



THE AUSTRALIAN NATIONAL UNIVERSITY

**Centre for
Aboriginal
Economic
Policy
Research**



**The relative economic status of
indigenous people in Tasmania,
1991 and 1996**

J. Taylor

No. 158/1998

Discussion Paper

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Director, CAEPR
The Australian National University
June 1998

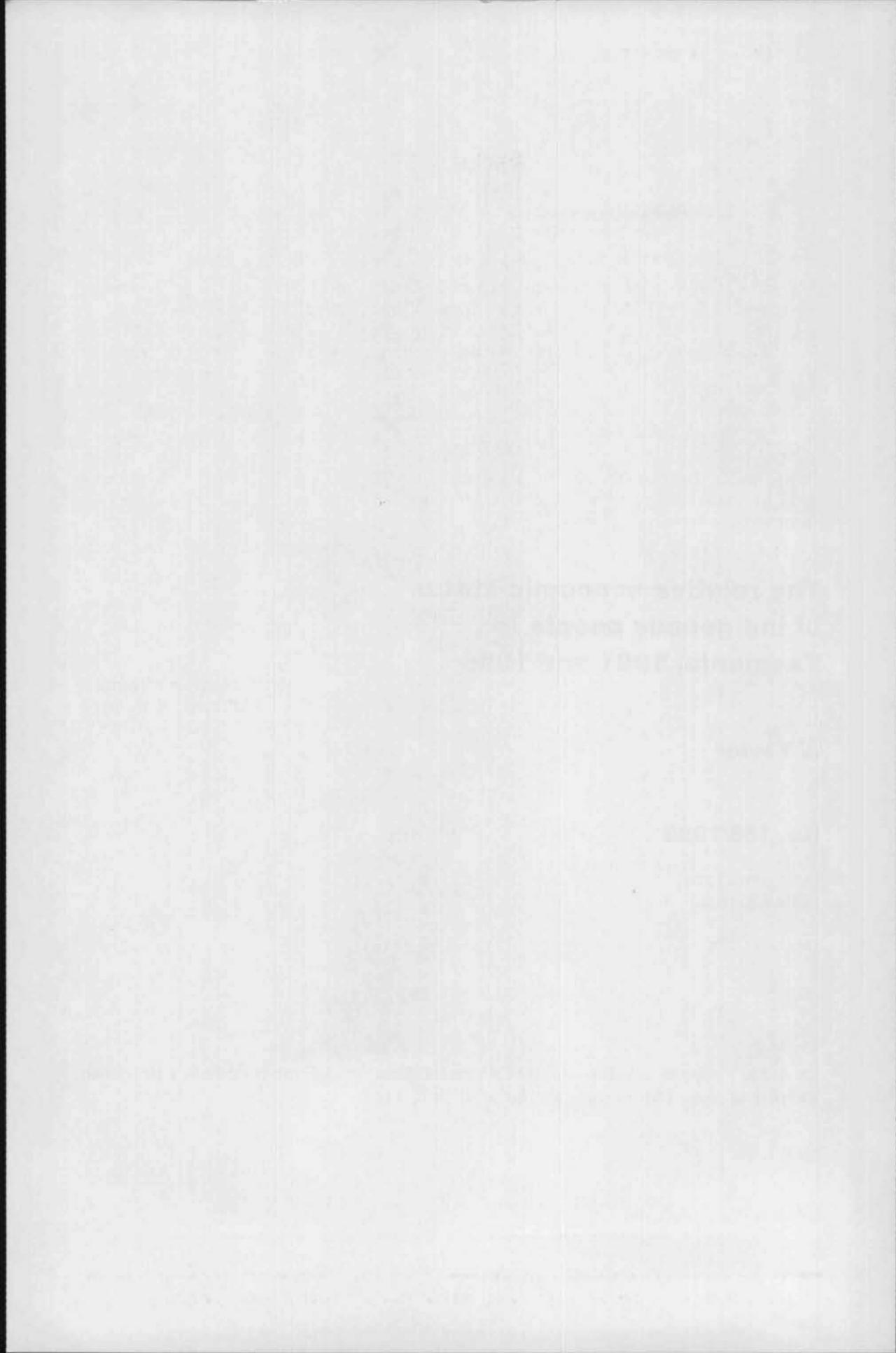
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Foreword

A component of CAEPR's research charter requires it to examine the economic situation of indigenous Australians at the State and Territory, as well as the national and regional levels of aggregation. Accordingly, in 1994, a series of eight CAEPR Discussion Papers (Discussion Papers 55-62) were published outlining changes in the relative economic status of indigenous Australians in each State and Territory using census data for the period 1986-91. These analyses, together with CAEPR Research Monographs 5 and 6, formed CAEPR's commissioned contribution to the mid-term evaluation of the Aboriginal Employment Development Policy.

As part of CAEPR's continual monitoring of indigenous economic status, access to 1996 Census data now enables this series of Discussion Papers to be up-dated for the intercensal period 1991-96. As far as possible care has been taken to ensure direct comparability in statistical content with the earlier series, thereby enabling longer-term analysis of change for the decade 1986-96. It is anticipated that these two series of Discussion Papers, taken together, will be of assistance to policy development at State, Territory and national levels.

Professor Jon Altman
Director, CAEPR
June 1998

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be clearly documented and verified. The text continues to describe various methods for ensuring the integrity of the data, including regular audits and cross-checking of entries.

In the second section, the author details the specific procedures for handling discrepancies. It is noted that any inconsistencies should be investigated immediately and resolved through a transparent process. The document also outlines the roles and responsibilities of the staff involved in the record-keeping process.

