

**The future of Indigenous work:
Forecasts of labour force status to 2011**

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Abbreviations and acronyms

ABS	Australian Bureau of Statistics
AGPS	Australian Government Publishing Service
ANU	The Australian National University
ATSIC	Aboriginal and Torres Strait Islander Commission
CAEPR	Centre for Aboriginal Economic Policy Research
CDEP	Community Development Employment Project
CPI	Consumer Price Index
DEWR	Department of Employment and Workplace Relations
DFACS	Department of Family and Community Services
DSS	Department of Social Security
GDP	Gross Domestic Product
IEP	Indigenous Employment Policy
NATSIS	National Aboriginal and Torres Strait Islander Survey

Abstract

The recent release of the final results for the 2001 Census presents an opportunity to assess the net change in employment outcomes for Indigenous Australians for the period covering the first two Howard administrations. This paper uses demographic techniques to make valid comparisons over time, and hence facilitate estimates of future employment levels against projected population growth. The 2001 Census data reveal no improvement in the overall position of Indigenous people in the labour market since 1996. Because of a growing Indigenous working-age population, new estimates of future job growth point to a lowering of employment rates and rising unemployment over the remainder of this decade. Overall, the current fiscal cost of this failure to eradicate Indigenous employment disparity is massive—in 2001 it was estimated to be around 0.5 per cent of Australian Gross Domestic Product (GDP). Findings from this new analysis indicate that the cost will be even higher in the future.

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Introduction

In 1997, The Aboriginal and Torres Strait Islander Commission (ATSIC) commissioned a report from the Centre for Aboriginal Economic Policy Research (CAEPR) titled *The Job Ahead* (Taylor & Altman 1997). This report estimated the costs to government of Indigenous employment disparity and provided a measure of the number of future additional jobs required to reduce the gap in labour force status. The projections of the working-age population were based on 1991 Census data, while estimates of employment trends covered the period from the 1986 Census to the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) (Australian Bureau of Statistics and CAEPR (ABS-CAEPR) 1996). Following the release of 1996 Census data and the subsequent upward revision of population projections, these estimates of future employment numbers and job needs were revised. The title of the resulting paper (Taylor & Hunter 1998), *The Job Still Ahead*, was indicative of its key findings.

Results from the 2001 Census are now available. They are of special interest because they provide the first indication of outcomes related to policy settings put in place during the first two Howard administrations which lasted almost exactly from 1996 to 2001. From a labour market perspective, key Commonwealth policy initiatives enacted over this period included a dismantling of the Keating government's *Working Nation* labour market programs, the privatisation of employment services, increased mutual obligation within the welfare system, the introduction of the Indigenous Employment Policy (IEP) with its explicit goal of enhancing private sector employment, and a focus in the reconciliation process on 'practical reconciliation'—including increased mainstream employment and reduced welfare dependency (Department of Employment and Workplace Relations (DEWR) 2002; Shergold 2001).

New projections of the working-age population and anticipated employment outcomes may now be developed to 2011, along with revised forecasts of the associated costs to government. We refine some of the cruder assumptions made in the earlier analyses (Taylor & Altman 1997; Taylor & Hunter 1998), for example by allowing Indigenous employment in the private sector and in full-time work and total Indigenous employment to grow at different rates. Also, in estimating the fiscal costs of employment disparity we include an estimate of the effect of large numbers of under-employed and discouraged Indigenous workers. A discouraged worker is someone who has given up looking for work, for example because there are no jobs available for them in the local area (Hunter & Gray 2001). The under-employed are employed people who want to work more hours than their current work arrangements permit. It will come as no surprise that Indigenous people are between three and four times more likely to be either discouraged workers or under-employed. Aside from these changes the methodology and rationale, in terms of benchmarking current labour market outcomes and foreshadowing future ones, remains the same.

The future size of the working-age population

The first step is to estimate the future size of the population. This is done by the conventional means of applying a cohort component projection method using the 2001 post-censal estimate of the Indigenous population (458,520) as the base. This population is then projected by five-year age group and sex to 2011, and the expected number of births are added. In this exercise, fertility rates prevailing between 1996 and 2001 are held constant, while mortality rates are derived from the latest national Indigenous life table constructed by Kinfu and Taylor (2002).¹ In line with earlier experimental low series projections of the Indigenous population produced by the ABS, no allowance is made for non-demographic additions or losses to the population. In other words, the Indigenous population is assumed to be affected only by natural increase.

It should be noted that this last assumption produces population estimates at the lower end of expectation because recently there have been large non-biological intercensal increases in the Indigenous population (Gray 1997). To this extent, the projections are conservative, but more reliable. Nonetheless, only the first part of the projection period (to 2006) should be considered a forecast, with the second half representing no more than a scenario drawn from possible trends. The results of the projection are summarised in Table 1.

Table 1. Projected Indigenous population by broad age group, 2001–11

Age group	2001	2006	2011
Numerical distribution			
<15	178,692	184,715	193,029
15+	279,828	320,497	363,577
Total population	458,520	505,212	556,606
Per cent distribution			
<15	39.0	36.6	34.7
15+	61.0	63.4	65.3

Source: ABS (2003a).

Overall, the Indigenous population is projected to be more than 550,000 by the end of the present decade. As with the population generally, the Indigenous population is seen to be ageing, though from a more youthful base. Thus, the Indigenous working-age population aged 15 and over will increase markedly both in number and as a proportion of the total population, despite high adult mortality rates. By 2011, an extra 84,000 Indigenous people are expected to be of working age—almost as many again as are now employed. The working-age share of the population will rise from 61 per cent in 2001 to 65 per cent by 2011.

Trends in employment levels and labour force status, 1996-2001

Against this backdrop of projected increases in the working-age population, it is possible to estimate likely future outcomes in labour force status by extrapolating from recent trends in Indigenous employment levels and labour force participation. The first step, then, is to establish these trends.

