Centre for Aboriginal Economic Policy Research

The relative labour force status of indigenous people, 1986–96: a cohort analysis

B. Hunter and M.C. Gray

No. 164/1998

**Discussion Paper** 

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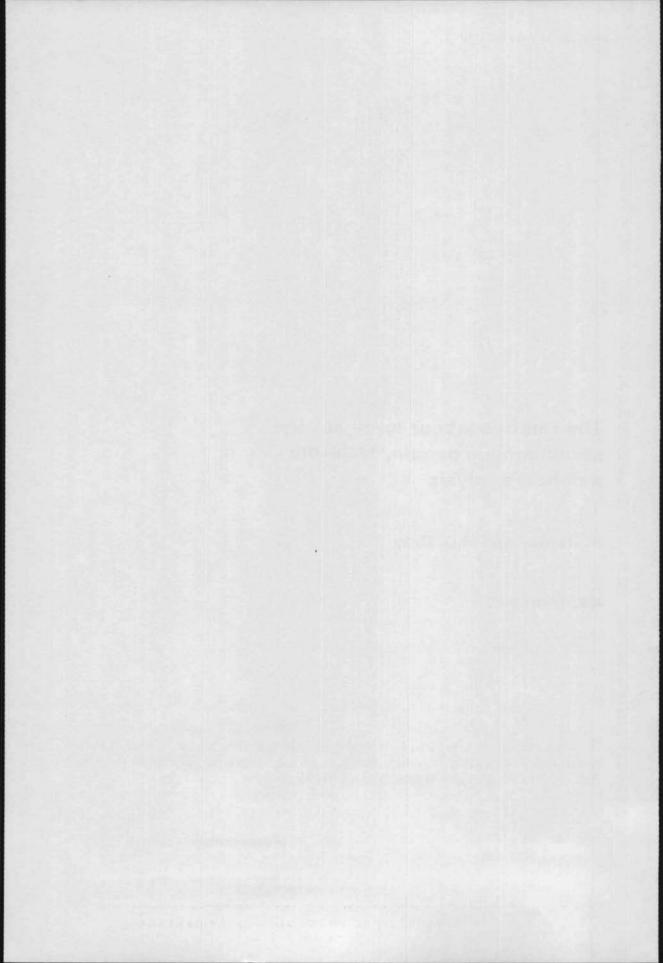
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The availability of the initial labour force estimates for the 1996 Census allows us to take stock of the long-run changes in the Australian workforce. For the Aboriginal and Torres Strait Islander population, the census estimates represent the only reliable yardstick for progress, or lack of progress, in improving employment outcomes. This paper presents cohort analysis of changes in labour force status over the last three censuses for the indigenous and non-indigenous populations.

# Changes in employment, 1986-96

- The raw employment statistics imply that indigenous employment improved in both absolute and relative terms. The indigenous male employment/population ratio for the working-age population increased by 5.6 percentage points between 1986 and 1996, in contrast to the non-indigenous male ratio which fell by 4.0 percentage points. The indigenous female ratio for the working-age population increased by 9.8 percentage points between 1986 and 1996, in contrast to the non-indigenous female ratio, which increased by 5.7 percentage points.
- For every indigenous cohort, the lifecycle changes in the employment/population ratio exhibit a larger increase, or smaller decrease, than for the equivalent non-indigenous cohort.
- When Community Development Employment Projects (CDEP) scheme employment is excluded there appears to be a worsening of the employment/population ratio for the total indigenous male population. The male indigenous employment ratio also worsened relative to the nonindigenous ratio. For indigenous females there remains an absolute increase in the employment ratio, and there remains an improvement relative to the female non-indigenous population.
- The fall in the non-CDEP employment/population ratio for indigenous males and females aged 15 to 24 years is of particular concern given the increases in educational participation of this group.
- In principle, it would also be desirable to exclude labour market programs which could be considered as employment. Unfortunately, reliable data on the age breakdown of labour market programs for 1986 are not available and thus no adjustments are made for the effects of labour market programs in the cohort analysis. However, it is worth reflecting upon the effect of such programs at the time of the 1996 Census. First, the majority of labour market program places go to young workers. Second, indigenous people are up to five times more likely to be in labour market programs than non-indigenous people. Third, for both the indigenous and non-indigenous populations, for all age groups, males are more likely to be in labour market programs than females. Given the substantial variation in distribution of such programs across the lifecycle and between indigenous and non-indigenous Australians,

- the fall in the non-CDEP employment/population ratio for indigenous persons aged 15 to 24 years is even more of a problem than previously indicated.
- In line with trends for the non-indigenous population, the indigenous participation rate has fallen for males and increased for females. The low indigenous participation rate in every age group, combined with the low levels of employment, provides evidence that there is a net discouraged worker effect operating on indigenous workers. The process by which indigenous people are discouraged from participating in the labour force is even observed for the youngest cohort. This is particularly troubling for policy makers since participation appears to be constrained even before indigenous people have had the opportunity to enter the workforce.
- For indigenous males aged 15 to 44, the proportion of the population working full time decreased between 1986 and 1996. Similarly, for non-indigenous males aged 15 to 64, the proportion of the population employed full time fell substantially. However, for the cohort aged 15 to 44, there was a major larger fall in the proportion of those employed who were working full time. For indigenous and non-indigenous females, with the exception of 15 to 24 year-olds, there were increases in the proportion of the population employed full time.
- In general, the macro trends in the non-indigenous workforce since 1986 are reflected in indigenous employment and unemployment. The major exception to this rule is in the public sector where indigenous workers have increased their share in employment, despite a significant winding back of employment among government and statutory employers. Since the public sector is now the only part of the economy in which indigenous people are employed in the same proportions as other Australians, a further curtailment in this sector will inevitably have an adverse impact on indigenous employment outcomes.
- There is some weak evidence of a relative improvement in the number of self-employed among the indigenous population between 1991 and 1996. The ratio of self-employment rates among the indigenous and non-indigenous workforce increased from 0.26 to 0.31 in the last inter-censal period. This relative improvement in self-employment rates among those in the labour force builds on the low historical numbers with this ratio being only 0.15 in 1986.