The final part of the document provides a summary of the key findings and recommendations. It stresses the need for ongoing training and improvement to maintain the highest standards of accuracy and reliability. The author concludes by expressing confidence in the system's ability to provide a clear and comprehensive overview of the organization's financial activities.

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Summary

Census data remain the primary source of information on the economic status of indigenous people in Tasmania, but their utility as a tool of public policy analysis is diminished. This is because the economic characteristics of individuals who identified as indigenous in 1991 can not be re-calibrated in 1996. As a consequence, the fundamental question of whether circumstances for indigenous people who identified in the 1991 Census were any better or worse in 1996 cannot be answered. The best that can be done is to estimate aggregate characteristics for the initial population using Australian Bureau of Statistics experimental population estimates derived from reverse survival procedures. This, at least, has the effect of properly aligning data levels for time series analysis.

It should be noted that as long as the census question on Aboriginal and Torres Strait Islander origins remains the sole means of comprehensively defining the indigenous population, then it is possible that the numbers identified in this way will continue to rise steadily due to improved enumeration, changes in identification and the flow-on effects of inter-marriage. At a time of growing pressure for targeted service delivery that is cost-effective and based on demonstrated need, this prospect of an ever-expanding indigenous population requires careful consideration.

Leaving aside these complexities of data collection, a key policy question that can be addressed from cross-sectional examination of census data is whether growth of the population identified by the census question on indigenous origins has resulted in any alteration at the aggregate level in the absolute and relative economic status of indigenous people in Tasmania. Results from the above analysis regarding employment and income status suggest that it has not, because:

- while the number of indigenous people recorded as employed has risen, there has been no narrowing of the employment gap between the census-derived indigenous population and the rest of the State's population;
- growth in mainstream, or non-program linked employment, has barely kept up with population growth and the true level of indigenous employment has been static for some time at around three-quarters of that recorded for other Tasmanians;
- the relatively low income status of indigenous people vis a vis others in the State has remained effectively unaltered;
- the fact that employment incomes also emerge as persistently lower than for other wage and salary earners underlines the need for quality, as well as quantity, in job acquisition.

Against this background, the key economic policy issue facing indigenous people is an orientation towards private sector activities as the primary source of future employment growth. This trend appears inevitable given the downsizing of public sector opportunities and the fiscal squeeze on many indigenous

organisations and areas of the mainstream public sector where indigenous people have, to date, found an employment niche.

A parallel development is the replacement of the Commonwealth Employment Service by contracted employment provision agencies and the dismantling and restructuring of government employment assistance. As it stands, there are 28 Job Network member agencies registered in Tasmania, 15 in Hobart and Southern Tasmania and 13 in North Tasmania and the Mersey-Lyell region. None of these are indigenous organisations leaving the issue of dedicated services for indigenous job-seekers open for question.

It seems inevitable that this privatisation of employment services will produce greater fluidity in the labour market circumstances of indigenous people. As far as further engagement with the private sector is concerned, research based on the 1994 National Aboriginal and Torres Strait Islander Survey suggests that some of the issues likely to be encountered include a possible lowering of average incomes and the likelihood of less job security, more casual/part-time work and fewer opportunities for women and older people.

In terms of anticipating where opportunities in the private sector will be generated, an important consideration in Tasmania is the continued widespread distribution of the population with a focus on residence away from Hobart. In this context, it is important to ask how the broad strategy of raising employment levels might be targeted to suit particular regional and local circumstances. An initial requirement is for detailed regionally-based quantitative assessments of the supply of, and demand for, indigenous labour for different economic activities that either exist already or that may be created at the local level. Only then can the appropriate mix of resources for enterprise development and training be appropriately channelled.

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Introduction

Census-derived social indicators continue to provide the main statistical basis for assessing change in the economic status of indigenous Australians. By way of inference, they also provide a means to assess possible aggregate impacts of indigenous economic policy. Use of such data in this way formed the basis for a mid-term review of the Aboriginal Employment Development Policy (AEDP) in 1993. This involved a series of research papers aimed at establishing relative shifts in indigenous employment and income status between 1986 and 1991 (Taylor 1993a, 1993b; Taylor and Roach 1994).

Findings for Tasmania indicated that the indigenous employment rate was unchanged over this period though the unemployment rate was higher and both were noticeably below equivalent rates for the non-indigenous population, but to a lesser degree than in other States and the Northern Territory (Taylor 1993b; Taylor and Roach 1994). Also of note was a lack of change in income relativities with indigenous individual incomes steady at just over three-quarters of the non-indigenous average. Obviously, it is of interest to policy-makers and to the community at large to consider whether the economic status of indigenous people described by these indicators was altered in the period 1991-96 and, if so, to what extent and in what way?

Finding the answer to these questions is not as straightforward as it might first appear given that caution has been called for with regard to the interpretation of change in social indicators for the indigenous population using 1996 Census data (Australian Bureau of Statistics (ABS) 1998a; Taylor and Bell 1998). This is because the 1996 Census count of the indigenous population in Tasmania included a large number of individuals who had previously not appeared in census data as indigenous Australians. Nationally, between 1991 and 1996, some 42 per cent of the intercensal increase in the indigenous population was due to factors other than natural causes (Gray 1997: 13). As a consequence, change in census-based economic indicators cannot be taken at face value. At worst, this prevents any assessment of change in the economic status of the population who identified as indigenous Australian in the 1991 Census. At best, some comparison of aggregate indicators over time is possible by applying demographic techniques to adjust the base year (1991) data.