Recent change in Indigenous labour force status

As shown in Table 2, the overall Indigenous employment rate recorded by the census (including persons recorded in Community Development Employment Project (CDEP) scheme employment) was marginally lower in 2001 (40.4%) than in 1996 (40.7%), but substantially higher than it was in 1991 (37.1%). For the non-Indigenous population the opposite was observed, with the employment rate higher in 2001 (58.9%) than in 1996 (56.4%). Consequently, the gap between Indigenous and non-Indigenous rates widened between 1996 and 2001, as indicated by a decline in the ratio of rates for the two populations from 0.72 to 0.68. Thus, the key feature of Indigenous employment status is that it remains firmly below the national average at less than three-quarters of the level recorded for non-Indigenous adults.

Table 2. Labour force status of Indigenous and non-Indigenous Australians, 1991–2001

	1991 (%)	1996 (%)	2001 (%)
Indigenous			
Employment/population ratio	37.1	40.7	40.4
Unemployment rate	30.8	22.7	20.0
Participation rate	53.5	52.7	52.1
Non-Indigenous			
Employment/population ratio	55.8	56.4	58.9
Unemployment rate	11.4	9.0	7.2
Participation rate	63.2	62.0	63.4
Ratio of Indigenous to non-Indigenous			
Employment to population ratio	0.66	0.72	0.68
Unemployment rate	2.71	2.52	2.78
Participation rate	0.85	0.85	0.82

Note: All estimates exclude those who did not state their labour force status.

Source: ABS Census 1991, 1996, 2001.

The census-based Indigenous unemployment rate showed slight improvement between 1996 and 2001.² So too did the non-Indigenous unemployment rate, resulting in a relative widening of the gap in rates between the two population groups. As a consequence, the unemployment rate among Indigenous people remains at more than two and one-half times the level recorded for non-Indigenous adults.

It is important to qualify discussions of relative employment and unemployment rates with data on relative rates of labour force participation since the proportion of the Indigenous population formally attached to the labour market has historically been well below the national average. The 2001 Census indicates that this is still the case with a slight fall in the Indigenous labour force participation rate since 1996 (Table 2). In effect, around half of all Indigenous people of working age were neither working nor actively seeking work, compared to roughly one-third of all other adults.

Interpreting Indigenous employment change, 1996–2001

On the face of it, the 2001 Census figures on Indigenous employment suggest a good news story—an increase of 18,013 people in work, constituting an apparent growth of 22 per cent since 1996 (around 4.4% p.a.). This rate of growth occurred at a time when the overall number of Australians in employment increased by only 1.2 per cent per annum. Caution is required, however, in interpreting apparent changes to Indigenous census characteristics because of the increase in population between 1996 and 2001 that cannot be accounted for by natural causes. Put simply, almost one-third of the intercensal growth in Indigenous population was due to individuals who were recorded as Indigenous in the 2001 Census count but not in the 1996 count (Kinфу & Taylor 2002). As a consequence, it is not clear whether any aggregate change observed in population characteristics over this period involves an alteration in the circumstances of the original (1991) population.

For example, a comparison of census characteristics in 1996 and 2001 could suggest an improvement in the economic status of Indigenous people. But the conditions of the original 1991 population may actually have become worse. The problem for analysts and policy-makers is that any such change in the condition of the original population is undetectable. All that can be noted is different aggregate status. There is some scope for estimating the compositional impact of newcomers to the population using fixed population characteristics, such as ‘age-left-school’ (Hunter 1998), but for characteristics that are variable over time, such as employment status, this is simply not possible.

However, one correction to employment change data that can and should be made is the establishment of a more realistic employment trend. This is achieved by first aligning Indigenous employment numbers at each census with revised estimates of the working-age population, and then establishing the contribution made to employment growth by participation in the CDEP scheme. This second step has the effect of revealing the underlying trend in mainstream employment by discounting any cosmetic change brought about by merely administrative shifts in the labour force status of individuals.

Reconstructing the 1996 population and revising employment estimates

The first step in establishing an appropriate intercensal employment growth rate is to adjust the 1996 population level so that it aligns with that recorded in 2001. This is based on the assumption that the 2001 Census-derived Indigenous population is the best estimate yet of an ultimately unknown number of individuals of Aboriginal or Torres Strait Islander descent, and that those revealed in the 2001 Census include individuals who, for whatever reason, did not appear as Indigenous in the 1996 Census count. To gain a meaningful analysis of intercensal change in economic indicators, these individuals should therefore be restored to the 1996 population. While the census provides no information which can be used to achieve this directly, it is possible to derive an estimate of the 1996 working-age population using the revised 2001 population as a base. The standard demographic technique for reconstituting the initial population is through reverse survival and this is applied to generate new estimates of the 1996 population.

As indicated in Table 3, this procedure raises the 1996 working-age population from the 211,577 revealed in the census count to an estimated 246,200. Thus, the estimated increase in the Indigenous working-age population over the intercensal period was only 33,628 or 13.7 per cent—although this was still substantially above the estimated growth of 5.5 per cent recorded for the non-Indigenous adult population.

Table 3. Indigenous population and employment in 1996 and 2001

	1996		2001
	Census count	Estimate from reverse survival	Estimated population
Population aged 15+	211,577	246,200	279,828
Total employment			
no.	82,377	96,068	112,982
% of population	38.9	39.0	40.4
Employed full-time			
no.	48,970	59,362	65,225
% of population	23.1	24.1	23.3
Employed in private sector			
no.	45,676	53,251	64,682
% of population	21.6	21.6	23.1

Note: Private sector and full-time employment counts include a proportional allocation from the 'not stated' category.

From a policy perspective, the key implication of this relatively higher Indigenous population growth is that the rate of employment growth would need to be greater than for non-Indigenous people (or at least equivalent to the growth in the Indigenous working-age group), simply to maintain the employment/population ratio at its current low level. Indigenous employment growth could be relatively high, but still have little appreciable impact on labour force status.