# The international context for indigenous labour force status

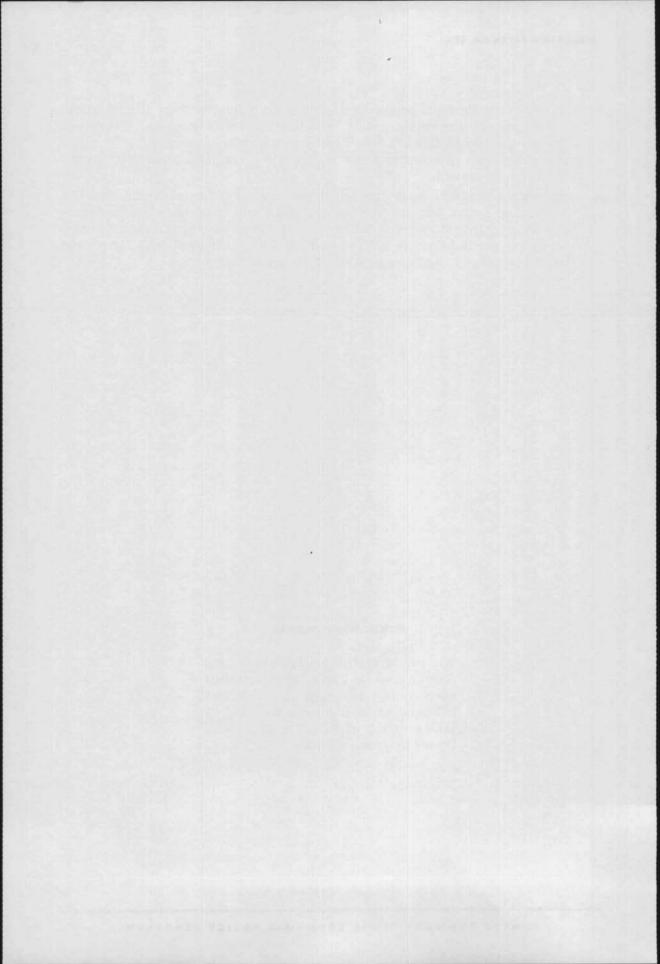
The employment/population rates for indigenous peoples in the United States, Canada and Australia show that indigenous people have poor employment prospects in what are indisputably different labour market conditions.

 In the more deregulated systems of the United States and Canada there are groups of indigenous people who have lower employment rates than the Australian indigenous population. For example, Indians on reservations are about five percentage points less likely to be employed than their Australian counterparts.

- Not only are indigenous people less likely to be employed than other citizens but they are, on the whole, much more likely to be unemployed if they are active in the labour market. The high unemployment combined with a low participation rate provides evidence of a net discouraged worker effect in the indigenous population.
- Indigenous Australians have markedly lower rates of self-employment than the New Zealand Maori, but are only slightly less likely to be self-employed than Canadian Indians off reserves. The self-employment rate for Canada's Indian reservation population was 2.2 per cent in 1990 compared to 2.7 per cent among Australia's indigenous workers at the analogous census.

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### Introduction

The availability of the initial labour force estimates for the 1996 Census allows us to take stock of the long-run changes in the Australian workforce. For minorities such as the Aboriginal and Torres Strait Islander population, census estimates still represent the only yardstick for measuring progress, or lack of progress, in improving employment outcomes. This paper presents comparison of changes in labour force status over the last three censuses for the indigenous and non-indigenous populations. The trends in the level and type of employment presented for both populations permit a direct comparison of indigenous-specific factors in employment with macroeconomic trends affecting the whole economy since 1986.

The validity of inter-censal comparisons of indigenous labour force status depend in part upon who identified as indigenous in the 1996 Census, but did not in previous censuses. Hunter (1998) has shown that it is possible to dismiss bogus identification or 'census vandals' as a major factor underlying the large non-biological increases in the indigenous population. The apparent lack of compositional change in the indigenous population identified in that paper mean that census data can be taken at face value and that inter-censal comparisons of employment rates are valid.<sup>2</sup>

While indigenous and non-indigenous employment rates are reasonably accurate, employment levels need to be corrected to account for the non-biological changes in the indigenous population. Taylor and Bell (1998) have shown that the recent large nominal increase in indigenous employment is probably illusory. After correcting for non-biological changes in the population and accounting for government programs which could be recorded as employment in the censuses, the indigenous employment rate actually fell. This paper avoids the need to adjust the level of employment for changes in the population base by focusing on employment rates. Notwithstanding, an attempt is made to account for important indigenous-specific institutional factors such as the Community Development Employment Projects (CDEP) scheme and Department of Employment, Education, Training and Youth Affairs (DEETYA) labour market programs that may be coded as employment in the censuses.<sup>3</sup>

One way of analysing the structure of Australian labour force status is to study the changes in the characteristics of cohorts of individuals between 1986 and 1996. A cohort is defined as having a fixed membership of individuals which can be easily identified in successive censuses (for example, males and females who were born in a particular year). Verbeek and Nijman (1992) show that synthetic cohorts of people in various age categories can be treated as individual observations when the size of each cohort is quite large, effectively 100 or 200 in practice. The construction of cohorts with members that are distinct from one another and internally homogenous will enhance precision of the analysis.

The major advantage of this approach is that it can be considered to create a panel of both indigenous and non-indigenous populations. Given that there is almost no useable longitudinal data for the indigenous population, this represents a great advance on previous analysis. It will now be theoretically possible to utilise the panel techniques, which permit the analyst some rudimentary controls for the effect of compositional changes in the indigenous population or the unobservable characteristics of respective populations. The following analysis is part of a larger research agenda to construct the first longitudinal data set of Australia's indigenous and non-indigenous population. As a prelude to future analysis, this paper provides detailed descriptive statistics of ten-year age groups or cohorts.

The main aim of this paper is to provide an up-to-date description of the structure of indigenous employment vis-à-vis the Australian labour market. It refines the focus of Taylor and Bell (1998) by examining separate age and sex groups in the 1986, 1991 and 1996 Censuses and broadens the scope of the analysis to incorporate an analysis of all labour force states of both indigenous and non-indigenous Australians. The changes in the type of employment for respective cohorts of males and females are also analysed by examining the number of hours usually worked per week and whether employment is in the public or private sector. After the recent trends in indigenous self-employment are summarised, the labour force status of indigenous Australians is placed in an international context, with comparisons being made to the New Zealand Maori, United States (US) Indians and Canada's aboriginal population. The paper concludes with some remarks on the implications of the analysis for policy makers.

# Changes in labour force status

The 1986, 1991 and 1996 Censuses are cross-sectional data sets which, in principle, include the entire Australian population. However, they can be treated as panel data by grouping individuals into cohorts, and treating the averages within these cohorts as individual observations which vary over time. These cohorts are defined such that each individual is a member of only one cohort, which is the same for all time periods. In this paper cohorts are defined on the basis of year of birth and sex. We define cohorts by ten-year age groups starting with those 5 to 14 years old in 1986. The use of a pre-adult group facilitates the analysis of how these youth enter the workforce.

# **Employment**

While the overall indigenous employment rate improved between 1986 and 1996 (Taylor and Bell 1998), there is no up-to-date analysis of the changes for different age groups. Table 1 presents the employment/population ratios for tenyear age groups by gender as well as for the entire population.

While indigenous labour market disadvantage is significant, at a superficial level indigenous employment is improving relative to other Australians. The raw employment statistics imply that indigenous employment improved in both

absolute and relative terms. The indigenous male employment/population ratio for the working-age population increased by 5.6 percentage points between 1986 and 1996, in contrast to the non-indigenous male ratio which fell by 4.0 percentage points. The indigenous female employment/population ratio for the working-age population increased by 9.8 percentage points between 1986 and 1996, in contrast to the non-indigenous female ratio, which increased by 5.7 percentage points.