Population size

Inconsistency in census counts is almost a defining feature of the indigenous Australian population. This is especially so in Tasmania where, for the past few censuses, the trend in overall numbers has been steadily upwards with population growth considerably above the level accounted for by biological factors. Reasons for this anomaly have been the subject of much speculation. For example, questions have been raised for some time by the ABS and others about

the steady expansion of Torres Strait Islander numbers recorded in the State with the suspicion that this may reflect misidentification (Choi and Gray 1985; Evans, Kahles and Bate 1993; Arthur 1998: 3). Also of note is disputation over claims of bogus identification as indigenous Australian in which petitioners have called for a tighter test of Aboriginality (Edwina Shaw and Joanne James v. Charles Wolf and Others TG 33 of 1996, in the Federal Court of Australia, 20 April 1998). Given this context of uncertainty regarding the size and composition of the indigenous population in Tasmania, and in the interpretation of census data purporting to establish this, it is worth recalling the Commonwealth's three-part definition of an indigenous Australian:

- that an individual has Aboriginal or Torres Strait Islander descent;
- identifies as an Aboriginal or Torres Strait Islander; and
- is accepted as an Aboriginal or a Torres Strait Islander by the community in which he or she lives.

The fact is, of course, that the indigenous population revealed by the census could only conform with the first and/or second of these criteria (to the extent that these are invoked by the census), and even then only to the extent that a collection of individuals anonomously tick the appropriate box on a census form which asks if they are of Aboriginal or Torres Strait Islander origin.¹ While the third of these criteria may not always be applied when recording indigenous status in administrative statistical collections, its lack of application in the census methodology means that the census-derived indigenous population would almost certainly be of a different size to any population based on the full Commonwealth definition. This effectively raises the prospect of different indigenous 'populations' eventuating in different statistical contexts, with that derived from the census being just one of these, though probably the most inclusive. The point to note from this is that political and cultural processes, including the highly variable way in which States, Territories and the Commonwealth have attempted to enumerate and categorise indigenous people and the choices made by respondents to official enumerations, construct the official statistical entity we call 'the indigenous population' (Smith 1980; Dodson 1994; Anderson 1997).

Most research on the demography of socially constructed populations and the policy implications that result from the inevitable variability in official counts has been conducted in the United States with respect to changes in the size and composition of the American Indian population (Snipp 1986, 1997; Eschbach 1995; Sandefur, Rindfuss and Cohen 1996; Eschbach, Supple and Snipp 1998). It is noted, for example, that the amount needed to make intercensal increase in a population balance after accounting for births, deaths and migration is usually small. However, in ethnic populations defined by self-identification, as in the case of American Indians, this 'error of closure' is often large due to shifts in the propensity of individuals to declare an ethnic status on census forms.²

A large error of closure is clearly evident when accounting for indigenous population growth in Tasmania over the last intercensal period. At the 1996 Census, 13,854 indigenous people were counted in the State, an increase of 4,973

(56 per cent) since 1991. To give some indication of how unexpected this result was, it is useful to consider what population size was projected for 1996 based on natural increase. Because census counts are subject to enumeration error, revised estimates of the resident population (ERPs) are produced by the ABS. In 1996, the indigenous ERP was calculated at 15,322, which was 44 per cent higher than the 10,664 expected on the basis of experimental projections from the 1991 Census (ABS 1996b: 21; 1998b: 10). Compared to other jurisdictions in Australia, even those in the south and east of the continent where increases in the indigenous population count were also above expectation, this gap between the population projected for 1996 and that finally estimated in 1996 was very large (Taylor 1997: 4).

Population distribution

The spatial distribution of individuals in Tasmania who have claimed indigenous origins in the past three censuses has been remarkably stable with approximately one-fifth of the population consistently recorded in Hobart, almost half in other urban centres (such as Launceston, Devonport, Burnie and Ulverstone) and the remainder (almost one-third) in scattered rural areas (Table 1). The fact that this pattern of relative distribution has remained stable despite a substantial non-biological increase in overall numbers, suggests that additions to the indigenous population have largely been drawn from the general population across Tasmania. This is especially so given that a net interstate migration loss of indigenous people from Tasmania has been recorded in the past two intercensal periods (Taylor and Roach 1994: 5; ABS 1998b: 24). Not surprisingly, then, the distribution of the indigenous population is broadly in line with the rest of the population (Table 2), although those identifying as indigenous in the census remain less likely to be found in Hobart and more likely to be resident in another urban centre or in a rural part of the State.

Table 1. Indigenous population counts by section-of-State: Tasmania, 1991 and 1996^a

	1991		1996		1991-96	
	No.	Per cent	No.	Per cent	Net change	Per cent change
Major urban	1,829	20.6	2,809	20.3	980	53.6
Other urban	4,276	48.1	6,773	48.8	2,497	58.4
Rural	2,776	31.3	4,272	30.8	1,496	53.9
Total	8,881	100.0	13,854	100.0	4,973	56.0

^a. The standard four-way section-of-State taxonomy for Tasmania is reduced to three by amalgamating data for bounded localities and the rural balance to create a single 'rural' category (0-999 persons).

Table 2. Non-indigenous population counts by section-of-State: Tasmania, 1991 and 1996

	1991		1996		1991-96	
	No.	Per cent	No.	Per cent	Net change	Per cent change
Major urban	125,303	28.2	122,827	27.6	-2,476	-2.0
Other urban	197,244	44.4	200,752	45.1	3,508	1.8
Rural	121,421	27.4	121,166	27.2	-255	-0.2
Total	433,968	100.0	444,745	100.0	10,777	2.5

The working-age population, 1991 and 1996

The 1996 Census count of indigenous people aged 15 years and over reveals an increase of 58 per cent since 1991, from 5,197 to 8,225. This rate of increase was far greater than the 2 per cent recorded for non-indigenous adults and was substantially above expectation based on projections from the 1991 Census. However, a more appropriate basis for estimating growth in the number of indigenous adults is provided by experimental population estimates produced by the ABS (1998b). These are constructed by a series of adjustments to the 1996 count. First, by excluding indigenous persons whose parents were both born overseas; second, by assuming indigenous status for a pro rata allocation of non-respondents to the census question on Aboriginal and Torres Strait Islander origins; third, by correcting for net undercount of the indigenous population; finally, by adjusting the number of persons aged zero on the basis of registered births (ABS 1998b).

