	52.2
1991	25.5	52.9	34.8	61.4	40.8	67.3	32.5	60.8	12.5	26.0	30.9	56.3
1996	30.9	56.2	38.5	64.3	45.3	67.6	40.0	65.3	18.2	29.8	36.3	59.3
2001	34.1	57.1	39.0	66.5	46.1	68.2	45.3	69.1	23.3	37.3	38.9	61.5
2006	35.8	60.6	44.3	70.4	50.7	71.4	52.1	74.4	31.6	46.8	43.3	65.6
2011	33.4	57.9	43.2	71.9	51.3	72.6	53.5	76.0	36.9	53.4	43.0	67.0
2016	36.7	56.4	46.1	73.1	51.7	74.1	52.6	75.6	39.8	57.0	44.7	67.8
2021	45.0	62.6	54.6	78.2	57.1	78.0	56.8	77.7	43.9	60.2	51.3	71.9

Note: This table is produced to provide the exact data values that inform some of the Figures in text. It shows the employment rate at each Census year (1981-2021) for men and women of ten-year age cohorts, Indigenous and Non-Indigenous (Non).

Source: 1981, 1986, 1991, 1996, 2001, 2006, 2011, 2016, and 2021 Censuses

Appendix Table A2. Labour Force Status by Indigenous Status, Geography, 2021.

		Employed F/T	Employed P/T	Employed, away from work	Unemployed	Not in Labour Force
Major Cities	Non-Indigenous	46.2	22.3	6	3.8	21.7
	Indigenous	33.1	17.5	6.6	6.4	36.4
Inner Regional	Non-Indigenous	43.4	25.6	5.3	3.3	22.4
	Indigenous	29.5	19.6	5	6.6	39.3
Outer Regional	Non-Indigenous	46.8	24.1	5.1	3.3	20.8
	Indigenous	28.5	17.3	4.6	7.5	42
Remote	Non-Indigenous	55.7	20.7	5.9	2.3	15.6
	Indigenous	25	12.2	4.7	7	51
Very Remote	Non-Indigenous	62.7	16.4	6.8	1.9	12.3
	Indigenous	17	10.4	3.6	8.4	60.5

Note: Inclusive of those aged between 15-64.

Source: 2021 Census.

Appendix Table A3. Annotated Bibliography of Indigenous Employment Literature

See Supplementary Material.

ⁱ An early report was the 1976 Interdepartmental Working Paper on Aboriginal Employment which amongst other things recommended the establishment of the Community Development and Employment Program (CDEP). Other significant reports include the 1986 Aboriginal Employment Development Policy Statement and the 1985 report of the Committee of Review of Aboriginal Employment and Training Programs. [<https://www.voced.edu.au/content/ngv%3A32530>]

ⁱⁱ ‘The National Agreement on Closing the Gap’ is an agreement from Australian Federal, State/Territory and local governments, as well as Aboriginal Peak Organisations, to improve various socioeconomic and sociocultural outcomes of the Indigenous population.

ⁱⁱⁱ The supplementary material provides an annotated bibliography of the pre-existing academic literature on Indigenous employment in Australia. This contains over two hundred individual citations.

^{iv} The CDEP Scheme was replaced by the Remote Jobs and Community Program (RJCP) from 2013, which was then replaced by the Community Development Program (CDP) from 2015, which is now being replaced by the Remote Jobs and Economic Development (RJED) Program and the New Remote Employment Service (nRES) (NIAA, 2024).

^v The justification for this stems from CDEP participants being paid through community organisations, whereas CDP participants are paid directly from government. <https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/income-and-work/community-development-program-participation-cdpp>

^{vi} Combining administrative data with population data to discern changes in CDEP participation with respect to population statistics adds uncertainty about the estimates because of the changing rate of Indigenous identification in the population between censuses (ABS, 2023).

^{vii} For example, in the 1911 Census, there are records of Aboriginal women listed as being employed as ‘domestic servants’.

^{viii} Studies using Censuses prior to 1981 include Broom (1971), Tesfaghiorghis and Altman (1991), Junankar and Kapuscinski (1991) and Boreham et al., (1993).

^{ix} Historically, the Census has only allowed ‘Male’ or ‘Female’ categories, introducing ‘Non-Binary Sex’ as an option in 2021. Data quality issues prevent the ABS from reporting this category, with amendments to the 2026 Census aimed at resolving this. <https://www.abs.gov.au/articles/analysis-non-binary-sex-responses#:~:text=the%202021%20Census.-,2021%20Census%20results,0.17%25%20of%20the%20Australian%20population.>

^x Ages in 2021 are approximate because exact year of birth will depend upon timing of birthday relative to the Census data.