Table 1. Employment (per cent) by age cohort, 1986-96

	Indiger	nous	Non-ind	igenous	
Age at 1986 Census	1986	1996	1986	1996	
Males	Hawld:	1 - 57 - 61 -	ten mine An	Production of	
5 to 14 years old	NA	39.1	NA	55.6	
15 to 24 years old	34.5	56.9	60.1	82.9	
25 to 34 years old	52.8	59.4	87.1	84.6	
35 to 44 years old	54.7	53.9	89.3	81.3	
45 to 54 years old	48.0	34.0	85.1	54.4	
55 to 64 years old	30.4	7.5	58.4	11.8	
65 plus years old	5.3	5.3	8.8	3.5	
Overall (15 plus years old)	42.2	47.8	68.6	64.6	
Females					
5 to 14 years old	NA	30.0	NA	54.4	
15 to 24 years old	23.6	37.7	53.6	63.0	
25 to 34 years old	27.6	44.1	55.0	66.3	
35 to 44 years old	30.6	39.1	59.7	64.2	
45 to 54 years old	22.9	17.5	51.3	28.6	
55 to 64 years old	10.8	3.3	21.6	4.6	
65 plus years old	1.7	2.9	2.7	1.0	
Overall (15 plus years old)	23.9	33.7	42.9	48.6	

Note: NA denotes that labour force status was not applicable for people aged less than 15.

Source: Unpublished cross-tabulations of census data.

As an example of the interpretation of cohort analysis in Table 1, consider indigenous males aged 25 to 34 in 1986. The employment/population ratio of this group was 52.8 per cent in 1986. By 1996, the employment/population ratio of this group, who was then aged 35 to 44 years, had increased to 59.4 per cent. This cohort can also be compared to people who were 25 to 34 years old in 1996. The relevant employment ratio for such people, aged 15 to 24 years in 1986, was 56.9. That is, employment for indigenous males in this prime-aged section of the workforce increased by 4.1 per cent to 56.9 per cent between 1986 and 1996. In this way, we can analyse the age structure of employment as well as how groups of individuals enter and leave the workforce.

For every indigenous cohort, the lifecycle changes in the employment/population ratio exhibit a larger increase, or smaller decrease, than for the equivalent non-indigenous cohort. This difference is greatest for males and

females aged over 45 who showed much smaller percentage decreases in the employment/population ratios than did the non-indigenous population.

The results for other ten-year age groups reveal that indigenous employment increased, both in absolute terms and relative to non-indigenous population, for males and females. An obvious explanation for such increases is the rise of the CDEP scheme employment between 1986 to 1996 (Taylor and Bell 1998).

## **Non-CDEP** employment

This section presents estimates of non-CDEP employment/population ratios for the indigenous population (Table 2). Since CDEP employment programs are available only for indigenous Australians the employment/population ratios of non-indigenous Australians is unchanged, but falls for indigenous Australians.

Table 2. Indigenous non-CDEP scheme employment (per cent) by age cohort, 1986-96

	Ma	les	Females	
Age in 1986	1986	1996	1986	1996
5 to 14 years old	NA	27.3	NA	22.7
15 to 24 years old	32.1	43.0	22.1	30.4
25 to 34 years old	49.3	47.6	25.7	38.0
35 to 44 years old	51.2	43.0	28.7	33.5
45 to 54 years old	44.7	24.4	21.3	14.9
55 to 64 years old	27.9	7.5	10.1	3.3
65 plus years old	5.3	5.3	1.7	2.9
Overall (15 plus years old)	39.3	36.2	22.3	27.6

Notes: NA denotes that labour force status was not applicable for people aged less than 15. CDEP scheme employment was calculated using the age distributions of CDEP workers from NATSIS and the total number of CDEP employed estimated in Taylor (1993) and Taylor and Bell (1998).

Sources: Taylor (1993), Taylor and Bell (1998) and unpublished cross-tabulations of NATSIS and census data.

As Taylor and Bell (1998) have noted, when CDEP scheme employment is excluded there appears to be a worsening of the employment/population ratio for the total indigenous male population. The indigenous male employment ratio also worsened relative to the non-indigenous ratio. For indigenous females, there remains an absolute increase in the employment ratio, and also an improvement relative to the female non-indigenous population.

This overall worsening, for indigenous males, of the non-CDEP employment/population ratio is true for all the age cohorts from 15 to 64 years of age. For the 65 plus cohort, both the indigenous and non-indigenous populations show an improvement in the employment/population ratio. Table 2 also shows that the improvements in the indigenous employment/population ratio relative to the non-indigenous population disappears for all age groups, except the 65 plus age group. The 45 to 54 year-old cohort is particularly affected by the exclusion of

CDEP employment, with the ratio of indigenous to non-indigenous employment falling from 52.5 in 1986 to 44.8 in 1996.

For indigenous females, there remain absolute improvements in the employment/population ratio in all age cohorts. However, the position relative to the non-indigenous population is more mixed. It must be of great concern that in relation to females aged 15 to 24 years the indigenous population has lost ground relative to the non-indigenous population. On the other hand, there remain substantial relative improvements for all the female cohorts aged over 35 years.

The fall in the non-CDEP employment/population ratio for indigenous males and females aged 15 to 24 years is of particular concern given the increases in educational participation of this group (Hunter and Schwab 1998). Part of the explanation may be that a higher proportion of young indigenous people live in rural areas than do non-indigenous young people and that there are poor labour market opportunities for anyone living in rural areas. This may be compounded by the lower rate of migration from rural areas to cities for young indigenous Australians, especially if they may be less likely to migrate in response to poor labour market opportunities than are young non-indigenous Australians (Taylor and Bell 1996).

## Labour market programs and employment

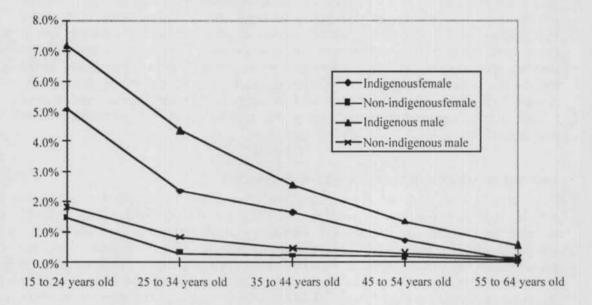
In principle, it would also be desirable to exclude labour market programs which could be considered as employment (Taylor and Bell 1998). Unfortunately, reliable data on the age breakdown of labour market programs for 1986 are not available and so no adjustments are made for the effects of labour market programs in the cohort analysis. However, it is worth reflecting upon the effect of excluding labour market programs that may have been coded as employment in the censuses using disaggregated DEETYA data compiled at the time of the 1996 Census.<sup>7</sup>

Figure 1 shows the proportion of each age group in labour market programs which may be classified as employment for 1996. There are several points in regard to this which are important for the analysis. First, the majority of labour market programs are provided to young workers. Second, indigenous people are up to five times more likely to be in labour market programs than non-indigenous people. Third, for both the indigenous and non-indigenous populations, for all age groups, males are more likely to be in labour market programs than females.

Given the substantial variation in distribution of such programs across the lifecycle and between indigenous and non-indigenous Australians, any attempt to correct for such programs will have a significant impact on the above analysis. The introduction of the Labor government's *Working Nation* initiatives in 1994 is likely to be a major factor underlying the increase in the use of such programs between 1991 and 1996 (Taylor and Hunter 1996). If the number of such programs were much less significant in 1986, as seems likely, then employment among indigenous youth would have been overstated in the last census. This

effect would be particularly pronounced for young indigenous males whose 1996 employment/population ratio would be reduced by as much as 7 per cent, or 5 percentage points more than for non-indigenous male youth. Therefore, the fall in the non-CDEP employment/population ratio for indigenous people aged between 15 to 24 years, identified in the previous section, is even more of a problem than is indicated by the raw data in Tables 1 and 2.