Reconstructing the 1991 population

Conceptually, the 1996 Census-derived population may be viewed as the best estimate yet of an ultimately unknown number of individuals of Aboriginal or Torres Strait Islander origins. In Tasmania, as elsewhere in Australia, the number of individuals who could respond to the open-ended question on Aboriginal and Torres Strait Islander origins is, in all probability, very substantial given the expansionary effects on a self-identified population of inter-marriage over generations. In order to gain a meaningful analysis of intercensal change in such a population it is essential to assume that those revealed in the 1996 Census are drawn from this pool and that they include individuals who, for whatever reason, did not appear in the 1991 Census as indigenous. Realistically, for analysis of change in population characteristics, these latent numbers should be restored to the 1991 population. While the census provides no information which can be used to achieve this directly (although it could if census unit records were linked over time), it is possible to derive an estimate of the 1991 working-age population using the revised 1996 population as a base. The standard demographic

technique for reconstituting the initial population in this way is through reverse survival (Shyrock, Siegel and Associates 1976: 262-3, 418-21) and this is applied by the ABS to generate new upwardly revised estimates of the 1991 population (ABS 1998b).

Application of the reverse survival procedure in this context involves taking the population as counted in 1996, disaggregated by age and sex, 'younging' this population by five years and making allowance for deaths that occurred over the intercensal period, to estimate the population in each age-sex group in 1991 (Taylor and Bell 1998). Thus, the population of males aged 20-24 in 1991 is estimated by applying reverse survival ratios to the male population aged 25-29 in 1996. This is essentially the reverse of the standard procedure used in making projections of future population by the cohort-component method, although it should be noted that ABS's application of the reverse survival procedure to reconstitute the earlier population assumes that the population is closed to interstate migration.

As indicated in Table 3, this procedure raises the 1991 working-age population from the 5,197 revealed in the census count to an estimate of 7,914. Thus, the estimated increase in the indigenous working-age population over the intercensal period was only 1,190, or 15 per cent, though this was still substantially above the 2 per cent growth rate estimated for the non-indigenous adult population. This differential growth was mostly due to much higher net interstate migration loss among non-indigenous Tasmanians. It is also likely to reflect the inevitable outcome of demographic processes set in train through high indigenous fertility in the early 1970s (Gray and Tesfaghiorghis 1993; Gray 1997). From a policy perspective, the key implication to note is that the rate of indigenous employment growth over the intercensal period would need to have been greater than for non-indigenous people, and at least equivalent to the growth in the indigenous working-age group, simply to maintain the indigenous employment/population ratio at its 1991 level. The retrogressive nature of this connection is indicated by the fact that employment growth could be relatively high but still have little appreciable impact on labour force status.

Table 3. Estimated population aged 15 years and over: indigenous and non-indigenous people in Tasmania, 1991 and 1996

	1991	1996	1991-96	
			Net change	Per cent change
Indigenous	7,914	9,104	1,190	15.0
Non-indigenous	350,962	359,513	8,551	2.4

Source: ABS 1996b: 14, 1998b: 9-10.

Labour force status, 1991 and 1996

In examining change in the labour force status of indigenous people, census count data are utilised for two reasons. First, to maintain consistency with data from previous analysis of indigenous economic status in Tasmania (Taylor and Roach 1994). Secondly, to enable an examination of change by section-of-State, a geographic level for which estimated resident population data are not available. It should also be noted that labour force status is expressed as a proportion of the 15-64 years old working-age group. This is because of the much older age profile of the non-indigenous population which distorts any comparison of labour force participation rates.

Three standard social indicators are used for this purpose: the employment rate, representing the percentage of persons aged 15-64 years who indicated in the census that they were in employment during the week prior to enumeration; the unemployment rate, expressing those who indicated that they were not in employment but had actively looked for work during the four weeks prior to enumeration as a percentage of those in the labour force (those employed plus those unemployed); and the labour force participation rate, representing persons in the labour force as a percentage of those of working age.

Table 4. Labour force status of indigenous and non-indigenous people in Tasmania, 1991 and 1996

	Indigenous		Non-indigenous	
	1991 (1)	1996 (1)	1991 (2)	1996 (2)
Employment rate	49.0	50.2	61.5	62.2
Unemployment rate	25.4	20.5	13.3	10.8
Participation rate	65.6	63.2	70.9	69.8
Ratios (1/2):				
Employment rate	0.80	0.81		
Unemployment rate	1.90	1.89		
Participation rate	0.92	0.91		

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

The number of indigenous people recorded by the census as employed increased by 64 per cent from 2,417 in 1991 to 3,954 in 1996. However, in the context of a much higher count of working-age population the overall employment rate remained essentially unchanged at around 50 per cent (Table 4). This was also the case in 1986 (Taylor and Roach 1994: 6). The employment rate for the non-indigenous population was also stable over the same period at around 62 per cent, which means that the indigenous employment rate remained at 80 per cent of the level recorded for non-indigenous adults. At the same time, it should be noted that this relative stability in the indigenous employment rate has occurred against a background of sustained higher growth in the indigenous population of

working age. Also in line with the trend generally in Tasmania, the census-derived indigenous unemployment rate was lower in 1996 (at 20 per cent) compared to 1991 at 25 per cent (Table 4), but the unemployment level recorded for indigenous people was still twice that recorded for non-indigenous adults.