Age-specific employment rates from the 1996 Census are applied to the new estimated five-year age distribution of the working-age group to generate an upward adjustment to the census-derived employment figure. This assumes that the age-specific employment rate for the revised 1996 population is the same as that for the observed population. Thus, as shown in Table 4, employment in 1996 rises from the census count figure of 82,377 to an estimated 96,068. Likewise, the Indigenous employment count of 100,390 in the last census is adjusted to align with the ABS's estimated residential population for 2001. This produces an adjusted estimate of employment in 2001 of 112,982. Using the adjusted estimate of 1996 employment as the new base, the intercensal increase in Indigenous employment is revised to 16,915, representing a increase of 17.6 per cent. This is a lower (and more realistic) rate of growth than the 22 per cent increase obtained from a direct comparison of 1996 and 2001 Census employment counts. It is also twice the rate of growth recorded for the non-Indigenous population (8.5%). However, a proportion of this job growth for Indigenous people can be accounted for by program intervention and this contribution has also to be estimated to achieve a more meaningful comparison.

When accounting for variation in the number of Indigenous people recorded as employed it is important to remember that administrative changes in the way the state handles entitlements for the unemployed and those not in the labour force can effect a change of their labour force status in the census. For the purposes of this analysis, the main program influence considered is participation in the CDEP scheme.

It is well documented that Indigenous people have relied heavily on government program support for employment creation (Altman & Taylor 1995; Commonwealth of Australia 1994; Taylor & Hunter 1997). Any meaningful assessment of intercensal employment change thus has to account for changes in such programs that may influence the number of individuals who could claim on the census form that they had a job of any kind in the week prior to enumeration.

Employment via the CDEP scheme cannot be fully established from census data because information on employment in the scheme was only sought explicitly in remote areas where Special Indigenous Census Forms were utilised. Some CDEP scheme employment in non-remote areas was recorded using the standard census form, but because census-recorded employment in the scheme was incomplete, the overall level has to be estimated. The estimate is made using data on the number of CDEP scheme participants recorded by ATSIIC at the time of the 2001 Census, and is based on arguments outlined by Taylor and Hunter (2001: 97–8) regarding the conflation of CDEP scheme participation and CDEP scheme

employment. This exercise yields a total of 30,474 Indigenous people in CDEP scheme employment at the time of the 2001 Census (Table 4).

Table 4. Estimate of Indigenous employment change, 1996–2001

	1996 Census	2001 Census	Net change	Change (%)	Annual change (%)
Numbers					
Population aged 15+	246,200	279,828	33,628	13.7	2.6
Total employment	96,068	112,982	16,915	17.6	3.3
CDEP scheme employment	18,656	30,474	11,818	63.3	10.3
Employed full-time	59,362	65,225	5,863	9.9	1.9
Employed in private sector	53,251	64,682	11,431	21.5	4.0
Non-CDEP employment	77,412	82,508	5,097	6.6	1.3
Employment/population ratios					
Total employment (%)	39.0	40.4	1.4	3.5	0.7
Employed full-time (%)	24.1	23.3	-0.8	-3.3	-0.7
Employed private sector (%)	21.6	23.1	1.5	6.9	1.3
Non-CDEP employment (%)	31.4	29.5	-2.0	-6.2	-1.3

Note: Private sector and full-time employment counts include a proportional allocation from the 'not stated' category.

The increase in Indigenous employment can be benchmarked against the overall employment growth in the whole Australian labour market. Comparison of Table 4 with Table 5 illustrates that the growth in the number of jobs held by Indigenous Australians has been quite high compared to aggregate job growth, this latter being a measure of the capacity of the economy to generate jobs.

The total change in Indigenous employment estimated from reverse survival is approximately twice that of aggregate jobs growth in the labour market as a whole (i.e. 3.3% p.a. compared to 1.7% p.a.). The large growth in the CDEP scheme between 1996 and 2001 means that a disproportionate amount of the growth in Indigenous employment is based on the scheme. This notwithstanding, the growth of the number of Indigenous people employed in either full-time jobs or the private sector was greater than the growth for such jobs in the market as a whole. While there was a marked growth in full-time employment among Indigenous people (1.9% p.a.), the increase in such jobs for the working-age population as a whole was much lower (0.7% p.a.). As for the Indigenous employment in the private sector, this increased at a greater rate than the growth in the population aged over 15, leading to a small rise in the employment/population ratio for that sector between 1996 and 2001 (see Table 4).

Table 5. Employment growth in the whole Australian labour market, 1996–2001

	Aggregate growth in jobs (%)	Annual growth (%)
Private sector jobs	10.7	2.1
Full-time jobs	3.5	0.7
Total employment	8.7	1.7

Source: ABS Census 1996 and 2001.

Overall, the use of the reverse survival estimates provides a generous estimate of likely Indigenous employment growth. Interestingly, the assumptions used in *The Job Still Ahead* (Taylor & Hunter 1998) led to a prediction which coincides exactly with the actual annual growth in non-CDEP jobs between 1996 and 2001 (i.e. 1.3% p.a.). As a result, our previous projections in forecasting the Indigenous unemployment rate (Hunter & Taylor 2001) have proved to be very accurate. However, forecasting is an intrinsically risky business and its accuracy depends upon the fluctuating fortunes of the Australian economy.

Projecting labour force status, 2001–11

The key to projecting labour force status is to first establish estimates of the future size of the Indigenous labour force. This is done by assuming that the labour force participation rate remains at the level recorded by the 2001 Census, which is the most accurate recent indicator of Indigenous labour supply. The empirical basis for adopting this assumption is available in Table 2, which shows that Indigenous participation has remained relatively steady for the past decade. Using our projections of the Indigenous working-age population to 2011, age-specific participation rates from the 2001 Census may then be applied to derive estimates of labour force numbers. The results of these calculations are shown in Table 6.