Figure 1. Proportion of each age group in labour market programs which may be classified as employment, 6 August 1996



Notes: The labour market programs includes placements in DEETYA programs A20, A30, A31, F12, F13, G20, H15, H42, H43, N20, N21, N42, N43, O11, S11, U13, W40, W41, W42, W43. The numbers excludes 139 CDEP participants in employment placements and brokered programs.

Source: Unpublished cross-tabulations of census data and labour market program data from DEETYA data base.

# Labour force participation rate

In line with trends for the non-indigenous population, the indigenous participation rate has fallen for males and increased for females. Table 3 shows that between 1986 and 1996 the indigenous male participation rate fell from 66 per cent to 63.5 per cent, at the same time the non-indigenous rate fell from 75.2 per cent to 71.5 per cent. In contrast, the indigenous female participation rate increased from 36.3 per cent to 42.3 per cent and the non-indigenous female rate rose from 47.5 per cent to 53.0 per cent.

Comparing ten-year age groups, the indigenous male participation rate declined between 1986 and 1996 for all age groups except those aged 55 to 64 years, which showed a slight increase. For indigenous females, there has been a slight decline in the participation rate for 15 to 24 year-olds and an increase for all other age groups. This pattern is very similar to that exhibited by the non-indigenous population.

Table 3. Labour force participation (per cent) by age cohort, 1986-96

	Indige	nous	Non-indigenous	
Age at 1986 Census	1986	1996	1986	1996
Males				
5 to 14 years old	NA	58.4	NA	66.9
15 to 24 years old	63.9	75.7	71.5	91.7
25 to 34 years old	79.3	73.7	94.8	91.3
35 to 44 years old	75.1	64.2	94.6	87.3
45 to 54 years old	64.4	40.9	90.2	60.8
55 to 64 years old	40.7	8.9	63.5	12.2
65 plus years old	8.3	6.8	9.1	3.7
Overall (15 plus years old)	66.0	63.5	75.2	71.5
Females				
5 to 14 years old	NA	42.7	NA	63.3
15 to 24 years old	43.2	46.3	63.6	68.4
25 to 34 years old	38.5	51.6	60.4	70.9
35 to 44 years old	39.3	45.1	63.9	68.2
45 to 54 years old	29.3	20.0	54.3	30.5
55 to 64 years old	13.7	3.9	22.6	4.7
65 plus years old	3.3	3.9	2.9	1.1
Overall (15 plus years old)	36.3	42.3	47.5	53.0

Note: NA denotes that labour force status was not applicable for people aged less than 15.

Source: Unpublished cross-tabulations of census data.

Table 3 also illustrates changes in labour market participation over the lifecycle. If indigenous people do survive to old age, they are more likely to be participating in the labour market. This is probably explained by higher mortality rates selectively affecting the less educated people in the indigenous population. In contrast, early mortality appears to be less selective among the non-indigenous population.

The low indigenous labour force participation rate in every age group combined with the low levels of indigenous employment provides evidence that there is a net discouraged worker effect in operation. The process by which indigenous people are discouraged from participating in the labour force is observed even for the youngest cohort. That is, the indigenous cohort who commenced their working lives between 1986 and 1996 are much less likely to participate than non-indigenous counterparts. For example, only 42.7 per cent of indigenous females aged 5 to 14 in 1986 participated in the workforce, more than 20 percentage points lower than the analogous non-indigenous cohort. It is

probably not a coincidence that non-CDEP scheme employment for this indigenous cohort is more than 20 percentage lower than the comparable non-indigenous female cohort. This is particularly troubling for policy makers, since participation appears to be constrained even before indigenous people have had the opportunity to enter the workforce. However, given the wide range of supply and demand factors that potentially influence the participation rate, a detailed analysis of the discouraged worker effect must be left for future research.

## Unemployment

While unemployment statistics are implicit in the preceding tables, it is worthwhile reflecting upon the unemployment rate for various cohorts. The unemployment rate is defined here as the proportion of the active labour force who are unemployed. The unemployment rate of indigenous males is between two and three times as high as the rate of non-indigenous males (Appendix Table B1). For younger workers there has been a substantial fall in the unemployment rate of both males and females. For indigenous females aged 15 to 24, the unemployment rate in 1986 was 19.6 per cent which had fallen to 12.7 per cent by 1996. This can be contrasted to non-indigenous females aged 15 to 24 whose unemployment rate fell from 10.0 per cent to 8.9 per cent in 1996.

The low employment and participation rates, combined with the high unemployment rates, is suggestive of there being a large number of indigenous Australians who would like to have a job but feel that it is hopeless searching for one. Such people, who are not actively looking for work, are therefore not counted as participating in the labour market and can be considered as the 'hidden' unemployed.

The age structure of the indigenous unemployed may be affected by the increasing numbers of people staying on at school. It is therefore important to look at changes in labour force status in conjunction with the corresponding changes in educational status. This issue is particularly pronounced when one compares different cohorts, given the large change in propensity to stay at school is concentrated in the younger age groups (Hunter and Schwab 1998). While there has been a substantial increase in school retention rates between 1986 and 1996, the changes were more or less proportional for both indigenous and nonindigenous youth.8 It does not appear that the increases in educational participation of indigenous Australians aged between 15 and 19 years can explain the substantial relative falls in the unemployment rate for indigenous Australians. A more likely explanation lies in the large increases in CDEP scheme employment among indigenous youth (Appendix Table B2). Further evidence for this conclusion rests in the fact that there are general falls in the indigenous unemployment rate, especially among males, which are not observed in nonindigenous cohorts.

Recent labour force survey results show the high rate of unemployment and labour market participation among people attending educational institutions (ABS 1998). If, as seems likely, this observation is true for both the indigenous and

non-indigenous populations, then the large differences in the retention rates between these groups will not have a large effect on either unemployment rates or participation rates. That is, the fact that fewer indigenous youth attend school or tertiary institutes will not qualitatively affect the reported results because most youth are involved in the labour market irrespective of the educational opportunities available to them.

# Type of employment

This section of the paper analyses the types of employment indigenous Australians have in comparison with the non-indigenous population. The areas studied are: the number of hours worked, whether employment is in the private of public sector, and the extent of self-employment.

#### Number of hours worked

For both indigenous and non-indigenous males and females, the share of employment which is part-time has increased over the period 1986 to 1996. Table 4 shows that for indigenous males the proportion of people working who worked 15 hours or less increased from 6.4 per cent in 1986 to 9.8 per cent in 1996. Similarly, for indigenous females, the proportion who worked 15 hours or less increased from 13.6 per cent in 1986 to 18.4 per cent in 1996. This pattern is similar to that found in the non-indigenous population, but is more pronounced for indigenous females than it is for non-indigenous females.