It is important to qualify these observations by pointing out that they reveal nothing about the change in status of the original indigenous population identified by the 1991 Census. All that can be said is that the employment rate among those who identified as indigenous in 1996 was similar to the rate observed for those recorded as indigenous in 1991, while the unemployment rate for the 1996 population was somewhat lower. While these facts have cross-sectional value, the more interesting and vital policy question of whether the labour force status of the original 1991 population was worse, better or no different in 1996, is simply beyond analytical reach in the Tasmanian context where large non-biological increase in the population has occurred. Due to the lack of alternative sources of information on indigenous employment outcomes, this is a serious public policy deficiency.

Section-of-State and gender variations

One of the features of indigenous labour force status observed from the 1991 Census was a degree of difference between urban and rural populations, especially among males. Contrary to what might be expected, the best labour market outcomes for indigenous males were reported in rural areas. Among other males, little variation in labour force was observed by section-of-State (Taylor and Roach 1994: 9-10). This difference in the pattern of outcomes was still apparent in 1996 (Tables 5 and 6), even though the employment rate reported for indigenous males in Hobart was higher in 1996 and the unemployment rate was substantially lower. Less variation by section-of-State is evident among indigenous females, although non-indigenous females in Hobart tend to have higher employment and lower unemployment rates than their counterparts elsewhere in the State. The key structural difference in labour force status, of course, remains between males and females, regardless of location. While indigenous females still report a much lower employment and participation rate than indigenous males, their unemployment rate is also lower, though substantially above that of other females.

Table 7 shows the net change between 1991 and 1996 in the numbers of indigenous and non-indigenous people recorded as employed in each section-of-State. It indicates that the rate of employment increase was slightly higher in urban areas than in rural areas, although the distribution of employed persons by section-of-State remained essentially unaltered. Greater change was evident in the composition of employment by sex with the rate of female employment increasing more rapidly than for males and the female share of total indigenous employment rising (Table 8).

Table 5. Labour force status of indigenous people by section-of-State and sex: Tasmania, 1991 and 1996

	Major urban		Other urban		Rural		Total	
	1991	1996	1991	1996	1991	1996	1991	1996
Males								
Employment rate	56.9	58.3	55.3	54.4	64.5	62.0	58.8	57.7
Unemployment rate	26.5	20.3	29.9	25.9	22.0	19.0	26.4	22.5
Participation rate	77.4	73.2	78.9	73.4	82.7	76.6	79.9	74.4
Females								
Employment rate	41.7	45.5	36.9	41.1	40.0	44.6	38.9	43.1
Unemployment rate	24.0	15.9	24.6	19.4	22.0	16.5	23.7	17.7
Participation rate	54.9	54.1	48.9	51.0	51.3	53.4	51.0	52.4

Table 6. Labour force status of non-indigenous people by section-of-State and sex: Tasmania, 1991 and 1996

	Major urban		Other urban		Rural		Total	
	1991	1996	1991	1996	1991	1996	1991	1996
Males								
Employment rate	70.8	70.3	70.0	69.1	72.0	70.7	70.8	69.9
Unemployment rate	13.1	11.3	15.6	13.1	14.5	11.6	14.6	12.2
Participation rate	81.5	79.3	83.0	79.5	84.2	80.0	82.9	79.6
Females								
Employment rate	56.5	59.4	49.4	51.8	51.4	54.2	52.0	54.6
Unemployment rate	9.8	7.8	13.0	10.3	11.3	8.5	11.5	9.1
Participation rate	62.6	64.5	56.8	57.7	57.9	59.3	58.8	60.0

Table 7. Employment among indigenous and non-indigenous people by section-of-State: Tasmania, 1991 and 1996

	Per cent employed		Change	
	1991	1996	Net	Per cent
Indigenous				
Major urban	20.8	21.6	352	70.0
Other urban	44.7	45.4	740	70.0
Rural	34.5	33.0	448	52.3
Total	100.0	100.0		
Total number	2,417	3,954	1,537	63.6
Non-indigenous				
Major urban	29.8	29.2	-456	-0.9
Other urban	42.4	43.2	2,146	2.9
Rural	27.9	27.7	605	1.3
Total	100.0	100.0		
Total number	173,494	175,789	2,295	1.3

Table 8. Employment among indigenous and non-indigenous people by sex: Tasmania, 1991 and 1996

	Per cent employed		Change	
	1991	1996	Net	Per cent
Indigenous				
Males	60.6	56.4	766	52.3
Females	39.4	43.6	774	81.4
Total	100.0	100.0	1,540	63.7
Non-indigenous				
Males	57.8	55.9	-2,192	-2.2
Females	42.2	44.1	4,487	6.1
Total	100.0	100.0	2,295	1.3

Interpreting indigenous employment change

On the face of it, these results from the 1996 Census regarding indigenous employment growth suggest a good news story. With a relative rate of employment expansion at the level implied by this intercensal change, the policy goal of statistical equality in employment for indigenous people begins to look more achievable, contrary to earlier informed assessment (Sanders 1991; Taylor and Altman 1997). However, this is an illusion since it is not clear whether any aggregate change observed in population characteristics over time involves an alteration in the circumstances of the original population or whether it merely reflects the particular features of individuals appearing in the population for the first time.