Table 6. Projected estimates of Indigenous employment, labour force and working age population, 2001–11

	Mainstream employment ^a	CDEP employment ^b	Total employment	Labour force ^c	Population 15+
2001	82,508	30,474	112,982	145,790	279,828
2006	88,013	34,224	122,237	166,979	320,497
2011	93,884	36,974	130,858	189,424	363,577

Notes: a. Based on continuation of 1996–2001 aggregate jobs growth of 1.3 per cent per annum for the Australian labour market.
 b. Based on an increase of 1,000 CDEP places in 2004 following 2003 budget provisions, plus an assumption that CDEP participants increase by natural growth of 550 per annum after 2001.
 c. Based on maintaining Indigenous labour force participation rate at the 2001 level (52.1%).

As for estimating the numbers in employment, separate calculations using different assumptions are made for mainstream employment and CDEP scheme employment. It is assumed that mainstream employment will continue to expand at the rate observed between 1996 and 2001 (1.3% p.a.). While current prognoses for growth in the labour market do not suggest any likely change in this situation in the medium term (Commonwealth of Australia 1998: 2–5), this assumption is inevitably made against a background of uncertainty.

Greater precision is possible in projecting CDEP scheme employment because policy and financial constraints provide the parameters for growth. On the basis of recent and current planning for the scheme, it is assumed that the number of participants will continue to expand beyond 2001 by 550 participants per annum, according to program allowance for natural (administrative) increase in existing schemes. An extra 1,000 participants are added in 2004 as provided for in the 2003–04 Commonwealth Budget.

Thus, Table 6 indicates that the number of employed CDEP scheme participants is expected to rise from 30,474 in 2001 to almost 37,000 by 2011. Assuming that mainstream employment continues to grow at the rate observed in the last half of the 1990s, then it will rise from 82,508 in 2001 to 93,884 in 2011. Accordingly, total employment is estimated to rise from 112,982 to around 131,000.

In Table 7, these projected changes in employment numbers are converted to employment/population ratios and unemployment rates. Because the rate of employment growth is anticipated to be slower than population growth, the overall employment rate is expected to fall from 40 per cent to 36 per cent over the projection period. Assuming no change in the labour force participation rate, the reverse side of this equation will see unemployment numbers rise from an estimated 32,808 in 2001 to 58,565 by 2011, with a consequent increase in the unemployment rate from 22.5 per cent to almost 31 per cent of those in the labour force.

These projections point clearly to a worsening in the labour force status of Indigenous adults. Moreover it should be noted that they are based on the inclusion of working CDEP scheme participants in the estimates of persons employed. If these were excluded, and instead counted as unemployed (on account of the notional link between CDEP wages and the Newstart and Job Search Allowances), then predicted labour market outcomes for Indigenous people would become far worse, with an unemployment rate of 43 per cent rising to 50 per cent. Even with the growth in CDEP scheme employment, Indigenous employment rates decrease by around 5 per cent for overall employment and 4 per cent for non-CDEP employment. Thus, planned CDEP growth is currently insufficient to maintain the status quo and will lead to increased employment disparity under current projections.

Table 7. Estimated Indigenous employment/population ratios and unemployment rates, 2001–11^a

	Employment/population ratios		
	2001	2006	2011
Total employment ^b	40.4	38.1	36.0
Non-CDEP employment	29.5	27.5	25.8
Unemployment rates			
CDEP counted as employed	22.5	26.8	30.9
CDEP counted as unemployed	43.4	47.3	50.4
Unemployment rates when discouraged workers included in labour force ^c			
CDEP counted as employed and ABS definition of discouraged workers applies	25.9	30.0	33.9
CDEP counted as unemployed and ABS definition of discouraged workers applies	45.9	49.6	52.6
CDEP counted as unemployed and all people who want work are included in labour force	55.9	58.9	61.3

- Notes:
- Estimates based on post-2001 Census population estimates and projections as shown in Table 6.
 - Includes those employed in the CDEP scheme. All of the estimates are based on the data in Table 6. Unemployment rates express the unemployed as a percentage of the labour force.
 - The ABS definition of 'discouraged worker' is confined to those who are available to start work and who give a reason for not actively looking for work that is related to the availability of jobs or other demand-side reasons. Gray, Heath and Hunter (2002) argue that effective labour supply may include all those who want to work because their behaviour is similar to that of the unemployed for the Australian population as a whole.

The lower portion of Table 7 includes a calculation of unemployment rates when discouraged workers are included in the labour force. Note that these rates are significantly higher when discouraged workers are included. They are higher still if all people who want work are included in the labour force. Under these hypotheticals, Indigenous unemployment rates would be as high as 61 per cent by 2011.

It is worth recalling that the equivalent rates for the rest of the Australian population are presently around 6.0 per cent for unemployment and on past experience, and present Budget forecasts, these are likely to remain relatively unchanged (Commonwealth of Australia 2003). For example, the Commonwealth Budget confidently predicts that further jobs should be created next year, and that the unemployment rate should remain steady at around current low levels. The medium-term prognosis, then, all other things being equal, is for a substantial worsening of the overall labour force status of Indigenous people both relatively and absolutely.

Future employment requirements

Using our projected estimates of employment against the background of an expanding Indigenous working-age population, it is possible to calculate the number of jobs required for Indigenous people either to maintain their current employment status or to achieve an equivalent rate of employment to the non-Indigenous population.

As indicated in Table 3, the 2001 employment/population ratio for Indigenous people is estimated at 40.4 per cent. This is substantially below the ratio of 58.9 per cent recorded by the Census for all other Australians. On the assumption that the estimated Indigenous employment base of 112,982 persons is not eroded in future, and that the non-Indigenous employment/population ratio also remains constant, two sets of estimated employment requirements are provided for in Table 8:

- a minimalist scenario which indicates the numbers required simply to maintain the Indigenous employment/population ratio at its 1996 level; and
- the numbers required to achieve an employment rate equivalent to that of the rest of the population.