Table 4. Distribution of number of hours worked (per cent) for employed Australians aged over age 15, 1986–96

	Indigenous			Nor	n-indigen	ous
	1986	1991	1996	1986	1991	1996
Males						
15 hours or less	6.4	7.9	9.8	3.5	5.0	6.2
16 - 34 hours	9.5	18.5	21.0	5.7	7.4	9.2
35 - 40 hours	64.1	53.4	47.0	53.2	47.6	40.5
41 hours and over	19.9	20.1	22.3	37.6	40.0	44.5
Female						
15 hours or less	13.6	16.5	18.4	15.0	17.5	17.
16 - 34 hours	21.2	26.9	29.9	21.9	24.1	26.9
35 - 40 hours	56.0	47.4	41.8	47.8	42.1	36.5
41 hours and over	9.1	9.2	9.9	15.2	16.3	18.9

Notes: Workers who were on leave from their employment or did not state how many hours they worked in the week before the census were excluded from the calculations. That is, they are assumed to have worked in the various categories of hours worked in the same proportion as those who did answer the question. Also, the 1996 Census results are based on the main job held last week, while 1986 and 1991 results are based on all jobs held last week.

Source: Unpublished cross-tabulations of census data.

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The increase in the proportion working part-time from 1991 to 1996 probably understates the true increase because the census question in 1996 restricted hours worked to the main job, rather than all jobs worked in the last week as was the case for the 1991 census.

The stronger trend towards part-time work for the indigenous population than for the non-indigenous population can, at least in part, be accounted for by increased CDEP employment which, with the exception of a few administrative and managerial jobs, is largely part-time work with people working for their dole equivalents.<sup>9</sup>

The influence of CDEP on the structure of the number of hours worked is less for females, who have substantially lower participation in the scheme than their male counterparts (see Appendix Table B2). This suggests that there may have been market driven increases in indigenous female part-time employment relative to indigenous male employment.

There has also been an increase in the proportion of workers working more than 40 hours per week. The proportion working more than 40 hours a week in 1996 is probably an understatement, as the census question in 1996 restricted hours worked to the main job, rather than all jobs worked in the last week.

Table 5. Full-time employment (per cent) by age cohort, 1986-96

	Indigenous		Non-ind	igenous
Age at 1986 Census	1986	1996	1986	1996
Male				
5 to 14 years old	NA	22.2	NA	38.4
15 to 24 years old	27.0	38.2	51.6	73.0
25 to 34 years old	43.8	42.6	80.1	75.6
35 to 44 years old	44.5	39.3	82.8	72.4
45 to 54 years old	38.6	22.2	78.4	44.1
55 to 64 years old	23.5	4.7	51.4	7.2
65 plus years old	2.9	2.9	5.8	2.0
Overall (15 plus years old)	33.9	31.6	61.9	54.5
Female				
5 to 14 years old	NA	14.2	NA	28.1
15 to 24 years old	16.0	19.1	39.7	39.2
25 to 34 years old	16.5	22.3	34.8	34.6
35 to 44 years old	17.7	21.1	33.0	36.8
45 to 54 years old	13.0	8.3	30.5	14.6
55 to 64 years old	6.2	1.7	12.7	2.0
65 plus years old	0.8	1.3	1.5	0.5
Overall (15 plus years old)	14.8	16.9	27.1	27.0

Notes: NA indicates that labour force status was not applicable for people under 15 years old. The proportion of employed who work full-time is estimated by dividing the number of people working 35 hours or more in the week before the census by the total population in each age group. Given that there is no information for those employed who did not answer the question consistently, including those who indicated they worked no hours (presumably because they were on leave), these respondents are distributed proportionately across the hours categories.

Source: Unpublished cross-tabulations of census data.

Table 5 shows that the proportion of the population working full-time (35 or more hours a week) as a percentage of the population in that age group. The major advantage of focusing on full-time employment is that almost all CDEP jobs are part-time and, consequently, there are no CDEP-related distortions affecting the changes in employment identified. For all indigenous males aged between 15 and 44, the proportion of the population working full-time decreased between 1986 and 1996. The proportion of the male indigenous population aged 65 years plus employed full time increased between 1986 and 1996.

Similarly, for non-indigenous males aged 15 to 64, the proportion of the population employed full-time fell substantially while at the same time the employment/population ratio fell. However, for the cohort aged between 15 and 44, there was a major larger fall in the proportion of those employed who were working full-time. For indigenous and non-indigenous females, with the exception of the 15 to 24 year-olds, there were increases in the proportion of the population employed full time.

## Sector of employment

The winding back of the public sector in recent years may have had a disproportionate effect on the indigenous population (Taylor and Hunter 1997). Table 6 shows private sector employment by ten-year age groups. <sup>10</sup> For indigenous males there has been an increase in private sector employment of 2.3 per cent as compared to an increase of 3.3 per cent for non-indigenous males. A similar pattern holds for females, where indigenous females had a growth rate of 4.9 per cent as compared to non-indigenous females who had a private sector growth rate of 7.2 per cent.

The age breakdown of private sector employment reveals some disturbing patterns. The faster growth rate of private sector employment for non-indigenous males is much more pronounced for the age group 25 to 34 years, where non-indigenous male private sector employment grew 7.9 per cent between 1986 and 1996 as compared to a growth rate of just 1.3 per cent for indigenous males. For males aged between 45 and 54, the growth rate of private sector employment was greater for indigenous than non-indigenous males.

The involvement in private sector employment of indigenous females aged between 15 and 34 lagged well behind that of their non-indigenous counterparts. For non-indigenous females aged between 15 and 24, the growth rate was 7.9 per cent; and for the group aged 25 to 34 years, it was 11.9 per cent. This can be compared with the indigenous population who had uniform growth rates of 4.3 per cent for all females aged between 15 and 34.

Older indigenous males achieved better results than non-indigenous males in terms of the growth rate of private sector employment. For indigenous males aged between 45 and 54, private sector employment grew at 3.4 per cent as compared to non-indigenous males whose growth rate was only 2.5 per cent. For workers over 65 years of age non-indigenous male private sector employment

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grew faster than that of non-indigenous males (3.1 per cent compared to 0.8 per cent).

For females older than age 45, the rate of growth of private sector employment was much lower for indigenous females than it is for non-indigenous females. Indigenous females aged 35 to 44 had a slightly faster growth rate of employment in the private sector than did non-indigenous females.

Table 6. Private sector employment (per cent) by age cohort, 1986-96

	Indige	enous	Non-indigenous	
Age at Census	1986	1996	1986	1996
Male	D. STATE OF THE ST			
5 to 14 years old	NA	22.7	NA	50.9
15 to 24 years old	21.0	30.2	48.0	69.4
25 to 34 years old	28.9	31.1	61.5	67.4
35 to 44 years old	29.3	28.8	64.4	64.9
45 to 54 years old	25.4	17.9	62.4	45.7
55 to 64 years old	14.6	4.6	41.9	11.6
65 plus years old	3.8	3.0	8.5	3.8
Overall (15 plus years old)	23.7	26.0	50.6	53.9
Female				
5 to 14 years old	NA	17.5	NA	48.8
15 to 24 years old	13.2	18.1	40.9	49.5
25 to 34 years old	13.8	22.0	37.6	50.1
35 to 44 years old	16.0	20.1	44.4	49.3
45 to 54 years old	11.6	9.0	38.3	23.2
55 to 64 years old	5.5	1.8	16.6	4.6
65 plus years old	1.2	1.6	2.8	1.1
Overall (15 plus years old)	12.6	17.5	31.7	38.9

Notes: NA indicates that labour force status was not applicable for people under 15 years of age.

Those who indicated that they were employed but not the sector they worked in were distributed across private and public sector employment.