The importance of this dilemma is best illustrated by a simple hypothetical situation. If, for example, all the intercensal additions to the 1991 indigenous adult population of Tasmania had an employment rate equivalent to that recorded for the non-indigenous adult population in 1996 (62 per cent), then the number of indigenous persons employed in 1996 should have been higher by 340. The fact that it wasn't would indicate that employment among the original (1991) group would have fallen by this amount. 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 in respect of 'different' populations. While there is some scope for estimating the compositional impact of newcomers to the population using fixed population characteristics, such as age left school (Eschbach, Supple and Snipp 1998; Hunter 1998), for characteristics that are variable over time, such as employment status, this is simply not possible.

One correction to employment change data that can, and should, be made, however, is to establish a more realistic time series by estimating separate components of employment at each census date. As a first step in this process,

compensation for the effect of excess population increase is achieved by using the revised ABS estimate of the 1991 working-age population to re-align the 1991 employment level with an equivalent estimation for 1996. A further step is to then estimate the contribution made to employment growth by non-market related government program interventions. This 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.

Revising employment change

Because reverse survival inevitably alters the end-year age distribution, age-specific employment rates from the 1991 Census are applied to the new estimated 5-year age distribution of the working-age group to generate an upward adjustment to the census-derived employment figure. Thus, as shown in Table 9, employment in 1991 rises from the census count figure of 2,404 to an estimated 3,709. Likewise, the 1996 employment figure from the census is adjusted to align with the 1996 ERP. This produces an estimate of employment in 1996 of 4,373. Using this adjusted estimate of 1991 employment as the new base, the intercensal rise in the number of indigenous people employed becomes 664, representing a increase of 18 per cent. While this is a considerably lower growth rate than the 63 per cent increase obtained from a direct comparison of 1991 and 1996 Census employment figures, it is nonetheless still considerably above the general level of employment growth recorded in the State. However, a proportion of this additional growth can be accounted for by government program intervention and this contribution has also to be estimated.

Table 9. Estimated indigenous employment in Tasmania, 1991 and 1996

	1991		1996
	Census count	Estimate from reverse survival	ERP
Population aged 15+	5,197	7,914	9,104
Employed	2,404	3,709	4,373

Program intervention and employment growth

An important consideration when accounting for variation in the number of indigenous people recorded as employed is the fact that administrative changes in the way the State handles entitlements for the unemployed and those not in the labour force can effect a change in their labour force status as recorded by the census. Such program influences in Tasmania over the period under consideration here derived primarily from participation in Department of Employment Education Training and Youth Affairs (DEETYA) labour market programs.

According to the ABS, the labour force status of labour market program participants is recorded by the census using the standard question about activities in the week prior to enumeration (ABS 1995b: 8). Those in programs involving a form of wage subsidy or job placement are likely to regard themselves as having undertaken paid work, and hence employed. Those in training, but with no subsidy, are more problematic. However, if these people held a part-time job along with their training then they were also likely to be regarded as employed. According to the Indigenous Employment Initiatives Branch of DEETYA, labour market programs that were likely to have contributed to employment numbers in this way in 1996 included various elements of the Training for Aboriginals Program (TAP), Apprenticeship Wage Subsidies, Job Clubs, National Training Wage Traineeships, the New Work Opportunities Program, Jobskills Projects, and the various Jobtrain and Jobstart programs.

A question remains as to which of these programs actually generated additional employment for indigenous people. For example, some individuals in wage subsidised employment may have secured their position regardless. However, it is more likely that wage subsidies offer an important competitive edge for indigenous people in the labour market given their multiple disadvantage in securing employment (ABS/CAEPR 1996). Equally, it seems that indigenous DEETYA clients in wage subsidy programs would, in all probability, substitute for non-indigenous employees given their small share of the population. This would serve to augment indigenous employment outcomes.

One pointer to this positive interpretation of the possible impact of program intervention is provided by the fact that the proportion of the indigenous population in Tasmania aged 15 years and over that was employed fell between 1991 and 1994 from 46 per cent to 44 per cent (ABS 1996a: 29), but over the subsequent two years to 1996 it increased to 48 per cent. Accordingly, over the same two-year period the unemployment rate fell dramatically from 29 per cent to 20 per cent. Such a positive shift in labour force status is unlikely to have been produced over this space of time by market forces alone, especially during a period of poor outcomes generally in the labour market. Given the coincidence in timing, the suggestion here is that this improvement was associated with the introduction of *Working Nation* initiatives launched by the Labor government in May 1994. A key feature of these initiatives was the Job Compact which gave people in receipt of unemployment allowances for more than 18 months the guarantee of a job or training opportunity. Early interventions, case management and the National Training Wage were also major features of *Working Nation* programs.

The fact that indigenous people have relied heavily on government program support for employment creation is well documented (Sanders 1993; Taylor and Hunter 1996; Altman 1997; Taylor and Altman 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 full-time or part-time job of any kind in the week

prior to enumeration. The contribution of these to employment growth is estimated using DEETYA administrative data as shown in Table 10.

Table 10. Estimates of mainstream indigenous employment in Tasmania, 1991 and 1996

	1991	1996
Total employed	3,709 ^a	4,373 ^b
Employed in labour market programs	115 ^c	377 ^d
Employed in mainstream	3,594	3,996
Mainstream employment/population ratio	45.4	43.9
Net change in mainstream employment	402 (2.2 per cent per annum)	

Note: a. Estimated by applying 1991 age-specific employment rates to the 1991 ERP derived from reverse survival.

b. Estimated by applying 1996 age-specific employment rates to the 1996 ERP.

c. Includes placements in DEETYA programs A20, A30, A31, A42, H15, U13, W11, W12, W13, W15, W16, W20, W33.

d. 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.