Table 8. Indigenous employment growth required to maintain the status quo or to achieve employment equality, 2001–11

Employment/ population ratio	Base employment 2001 ^a	Total jobs required by 2011	Extra jobs required	Extra jobs projected ^b	Projected jobs deficit by 2011
40.4 ^c (status quo)	112,982	146,885	33,903	17,876	16,027
58.9 ^d (equality)	112,982	214,147	101,164	17,876	83,288

Notes: a. The estimated number of Indigenous Australians in employment in 2001.
 b. From Table 6.
 c. The estimated employment/population ratio for Indigenous Australians based on 2001 population estimates.
 d. The employment/population ratio for non-Indigenous Australians from the 2001 Census.

Because of growth in the population of working age, an additional 33,903 jobs will be required by the year 2011 just to maintain the rate of Indigenous employment at the 2001 level. This means that by the end of the decade, the Indigenous workforce will need to have increased by almost one-third of its estimated present size to avoid any decline in the already low employment level.

However, to achieve employment equality between Indigenous and non-Indigenous Australians by the first year of the next decade will require many more new jobs. By the year 2011, a total of 101,164 additional jobs will be required, an increase almost equivalent to the current size of the workforce. In annual terms, this translates into more than 10,000 new jobs per annum which is substantially

greater than the 3,362 new jobs estimated to have been created each year in the last half of the 1990s. If current trends in employment growth are held constant, the projected shortfall in jobs for Indigenous people, using non-Indigenous employment levels as a benchmark, is around 83,000. It should be noted that these employment outcomes represent a best case scenario as they include CDEP scheme participants.

Mainstream employment requirements

To the extent that employment generated by the CDEP scheme is dependent upon continued government financial and administrative support, it is of policy interest to estimate non-program driven mainstream employment requirements. This is done by removing those in CDEP scheme jobs from the estimate of the employed. In the light of the constraints on the data, this provides the best estimate available of mainstream employment. Thus individuals who claim employment status due to other forms of program intervention, for example via wage subsidy schemes under the IEP, are counted as part of the mainstream workforce.

By excluding CDEP scheme employees from total employment in 2001, the number of Indigenous people in mainstream employment is estimated at 82,508 (see Table 6), producing a mainstream employment/population ratio of 29.5 which compares to an employment/population ratio for non-Indigenous people of 58.9. Almost 25,000 extra jobs would be required by the year 2011 simply to maintain this substantially lower rate of mainstream employment at its 2001 level. However, if the rate of growth in mainstream employment observed over the 1996–2001 period continues, then less than half this number of additional jobs will be created, leading to a shortfall of over 13,000 jobs. Movement towards employment equality by 2011 presents an even greater challenge, with the number of extra jobs required almost ten times higher than the number expected and a substantially higher jobs deficit of 120,300 anticipated.

Full-time and private sector employment requirements

Relatively few Indigenous workers are employed full time, and this is an ongoing problem in the effort to raise Indigenous living standards. Estimates based on the 2001 Census indicate that just over 60 per cent of total Indigenous employment is full-time employment. This produces a full-time employment/population ratio of only 23 per cent compared to around 40 per cent for non-Indigenous adults (Table 9).

If we now turn to compositional issues within this overall figure, we can estimate future need for full-time and private sector jobs growth. To sustain full-time employment at its 2001 level would require Indigenous people to occupy a total of 84,713 full-time positions by 2011, an increase of 19,489. However, since full-time employment for Indigenous workers are projected to increase by 13,508, the additional deficit in the number of full-time jobs will be 5,981.

Table 9. Indigenous full-time employment growth required to maintain the status quo or to achieve employment equality, 2001–11

Employment/ population ratio	Base employment 2001 ^a	Total jobs required by 2011	Extra jobs required	Extra jobs projected ^b	Projected jobs deficit by 2011 ^c
23.3 ^d (status quo)	65,225	84,713	19,489	13,508	5,981
39.3 ^e (equality)	65,225	142,886	77,661	13,508	64,153

Notes: a. The estimated number of Indigenous Australians in employment in 2001.
 b. Projections based on the 1.9% p.a. growth achieved between 1996 and 2001.
 c. Projections based on the 0.7% growth of full-time jobs achieved in the total labour market in last inter-censal period indicate that only 4,712 jobs will be created. Consequently, this is a conservative estimate of the projected jobs deficit to 2011.
 d. The estimated employment/population ratio for Indigenous Australians based on 2001 population estimates.
 e. The employment/population ratio for non-Indigenous Australians from the 2001 Census.

This is an increasingly difficult target to meet because of the rapid erosion of full-time work in the Australian labour market (Borland, Gregory & Sheehan 2001). Once again, the task of approaching equality with the rest of the workforce is much greater, with the number of extra full-time positions required (77,661) being larger than the current projections of available jobs.

Table 10. Indigenous private sector employment growth required to maintain the status quo or to achieve employment equality, 2001–11

Employment/ population ratio	Base employment 2001 ^a	Total jobs required by 2011	Extra jobs required	Extra jobs projected ^b	Projected jobs deficit by 2011 ^c
23.1 ^d (status quo)	64,682	83,986	19,304	31,063	-11,759
48.5 ^e (equality)	64,682	176,335	111,653	31,063	80,590

Notes: a. The estimated number of Indigenous Australians in employment in 2001.
 b. Projections based on the 4% p.a. growth achieved between 1996 and 2001.
 c. Projections based on the 2.1% p.a. growth in private sector jobs achieved in the overall Australian labour market in last inter-censal period indicate that 14,941 jobs will be created in that section.
 d. The estimated employment/population ratio for Indigenous Australians based on 2001 Census.
 e. The employment/population ratio for non-Indigenous Australians from the 2001 Census.

Indigenous employment in the private sector has been growing much faster than the growth in full-time employment. As indicated above, the growth in that sector in the last intercensal period outstripped the growth in the Indigenous population aged 15 and over. Under current projections (Table 10), the Indigenous private sector will continue to increase by more than the working-age population, with the proportion of the population working in that sector increasing from 23.1 per cent to 26.3 per cent between 2001 and 2011.