Source: Unpublished cross-tabulations of census data.

The flip side of the discussion on private sector employment is public sector employment. Table 7 shows the proportion of each cohort employed in the public sector; where the public sector is defined to include only non-CDEP employment. There has been a slight increase in the proportion of indigenous females employed in the non-CDEP public sector from 9.7 per cent to 10.1, against a decrease of non-indigenous females in this sector from 11.2 per cent to 9.7 per cent. For indigenous males, there has been a decrease in non-CDEP public sector employment from 15.6 per cent to 10.2 per cent. The changes for non-indigenous males are very similar with employment in the public sector falling from 18.0 per cent to 10.7 per cent.

The age cohort breakdown for both 1986 and 1996 indicates that the proportion of indigenous males employed in the non-CDEP public sector is quite similar to the proportion of non-indigenous males employed in this sector. For

females the age cohort breakdown reveals similar patterns for the indigenous and the non-indigenous populations.

Table 7. Public sector non-CDEP employment (per cent) by age cohort, 1986-96

	Indige	enous	Non-indigenous	
Age at 1986 Census	1986	1996	1986	1996
Male				
5 to 14 years old	NA	4.6	NA	4.7
15 to 24 years old	11.1	12.8	12.1	13.5
25 to 34 years old	20.4	16.5	25.6	17.2
35 to 44 years old	21.9	14.2	24.9	16.4
45 to 54 years old	19.3	6.5	22.7	8.7
55 to 64 years old	13.3	2.9	16.5	0.2
65 plus years old	1.5	2.3	0.3	0.0
Overall (15 plus years old)	15.6	10.2	18.0	10.7
Female				
5 to 14 years old	NA	5.2	NA	5.6
15 to 24 years old	8.9	12.3	12.7	13.5
25 to 34 years old	11.9	16.0	17.4	16.2
35 to 44 years old	12.7	13.4	15.3	14.9
45 to 54 years old	9.7	5.9	13.0	5.4
55 to 64 years old	4.5	1.5	5.0	0.0
65 plus years old	0.5	1.3	0.0	0.0
Overall (15 plus years old)	9.7	10.1	11.2	9.7

Notes: NA indicates that labour force status was not applicable for people under 15 years old. The numbers in this table are calculated by subtracting the private sector employment (Table 6) from the non-CDEP employment documented in Table 2 (for indigenous population) and Table 1 (for non-indigenous population). If the estimated numbers were slightly less than zero, as occurred for several of the non-indigenous cohorts aged over 65 years, the number was set to zero.

Source: Unpublished cross-tabulations of census data.

It is worth noting that between 1986 and 1996 a higher proportion of indigenous males and females aged over 65 were employed in the public sector than non-indigenous population of the same age. This, however, is a relatively minor phenomena as only a very small proportion of the indigenous population aged over 65 are employed in the public sector.

The similarities in the patterns of employment patterns in the public sector of the indigenous and the non-indigenous populations is not surprising given the strong non-discriminatory employment policies of the public sector. However, it does raise some serious concerns for the indigenous population which has a larger share of employment in the public sector than does the non-indigenous population (Taylor and Hunter 1997).

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## **Self-employment**

Taylor (1993) showed that while indigenous self-employment remains low, when compared to other Australians it grew relatively quickly between 1986 and 1991. The raw census data shows that the relative improvement continued to 1996. Unfortunately, the changes to the census question in the last inter-censal period have made it difficult to estimate the recent changes in self-employment by reducing the numbers of self-employed for both the indigenous and non-indigenous population. <sup>11</sup>

There is some weak evidence of a relative improvement in the number of self-employed among the indigenous employed, with an increase in the number of indigenous self-employed relative to other self-employed. The ratio of selfemployment rates among the indigenous and non-indigenous workforce increased from 0.26 to 0.31 in the last inter-censal period. This relative improvement in selfemployment rates among those in the labour force builds on the low historical numbers, with this ratio being only 0.15 in 1986. 12 While changes in the census question between 1991 and 1996 mean that it is difficult, if not impossible, to compare changes in the self-employment rates, the resulting distortions should affect the indigenous or non-indigenous populations more or less equally. That is, the relative improvement in indigenous self-employment provides some evidence that there has been ongoing improvements even after distortions introduced by the 1996 Census are taken into account. Unfortunately, this result will be difficult to confirm until future research applies sophisticated econometric techniques to the problem. Notwithstanding some possible improvements, the small size of the self-employed population mean that it still plays a minor role in promoting economic development among the entire indigenous population.

# The international context for indigenous labour force status

What are the employment prospects for indigenous Australians in the light of the experience of overseas labour markets? A cursory international comparison of indigenous outcomes in several developed economies shows that one should not be too sanguine about the prospects for improvement under a less regulated labour market environment (Table 8). The employment/population rates for indigenous peoples in the US, Canada and Australia show that indigenous people have poor employment prospects in what are indisputably different labour market conditions. In both of the more deregulated systems of the US and Canada there are groups of indigenous people who have lower employment rates than the Australian indigenous population. For example, Indians on reservations are about five percentage points less likely to be employed.

Table 8. International comparisons of indigenous labour force status, 1990-91

	Unemployment rate	Employment/ population ratio	Labour force participation rate
Australia			
Aboriginal and Torres Strait Islanders	30.84	37.10	53.50
	(2.66)	(0.67)	(0.85)
Canada			
Aboriginal (total)	19.40	51.83	64.30
	(1.94)	(0.85)	(0.94)
Registered Indians on-reservation	31.00	32.29	46.8
	(3.10)	(0.53)	(0.69)
Registered Indians off-reservation	25.10	42.92	57.3
	(2.51)	(0.43)	(0.84)
New Zealand			
All Maoris	24.70	45.70	60.70
	(2.84)	(0.78)	(0.95)
United States			
All Indians	7.90	47.20	55.10
	(2.31)	(0.89)	(0.97)
Registered Indians on-reservation	25.60	33.55	45.10
	(4.11)	(0.63)	(0.79)

Note: Ratio of indigenous/non-indigenous outcomes are reported in brackets.

Sources: Australia (Daly 1995, Table 1.3); US (Sandefur and Liebler 1996: 199); Canada (Department of Indian Affairs and Northern Development 1995); New Zealand (Statistics New Zealand 1991, 1996; Ministry of Maori Development 1998).

The relative employment disadvantage of the indigenous populations in all three countries emphasises the fact that decentralised labour markets do not necessarily alleviate this disadvantage. All the indigenous populations have substantially lower employment/population ratios than their non-indigenous counterparts. Indeed, the Australian indigenous population is relatively well situated, in terms of employment, with the exception of Indians outside reservations in the US. However, given that the proportions of US Indians in 1990 with a bachelor degree or higher (9.4 per cent) is similar to that of non-indigenous Australians, some of that relative advantage must be due to the more favourable bargaining position of highly educated and skilled workers. Another factor complicating this rather naive international analysis of the labour market position of indigenous people is institutionally-specific factors like the CDEP scheme.