Labour Market program codes: A20—Major Employment Strategies; A30—Job Skills Development (TAP Private Sector); A31—Work Experience/WIP; A42—Enterprise Employment Assistance; F12 and F13—New Enterprise Incentive Scheme Formal Training; G20—Group Employment Program; H15—Disabled Apprenticeships; H42 and H43—Apprenticeship Wage Subsidy; N20, N21, N42, N43—National Training Wage Program; O11—New Work Opportunities Program; S11—Job Skills Umbrella Projects; U13—SAP; W11, W12, W13, W15, W16, W20, W33, W40, W41, W42, W43—Jobstart.

At the time of the 1991 Census, a total of 115 indigenous people were in such programs and by 1996 this number had risen to 377. By subtracting these estimates of those employed via placement in a labour market program from the adjusted figures of total employment in each year, a residual estimate of non-program dependant mainstream employment is produced. As shown in Table 9, this reveals an estimated net intercensal increase in mainstream employment of just over 400 positions representing a rate of increase of 2.2 per cent per annum. With growth in the estimated working-age population at 3 per cent per annum, this results in a lowering of the mainstream employment/population ratio from 45.4 to 43.9. If these mainstream employment rates are compared with equivalent non-indigenous rates, by excluding non-indigenous labour market program participants as well, then the ratio of indigenous to non-indigenous employment rates is estimated to have been stable over the intercensal period at around 0.73.³ Thus, without the prop of program intervention in the labour market, the indigenous employment rate in Tasmania would have been less than three quarters of the level recorded for the non-indigenous population by the 1996 Census with no effective change evident since 1991.

Income status, 1991 and 1996

A key goal of government policy is to achieve an improvement in income levels for indigenous Australians to a point where they are equal to those of the general population. Since census data are the primary source of information on the individual incomes of indigenous people, the same difficulties encountered in the analysis of change in employment status also apply when assessing income levels. Consequently, the relative income status can only be established cross-sectionally. The more important issue of whether individual incomes are rising or falling cannot be addressed using this source of information.

Other conceptual problems bedevil the analysis of income data. For one thing, the census collects and reports information on gross income 'usually received each week' with annual income equivalents provided as a guide. For many people, the flow of income is intermittent and accurate depiction of a usual weekly income may be difficult. Aside from regular income flows from employment or welfare payments, there is the likelihood of sporadic employment income as well as windfall gains. On the debit side, there may be occasional reductions of income due to loss of employment or cash transfers to others. Taken together, these flows can create a highly complex picture, even over a short space of time, and one that census methods of data gathering are likely to misrepresent.

A further point to note is that census data report income as a range within an income category with the highest category left open-ended. Consequently, actual incomes have to be derived. In estimating total and mean incomes, the mid-point for each income category is used on the assumption that individuals are evenly distributed around this mid-point. The open-ended highest category is problematic, but it is arbitrarily assumed that the average income received by individuals in this category was one-and-a-half times the lower limit of the category (Treadgold 1988). Clearly, estimates of mean incomes will vary according to the upper level adopted.

Despite these caveats, the census remains the most comprehensive source of income data derived from a consistent methodology and the only source available for indigenous people. The gross income reported is intended to include family allowances, pensions, unemployment benefits, student allowances, maintenance, superannuation, wages, salary, dividends, rents received, interest received, business or farm income and worker's compensation received. Apart from enabling comparison between population groups, individual and household income can be established. Also, by cross-tabulating census data on labour force status and income a basis for distinguishing employment income from non-employment income is provided, the latter being a proxy measure of welfare dependence.

Figure 1 describes the relative income distribution for indigenous adults in Tasmania in 1996. A clear income gap is evident at either end of the distribution with the bulk of indigenous incomes (47 per cent) reported at the lower end (below \$20,000 per annum) compared to 38 per cent of incomes for non-indigenous

people. At the higher end of the income range, 26 per cent of indigenous incomes were above \$40,000 per annum compared to 39 per cent of non-indigenous incomes. Despite these differences, the income distribution for indigenous people in Tasmania resembles that of the rest of the population more closely than in any other State and the Northern Territory. However, apart from indicating that aggregate indigenous incomes in Tasmania are higher than the national indigenous average, this also results from the fact incomes generally in Tasmania are below the national average (ABS 1998c: 121).

Figure 1. Annual income distribution of indigenous and non-indigenous adults: Tasmania, 1996

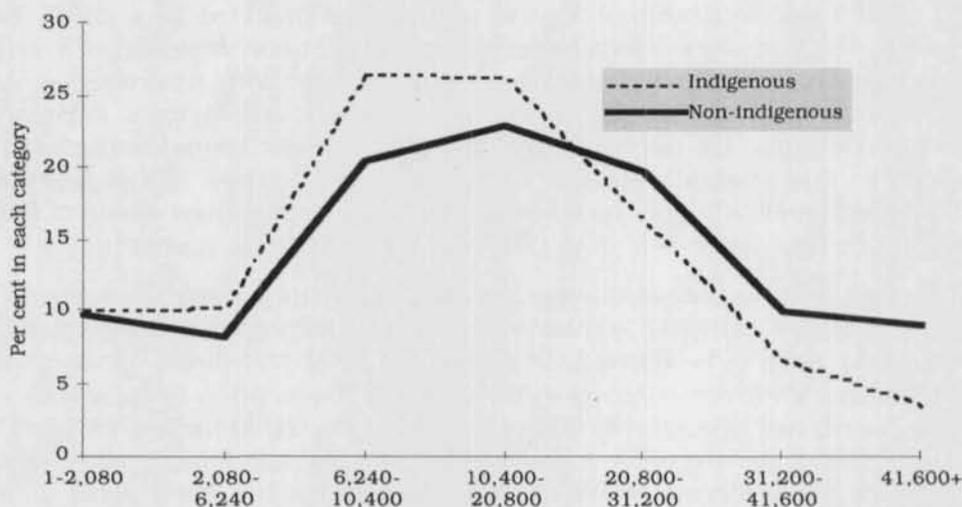


Table 11. Income status of indigenous and non-indigenous people in Tasmania, 1991 and 1996