However, since Indigenous adults are about half as likely to be employed in the private sector as other Australians, the projected job deficit is still massive if the goal is achieve equality with other Australians. Over 80,000 extra private sector jobs will be needed by 2011.

The relatively good performance of the private sector in generating work for Indigenous people may be attributed in part to the IEP, which places a premium on such jobs. The IEP has generated some 12,000 jobs for Indigenous people since its inception in 1998 (DEWR 2002). Around 9,000 of these jobs are in the private sector. Interestingly, our reverse survival estimate of growth is around 11,000 private sector jobs. Since some of the jobs created under the auspices of the IEP may be short-term, and hence many such jobs may have finished before the 2001 Census was collected, the similarity between our estimates and those claimed for the IEP may be a coincidence.

The cost of continued employment disparity

If social and economic conditions for Indigenous people remain the same as at present, the cost to government of providing income support, welfare payments and program support to those seeking work, or who are not in the labour force but want to work, will escalate in line with the growth in working-age population. On the other hand, if Indigenous people had more and better jobs then they would be able to meet from their own incomes many of the basic needs that governments now provide for. Furthermore, current government expenditures redistribute income between all Australians including Indigenous people with the effect of shifting part of the cost of foregone production from Indigenous people to government. Improved employment outcomes would contribute to reducing this cost.

To assess what the opportunity cost of achieving various labour market outcomes might be, we conceptualise a trade-off between the cost to the Department of Family and Community Services (DFACS) of supporting unemployed people and the additional cost to ATSIC of supporting CDEP scheme participants. Also incorporated in this assessment is the net benefit of a shift from non-employment to employment income with an associated increase in the tax base. All estimated costs and revenue are expressed in 2001 dollars and are adjusted using published Consumer Price Index (CPI) statistics (ABS 2003b). The cost of continued employment disparity is then calculated by multiplying these indicative costings for changing labour force status by the number of Indigenous people for whom jobs must be found to remove the employment disparity.

We use a mix of data sources. For CDEP, expenditure on the scheme reported by ATSIC (1996) for the 1995–96 financial year is divided by the number of scheme participants to produce an average cost per participant of \$11,605. This figure corresponds closely to the estimated annual employment income for CDEP scheme workers in NATSIS (\$11,467 in 1994–95 dollars).

Taylor and Hunter (1998) show that the analogous calculation that used administrative data was more problematic because it is difficult to allocate administration costs, accrued as a result of payments to all recipients, to the Indigenous sub-population. For example, the substantial differences in the geographic distribution of the Indigenous and non-Indigenous populations mean that the analogous calculation for social security payments would underestimate the average cost of supporting Indigenous recipients in remote and rural regions. In addition, the differing family structures, and therefore social security entitlements, of Indigenous and non-Indigenous households render calculations based on administrative data even more misleading.

The alternative to using administrative data in estimating the cost of changing labour force status is to use NATSIS income data. For example, unemployed NATSIS respondents who indicated that they received Newstart Allowance or Jobsearch Allowance had an income from government payments of \$8,368 in 1994. This estimate corresponds closely to the average amount of income support for all recipients of JobStart Allowance, NewStart Allowance and the Youth Training Wage, estimated using Department of Social Security (DSS) data (Commonwealth of Australia 1996: 151–3) by dividing total outlays in 1995/96 (\$6.6 billion) by the average monthly number of recipients (812,000). This produced an amount of \$8,128 per recipient. It should be noted that this NATSIS estimate is conservative given that Indigenous families and households are generally larger than the Australian average, and hence they have greater welfare entitlements to enable them to look after their dependents.

Independent confirmation of the estimated cost to government of Indigenous unemployment is provided by Daly and Hunter's (1999) estimations of the Social Security entitlement of the unemployed in the light of the family circumstances of NATSIS respondents. They found that the basic entitlement per annum (before family payments) was \$8,876, the average remote allowance payable was \$65 and rent assistance entitlements were \$518.³ The small difference that was found between the actual government payments and the estimated entitlements is likely to be driven by recipients breaching social security conditions or failing to apply for social security. However, since the following calculations focus on the costs to government, the actual amount paid by Centrelink forms the appropriate basis for the estimates of costs.

Researchers in this area have pointed to the level of take-up of unemployment benefit entitlement as an important factor determining labour force behaviour. The NATSIS data show that 94 per cent of the Indigenous unemployed aged 18 to 64 years were receiving a government benefit (Daly & Hunter 1999). This high take-up rate suggests that the assumption that increases in employment would reduce the cost to government by approximately \$8,368 per annum (in 1994 dollars) per job found is not too far off the mark.

One possible measure of government spending on those not in the labour force is the average income from government payments reported by NATSIS respondents outside the workforce who wanted a job (\$9,774 p.a. in 1994 dollars). The validity

of this estimate can be confirmed using the methodology set out in Daly and Hunter (1999). If these NATSIS respondents were to enter the workforce, then the average entitlement to Jobsearch Allowance, remote area allowance and rent assistance, before family payments, would be \$10,010 per annum in total. However, the actual amount paid by Centrelink and other agencies is used in the calculations as a more accurate reflection of costs to government of non-employment.

To complete the calculation of the costs of continuing employment disparity it is necessary to factor in estimates of the number of Indigenous discouraged workers. In the absence of any other reliable data, we are again forced to rely on the 1994 NATSIS data. In 1994, 23.1 per cent of those not in the labour force were recorded as both wanting a job and receiving government payments. If this ratio is applied to the 'not in the labour force' estimates, then it is possible to derive the number of recipients each year (31,006 in 2001, 35,513 in 2006 and 40,286 in 2011). These statistics provide a conservative estimate of the number of discouraged Indigenous workers. For example, when these potential workers are included in the 1996 labour force, the Indigenous participation rate is almost identical to that of the non-Indigenous population (63.6%). Inclusion of all those who want a job, irrespective of whether they receive a government payment, further increases the estimated participation rate of the Indigenous population to 67.2 per cent.