Notwithstanding the intrinsic difficulties of making international comparisons, it is clear that indigenous people experience significant disadvantage in labour markets throughout the world. Not only are they less likely to be employed than other citizens, but they are, on the whole, much more likely to be unemployed if they are active in the labour market. <sup>14</sup> The net effect on the indigenous participation rate is that it tends to be much lower than for other citizens in these developed countries. High unemployment combined with a low

participation rate provides evidence that indigenous people experience a net discouraged worker effect. While this provides a useful avenue for future research on changes in labour market status, it will not be pursued in detail in the present paper which focuses on the structure of employment.

While Table 8 is useful in illustrating the relative disadvantage of indigenous people, it contains no information about changes in labour force status. As Taylor and Bell (1998) illustrate, institutional changes within one country make intercensal comparisons fundamentally difficult. International comparisons of changes over time are almost impossible because complex country-specific institutional factors change frequently. A more productive research strategy would be to focus on Australian outcomes and using non-indigenous labour force status as a benchmark against which any trends can be judged.

International comparisons based on the early 1990s also confirm the low self-employment rates among Australia's indigenous population. Indigenous Australians have markedly lower rates of self-employment than the Maori of New Zealand, but are only slightly less likely to be self-employed than Canadian Indians on reserves. The self-employment rate for Canada's Indian reservation population was 2.2 per cent in 1990 compared to 2.7 per cent among Australia's indigenous workers at the analogous census. The Maori were almost twice as likely as Aborigines and Torres Strait Islanders to be employers or self-employed in 1991 with 7.4 per cent of the labour force running some type of business.

# Conclusion

The overall increase in the level of indigenous employment is largely an artefact of the increasing number of people who are willing to identify as indigenous in the census (Taylor and Bell 1998). In addition to the effect of non-biological increases of the indigenous population, indigenous employment increased mainly through the rise of the CDEP scheme and employment-based labour market programs. This paper shows that after one accounts for the increases in CDEP scheme employment between 1986 and 1996, indigenous employment in many age groups either stagnated or fell. These relatively poor employment outcomes highlight the continuing marginal status of the indigenous labour force.

The fall in non-CDEP scheme employment among younger indigenous cohorts is particularly problematic. This decline in employment occurred despite increases in educational participation which presumably improved the labour market competitiveness of indigenous youth. The significant increases in educational attainment of indigenous youth relative to other groups, both indigenous and non-indigenous, means that one would expect these cohorts to be performing particularly well (Hunter 1998). The failure of indigenous youth to catch up to the non-indigenous youth employment in any meaningful sense is an indication that they continue to operate in different segments of the labour market. The problems for indigenous youth are also reflected in relatively poor outcomes in full-time and private sector employment in both 1986 and 1996.

The on-going dependence on public employment among the indigenous population highlights the fragility of apparent growth in employment. Unfortunately, the convergence in indigenous public sector (excluding CDEP scheme) employment to the non-indigenous norms owes more to decline of public employment among the non-indigenous rather than real improvement in indigenous employment. Given the non-discriminatory employment policies of the public sector, any further reductions in government expenditure and consequently public employment are likely to bite into indigenous employment.

Running a business, or otherwise being self-employed, is one avenue for economic advancement for the indigenous population. However, employing oneself or others is a complex process for which there are many pitfalls. In an increasingly competitive marketplace where globalisation and instantaneous information processing have increased the mobility of consumers and producers alike, indigenous businesses have to be very sophisticated to compete. Not only do they need to manage financial risk, but fluctuating markets require a truly 'worldly' outlook with adequate access to collateral and social networks.

The low levels of educational attainment, the limited access to capital and locational disadvantage of many indigenous Australians means that the complexities of running a business make self-employment a risky strategy (Bates 1997). In any case, self-employment would only provide an escape from welfare dependency for a small section of the indigenous population. Even if the proportion in self-employment increased to the incidence in the non-indigenous population, this would only increase the proportion employed by a few percentage points.

The structural impediments to improving indigenous employment mean that there are no easy solutions to the problem. Given education is clearly a major factor limiting indigenous employment, it is clearly of concern that the better educated younger indigenous cohorts are not faring much better, in terms of labour force outcomes, than the older indigenous population. Part of the explanation lies in the fact that the relative improvements in indigenous educational attainment are not enough to counteract other structural problems. For example, the fact that indigenous people operate in distinctly regionalised labour markets produces, in itself, quite different employment outcomes from other Australians (ABS/CAEPR 1996). In addition, the ongoing high levels of arrest among indigenous youth and associated social problems are factors limiting improvements in education and employment (Hunter and Borland 1997; Hunter and Schwab 1998). While the results of this paper cannot provide much direct insight into policies for improving indigenous employment, it documents the scope of the employment deficit and identifies potential problems among indigenous youth as an important area requiring policy-makers attention.

## Notes

- Apart from census statistics, the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) is the only reliable source of data on indigenous employment.
- 2. Nonetheless, the employment rates reported do not tell us what happened to the employment status of the original population. In order to motivate the inter-censal comparisons, we need to assume that the experience of people who identified as indigenous for the first time in the last census is the same, at least in terms of employment, as those who identified in 1986 and 1991. One advantage of the panel of cohorts constructed in this paper is that it facilitates the use of sophisticated statistical techniques which can control for the effects of time-specific factors such as the change in indigenous identification. These techniques will be used in future analysis of changes in indigenous employment.
- 3. Under the CDEP scheme, indigenous communities get a grant similar to their collective Newstart entitlement to undertake community development work. The benefit recipients are then expected to work part-time for their entitlements. Historically the CDEP scheme was available on a one-in-all-in basis for each community. The current policy, which evolved gradually in the mid-1990s, means that when the CDEP scheme is provided in a community, the unemployed have the choice as to whether or not they participate in the scheme.
- 4. The analysis could be made more sophisticated by using an error-in-variable estimator for the formal statistical analysis (see Deaton 1985). However, the gains from adopting such a technical methodology are small since the cohorts sizes are much larger than that which make such an estimator worthwhile (Verbeek and Nijman 1992).
- 5. If the cohorts are of different sizes then this will require each observation be weighted by the square root of the cohort size. Given the attrition problem with panel data this may effectively mean that a repeated cross-section approach may not yield inferior results to genuine panel data. With respect to indigenous data the lack of any panel data means that there is no effective choice.
- As with any longitudinal analysis, extreme care needs to be exercised in comparing data whose definitions may change over time. Appendix A details how the census data was organised to ensure that inter-temporal comparisons are valid.
- The 1996 Census was conducted on 6 August 1996. The total numbers of such programs for indigenous males and females were 4,271 and 2,870. The analogous numbers for non-indigenous population were 43,366 and 26,122, respectively.
- While the relative situation between indigenous and non-indigenous Australians improved marginally for all ages (except 18 year-old females), the absolute difference in the percentages at school increased for all age groups over age 15 (Hunter and Schwab 1998).