Cost estimates of Indigenous labour force status and employment disparity

Our projections of Indigenous labour force can be translated into direct costs for government, especially those arising from welfare payments, and the costs to the economy of permitting the disparity between employment outcomes of Indigenous and other Australians to continue. Following *The Job Still Ahead*, the costs are broken down into those associated with CDEP workers, unemployment benefits, and welfare payments paid to those who want work but are currently outside the labour force.

Table 11 shows the estimated total cost to government of Indigenous labour force status, using the income data provided in the previous section. We assume a continuation of recent low growth in mainstream employment of 1.3 per cent per annum. Figures are shown in 2001 dollars and are estimated using the actual CPI index for July each year from 1994 to 2001 (ABS 2003b).

The important thing to note is that the direct costs to government increases dramatically by about \$450m in the 10 years to 2011. In 2001, the total cost, from a labour market perspective, of supporting individuals who were not in mainstream employment was estimated to be \$1.1 billion. By 2006, this cost is estimated to rise to around \$1.3 billion and to over \$1.5 billion by 2011, if current rates of employment growth prevail. The increases in costs are especially

large for the unemployed and discouraged workers who are currently outside the labour force.

Table 11. Estimated direct costs to government of Indigenous labour force status, 2001–11^a

Labour force status	2001 (\$m)	2006 (\$m) ^b	2011 (\$m) ^b
CDEP scheme	410	461	498
Unemployed	329	448	586
Not in the labour force	363	416	472
Total	1,102	1,325	1,556
Bottom line costs in <i>The Job Still Ahead</i>	1,070	1,254	

Notes: a. Assuming mainstream employment growth at 1.3 per cent per annum.
b. The CPI is used to adjust the costs of particular labour force states to 2001 dollars.

The bottom line costs in *The Job Still Ahead* are still very close to our current estimates for 2001, being only 3 per cent lower despite the upward revision of the Indigenous population between the last two censuses. Summaries of overall social costs in our earlier studies remain credible because our estimates of the cost of Indigenous labour force status based on the 1996 Census are reasonably close to our updated estimates.

Table 12. Macro costs by Indigenous labour force status, 2001

	Foregone output (\$m)	Reduction in welfare payments (\$m) ^a	Program and related expenditure (\$m)	Tax revenue foregone (\$m)
Unemployed	841	351	124	172
CDEP	305	389	156	142
Discouraged workers	1,493	347	N/A	305
Under-employed	268	N/A	N/A	82
Total	2,907	1,087	280	701

Notes: a. The calculations for discouraged workers in the second column are based on a subset of discouraged workers, namely those who receive some income support payments. The program and related expenses for the unemployed is merely the \$115 million allocated in the 1999 Federal Budget expressed in 2001 dollars. Analogous expenditure for the CDEP program is based on the fact that a loading of 40 per cent of income support payments is provided to CDEP schemes to cover running expenses.

Source: Hunter and Taylor (2002).

For example, Hunter and Taylor (2002) provide the most comprehensive estimates of the cost to the nation (the macro cost) of Indigenous unemployment and of the effect of generally low demand for Indigenous workers (Table 12). The main cost of

unemployment is through lost output, which is about \$2.9 billion (in 2001\$).⁴ If the excessive costs of imprisonment for Indigenous unemployed are included, then the costs exceed \$3 billion per annum. The calculations do not attempt to quantify such less tangible costs of unemployment, but nevertheless this figure is staggering. It amounts to about one-half of one per cent of Australia's GDP.

Welfare payments for Indigenous people who want work total about \$1.1 billion, while related program expenditure on CDEP and labour market programs amount to a further \$280 million. Since income support payments are merely a transfer or redistribution from taxpayers (largely employed persons) to the 'unemployed' broadly defined, the resulting reduction in transfer payments would create many 'winners' if the budgetary situation remained unchanged and the savings were passed onto taxpayers.

The ongoing levels of Indigenous unemployment also imply a substantial cost to government (or more correctly, to taxpayers; the total tax revenue foregone is about \$700 million. Again, if the government deficit is maintained at existing levels, the increased tax revenue from removing all forms of Indigenous unemployment would be passed on to those currently paying taxes. Note that this forgone tax cannot be considered a separate cost of unemployment because this tax revenue is deducted from the output generated by employing all Indigenous Australians.

Table 12 also highlights the relative contribution to the costs of frustrated labour supply among the various labour force states. Discouraged workers dominate the broadly-defined costs of Indigenous unemployment, especially those measured by foregone output. This result is driven by the enormous number of Indigenous workers who want work but have given up looking for it—Indigenous people are between three and four times more likely to be discouraged workers than other Australians. Discouraged workers are relatively less important in terms of the fiscal costs arising from income support payments because such workers fall largely outside the welfare system.

Even under-employment contributes a substantial loss to the economy. Furthermore, given the relatively high incidence of Indigenous employees who want more hours of work, under-employment is probably a more important component of macro costs than that measured for other Australians. In summary, while the phenomenon of the hidden unemployed (i.e. discouraged workers and the under-employed) is not distinctively Indigenous, the costs associated with such unemployment are likely to be more prominent among Indigenous Australians. The remainder of this chapter documents the extent of less tangible costs of unemployment.

Hunter and Taylor's (2002) estimates are conservative because the 2001 Census data were not yet available when they wrote, and hence they could not take into account the increasing propensity to identify as Indigenous in the last intercensal period. The rest of this paper charts the increasing costs of employment disparity based on the projections set out above (Table 13).

Table 13. Costs to government of not achieving equality in labour market outcomes, 2001–11

	2001 (\$m)	2006 (\$m)	2011 (\$m)
Cost of not achieving unemployment equality ^a			
Reduction in welfare payments	224	328	450
Tax revenue foregone	144	211	290
Cost of not finding jobs for Indigenous discouraged workers ^a			
Reduction in welfare payments	363	416	472
Tax revenue foregone ^b	200	229	260
Tax revenue foregone ^c	266	304	345

Notes: a. Adjusted to 2001 dollars.
b. Estimated using a narrower definition of discouraged workers as those who are currently receiving a government payment.
c. Estimate based on finding employment for all persons who want a job but are not currently in the workforce.

The upper section of Table 13 holds the Indigenous labour force participation rate at its 2001 level, while the lower section provides an estimate of the extra cost implicit in not finding jobs for discouraged workers. If the target Indigenous unemployment rate were 7.2 per cent, as it was for non-Indigenous Australians in the 2001 Census, then the costs of ‘unnecessary’ welfare payments will double between 2001 and 2011. Note that the tax revenue foregone also doubles in this period.

In summary, if Indigenous unemployment was reduced to a level commensurate with the rest of the population, and assuming that this latter rate remained constant, then the savings to government in payments to the unemployed, in real terms, would be \$328 million in 2006 and \$450 million in 2011. On the credit side, if all those formerly unemployed were to gain mainstream employment (excluding CDEP scheme employees) with an annual income equivalent (in 2001 prices) of \$30,746 (based on reported income of non-CDEP employees in the 1994 NATSIS), then the estimated tax return to government would approximate \$211 million and \$290 million in 2006 and 2011 respectively.

These estimates are conservative because they hold the Indigenous participation rates at their 2001 levels. If all the Indigenous people outside the labour force who wanted jobs found them, then government would save an additional \$416 million in 2006 and \$472 million in 2011 on government payments. That is, the additional welfare cost of not finding work for discouraged workers is even greater than that for the unemployed. The cost of lost tax revenue from discouraged workers will be as much as \$345 million by 2011.⁵

Policy implications

This analysis of 2001 Census data reveals no improvement in the overall position of Indigenous people in the labour market since 1996. Looking ahead, new estimates of future job growth point to a further lowering of employment rates and rising unemployment over the remainder of this decade. Overall, the current fiscal cost of this failure to eradicate Indigenous employment disparity is massive—in 2001, it was estimated to be around 0.5 per cent of Australian GDP. Findings from this new analysis indicate that the cost will be even higher in the future.

While it is not possible to put a dollar value on less tangible social costs of low employment and high unemployment, research has shown that the Indigenous unemployed, especially the long-term unemployed, fare worse than the employed on a range of social indicators—in terms of higher rates of arrest and police harassment, and lower levels of social capital and civic engagement (Hunter & Taylor 2002).

Thus, a vital issue for policy in the years ahead is the distinct prospect that the overall situation for Indigenous people will continue to deteriorate. This is primarily because of population growth, but also because of the enormous difficulties of economic catch-up in a rapidly changing, skills-based, and competitive labour market. Furthermore, many of the structural factors undermining Indigenous participation in the labour market remain in place—locational disadvantage, poor human capital endowments, and social exclusion. In short, we find no reason to retract, or alter, any of the policy implications and contributory factors leading to Indigenous disadvantage in the labour market that were spelled out in detail in the conclusion to previous such analyses—*The Job Ahead* (Taylor and Altman 1997), and *The Job Still Ahead* (Taylor and Hunter 1998).

Currently, it is the feedback between social exclusion and employment status that appears to be prominent in public debate. The prevalence of community dysfunction, manifest in domestic violence, substance abuse and accompanying recidivism, is an issue that most concerns many Aboriginal leaders (Ah Kit 2002; Pearson 2000a, 2000b). While resolution of such issues may well involve new forms of Indigenous governance and leadership, as Pearson proposes, there is some debate about the capacity of Indigenous groups to institute reforms unassisted, and about whether the involvement of government in engineering social change might not carry its own risks (Martin 2001).

Whatever the outcome stemming from this current debate, it is our contention that there will remain a need for the Indigenous unemployed to be better informed about, and better able to engage with, employment opportunities in the mainstream economy (presumably through greater access to outward looking networks). While Indigenous people may be seen as rich in social capital, this may reflect an excessive reliance on inward looking networks (Hunter 2000). Equally, the relative educational status of Indigenous people needs to improve so that a

wider range of jobs are accessible to them. Structural issues such as the buoyancy of the local economy in regional Australia, where many Indigenous people live, will also need to be addressed.

Employment in the public and community sectors will remain vital to Indigenous labour force participation but the private sector—albeit starting from a low base—has been the engine of growth in Indigenous employment in recent years. This relative success coincides with the implementation of the IEP. There are signs, then, that the IEP is effective in its aims, mainly through the provision of wage subsidies and the Structured Training Employment Program, though it should be noted that this is mainly in areas with established labour markets. Indeed, the lack of evident impact in remote areas away from labour markets reinforces the need for flexible policy interventions. Some of these options are discussed in a parallel paper examining future Indigenous labour market outcomes in the Northern Territory (Taylor 2003).

Notes

1. In this projection, the assumption of constant fertility does not affect the projected working age numbers as these people are already alive and subject only to the impact of mortality.
2. The Indigenous unemployment rate fell because the labour force participation rate fell by more than the fall in employment
3. The low level of wages among most Indigenous workers means that the family payment entitlements are largely unaffected by family members securing employment (Daly & Hunter 1999). Accordingly, all the estimated costs to government should ideally exclude family payments and related entitlements.
4. Hunter and Taylor (2002) estimate the output that Indigenous people would have if they were in work by using the mean wage and salary income data in NATSIS as a proxy for the expected employment income of the various groups. The income is inflated to 2001 dollars using the appropriate CPI index (ABS 2003b).
5. Note that the second estimate of tax revenue foregone is proportionately greater than the first estimate because the calculation is based on all Indigenous people who want a job, rather than those who both want a job and are receiving a government payment.

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