- Strictly speaking, people only work for the dole equivalent at the community level.
  There may be some variation in the number of hours worked by individuals in the
  community. However, NATSIS data confirm that the proportion of full-time CDEP
  employment is small.
- 10. In the 1986 and 1991 Censuses there was a substantial mis-coding of CDEP scheme employment as private sector employment (Altman and Taylor 1995). Altman and Taylor (1995) estimate, using information on industry and private sector categories, that 3,916 and 8,122 in 1986 and 1991 respectively were in CDEP scheme employment which was mis-classified as private sector employment. The 1996 numbers are likely to be less affected by the coding errors because 12,300 CDEP scheme employees were separately identified from private sector employment. Unfortunately, this distinction was only made in the remote areas. Another reason to expect the mis-classification problems to be less of an issue in the last census is that the industry classifications were updated between 1991 and 1996.
- 11. There are two reasons for the decline in self-employment between 1991 and 1996. First, the 1996 Census question specified whether a person worked in a limited liability company thus discouraging people who were uncertain of their company status from answering the question. Second, 136,000 overseas visitors were excluded from the 1996 calculations of labour force status. However, given that only 0.08 and 0.2 per cent of the non-indigenous self-employed in 1991 and 1996 were overseas visitors the major change in Australian self-employed arises from the way in which the question was asked.
- 12. See Miller (1985) for further comments on the low level of self-employment before 1986.
- The proportions with a bachelor degree reported are based on the US Indian population aged 25 years and over (Department of Commerce 1993).
- 14. The only exception to this observation is Canadian Indians on reservations whose unemployment rate was 0.16 per cent higher.

# Appendix A. Comparisons of census data on labour force status, 1986-96

The valid comparison of census data across time requires that attention is paid to both the question asked and the coding of the information received. Tables A1 to A3 detail the relevant changes for labour force status, the number of hours worked and industry sector of employment between 1986 and 1996.

Table A1. Labour force status in the last three censuses

1986	1991	1996
Categories		
<ul> <li>Wage or salary earner</li> <li>Self employed</li> <li>Employer</li> <li>Unpaid helper</li> <li>Unemployed (looking f/t work)</li> <li>Unemployed (looking p/t work)</li> <li>Not in labour force aged 15+</li> <li>Not stated</li> <li>Not applicable</li> <li>Total</li> </ul>	<ul> <li>Employed - wage or salary earner</li> <li>Employed - self employed</li> <li>Employed - employer</li> <li>Employed - unpaid helper</li> <li>Unemployed - looking for full-time work</li> <li>Unemployed - looking for part-time work</li> <li>Not in the labour force aged 15+</li> <li>Not stated</li> <li>Not applicable</li> <li>Total .</li> </ul>	<ul> <li>Employee</li> <li>Employer</li> <li>Own account worker</li> <li>Contributing family worker</li> <li>Unemployed look full-time work</li> <li>Unemployed look part-time work</li> <li>Not in the labour force</li> <li>Not stated</li> <li>Not applicable</li> <li>Total</li> </ul>

Changes to census questions and coding

- · Question on labour force status between 1986 and 1991 are identical.
- · Overseas visitors were excluded from labour force status population in 1996.
- The way the self employment question was asked changed between 1991 and 1996.
   The 1996 Census question specified whether a person worked in a limited liability company thus causing people who were uncertain of their company status not to answer the question.

Table A2. Number of hours worked in the last three censuses

1986	1991	1996
Categories		
• None	None	• None
• 1-15	• 1-15	• 1 - 15 hours
• 16-24	• 16-24	• 16 - 24 hours
• 25-34	• 25-34	<ul> <li>25 - 34 hours</li> </ul>
• 35-39	• 35-39	• 35 - 39 hours
• 40	• 40	• 40 hours
• 41-48	• 41-48	• 41 - 48 hours
49 or more	• 49 or more	<ul> <li>49 or more hours</li> </ul>
Not stated	Not stated	Not stated
<ul> <li>Not applicable</li> </ul>	Not applicable	<ul> <li>Not applicable</li> </ul>
Total	Total	Total

Changes to census questions and coding

- 1986 and 1991 question relates to main job whereas 1996 refers to the number of hours worked in all jobs held.
- · The none category refers to people who were employed but did not work last week.
- The coding in 1986 and 1991 categorised all people who were not employed in the not applicable category. The 1996 coding also explicitly includes people who did not state their labour force status and persons under 15 years in this category.

Table A3. Industry sector in the last three censuses

1986	1991	1996	
Categories			
Australian government  State government	<ul> <li>Commonwealth government</li> </ul>	Commonwealth     Government	
<ul> <li>Local government</li> <li>Private sector</li> <li>Not stated</li> <li>Not applicable</li> <li>Total</li> </ul>	<ul> <li>State/Territory government</li> </ul>	• State/Territory Government	
	<ul> <li>Local government</li> </ul>	<ul> <li>Local Government</li> </ul>	
	Private sector	Private sector	
	Not stated	• CDEP	
	Not applicable	Not stated	
	Total	Not applicable	
		Total	
SS 0. 10	2 2		

Changes to census questions and coding

- · The industry sector question relates to main job in all censuses.
- The coding in 1986 and 1991 categorised all people who were not employed in the not applicable category. The 1996 coding also explicitly includes people who did not state their labour force status and persons under 15 years in this category.
- CDEP scheme category added in 1996 Census only for the Special Indigenous Form (also known as the remote area form). Therefore information on CDEP is only available in remote areas.

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# Appendix B. Unemployment and CDEP scheme employment

Table B1. Unemployment rate (per cent) by age cohort, 1986-96

	Indigenous		Non-indigenous	
Age at 1986 Census	1986	1996	1986	1996
Males				TILE
5 to 14 years old	NA	19.3	NA	11.3
15 to 24 years old	29.4	18.8	11.4	8.8
25 to 34 years old	26.5	14.3	7.7	6.7
35 to 44 years old	20.4	10.3	5.3	6
45 to 54 years old	16.4	6.9	5.1	6.4
55 to 64 years old	10.3	1.4	5.1	0.4
65 plus years old	3	1.5	0.3	0.2
Overall (15 plus years old)	23.8	15.7	6.6	6.9
Females				
5 to 14 years old	NA	12.7	NA	8.9
15 to 24 years old	19.6	8.6	10	5.4
25 to 34 years old	10.9	7.5	5.4	4.6
35 to 44 years old	8.7	6	4.2	4
45 to 54 years old	6.4	2.5	3	1.9
55 to 64 years old	2.9	0.6	1	0.1
65 plus years old	1.6	1	0.2	0.1
Overall (15 plus years old)	12.4	8.6	4.6	4.4

Note: NA denotes that labour force status was not applicable for people aged less than 15.

Source: Unpublished cross-tabulations of census data.

Table B2. CDEP scheme employment (per cent) by age cohort, 1986-96

	Indigenous		
Age at 1986 Census	1986	1996	
Males		bearing out that and a	
5 to 14 years old	NA	11.8	
15 to 24 years old	2.4	13.8	
25 to 34 years old	3.6	11.8	
35 to 44 years old	3.5	11.0	
45 to 54 years old	3.3	9.6	
55 to 64 years old	2.5	0.0	
65 plus years old	0.0	0.0	
Overall (15 plus years old)	2.9	11.6	
Females			
5 to 14 years old	NA	7.3	
15 to 24 years old	1.5	7.3	
25 to 34 years old	2.0	6.1	
35 to 44 years old	1.8	5.6	
45 to 54 years old	1.6	2.7	
55 to 64 years old	0.7	0.0	
65 plus years old	0.0	0.0	
Overall (15 plus years old)	1.5	6.1	

Note: NA denotes that labour force status was not applicable for people aged less than 15. The age profiles of CDEP scheme employment are estimated using 1994 NATSIS data.

Source: Unpublished cross-tabulations of census data; NATSIS unit record data.

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