	Income (\$000s)			
	Indigenous		Non-indigenous	
	1991	1996	1991	1996
Mean	13.4	15.3	17.2	19.6
Median	11.2	11.5	14.4	15.3
Ratio of indigenous/ non-indigenous				
Mean	0.78	0.78		
Median	0.78	0.75		

Overall, income relativities between indigenous and non-indigenous adults were the same in 1996 as they were in 1991 (Table 11). Mean income for the indigenous adult population was \$15,300 in 1996, up from \$13,400 in 1991. This produces a ratio of mean indigenous income to that of the rest of the population of 0.78 in 1996, which is identical to that calculated for 1991. Median income figures appear somewhat lower because of the different bases for calculation, although the income ratios reveal the same outcome—that collective income for the census-identified indigenous population is steady at a level around three-quarters that of the majority population. However, the fact that the indigenous median income remained relatively static while average income increased suggests that there has been a stretching out of the income distribution at the upper end of the tail due to the addition of more individuals on high incomes. In short, the gap between rich and poor among those identifying as indigenous in the census was greater in 1996.

Of course, the apparent lack of improvement in relative income may simply be the consequence of newly-identifying individuals with higher incomes joining the 1991 Census-identified population. In that event, income for the latter group would have declined relatively. However, it is equally possible that the reverse occurred. The fact is, neither trend can be established. Whatever the case, it is undeniable that, as a group, those identifying as indigenous in the census continue to predominate among low income Tasmanians. Given the much lower level of mainstream employment outlined above, this is to be expected.

Income change by section-of-State

Despite the fact that the labour force status of indigenous people in rural areas was somewhat higher than in urban areas, average incomes are highest in Hobart in line with the pattern observed generally (Table 12). It is the other urban areas of Tasmania that seem to record the lowest economic status by persistently combining the lowest employment rate with the highest unemployment and lowest average incomes. In terms of comparability with non-indigenous incomes, however, the income gap is greatest in Hobart (a ratio of means of 0.77) and smallest in rural areas (a ratio of 0.81), although compared to the pattern of indigenous incomes in other jurisdictions the key feature in Tasmania is the relative lack of differentiation by section-of-State.

Table 12. Income status of indigenous and non-indigenous people by section-of-State: Tasmania, 1991 and 1996

	Income (\$000s)							
	Major urban		Other urban		Rural		Total	
	1991	1996	1991	1996	1991	1996	1991	1996
Indigenous								
Mean	14.0	16.3	13.1	15.0	13.5	15.3	13.4	15.3
Median	11.5	12.8	11.0	11.2	11.3	11.2	11.2	11.5
Non-indigenous								
Mean	18.4	21.3	16.8	18.9	16.6	19.0	17.2	19.6
Median	15.6	17.2	14.2	14.8	13.6	14.6	14.4	15.3
Ratio of indigenous/ non-indigenous								
Mean	0.76	0.77	0.78	0.79	0.82	0.81	0.78	0.78
Median	0.74	0.75	0.78	0.76	0.83	0.77	0.78	0.75

Table 13. Income status of indigenous and non-indigenous people by sex: Tasmania, 1991 and 1996

	\$ (\$000s)					
	Males		Females		Total	
	1991	1996	1991	1996	1991	1996
Indigenous						
Mean	16.5	17.8	10.1	12.9	13.4	15.3
Median	15.4	14.3	8.2	10.0	11.2	11.5
Non-indigenous						
Mean	21.8	24.3	12.4	14.9	17.2	19.6
Median	19.9	21.4	9.6	11.5	14.4	15.3
Ratio of indigenous/ non-indigenous						
Mean	0.76	0.73	0.82	0.87	0.78	0.78
Median	0.77	0.67	0.86	0.87	0.78	0.75

Income change by sex

Far more differentiation is evident between indigenous males and females in Tasmania than is the case in the population generally (Table 13). However, the gender gap in average incomes for indigenous people (\$17,800 for males in 1996 and \$12,900 for females) is far less than among their non-indigenous counterparts (\$24,300 for males compared to \$14,900 for females). One implication is that the ratio of average income for indigenous males compared to that of non-indigenous males (0.73) is lower than the equivalent ratio between indigenous females and other females (0.87). Furthermore, the ratio between males was lower in 1996 whereas the female ratio was higher.

Employment income and welfare dependence

An important issue with regard to the economic impact of employment change concerns the relative contribution of employment to total income relative to the contribution made from other sources. This provides some indication of the ability of regional populations to provide for their own welfare as opposed to depending on State support (Altman and Smith 1993). By cross-tabulating employment status against income, a direct measure of the income return from employment can be derived. Likewise, the income of those who are unemployed or not in the labour force can be used as a proxy measure of welfare dependence. Average incomes calculated on this basis are shown in Table 14.

Table 14. Total income of indigenous and non-indigenous people by labour force status: Tasmania, 1991 and 1996

	1991		1996	
	Income (\$million)	Per cent	Income (\$million)	Per cent
Indigenous				
Employed	44.1	73.0	86.5	74.5
Unemployed	6.5	10.9	7.7	6.6
Not in labour force	9.7	16.1	21.9	18.9
Total	60.4	100.0	116.1	100.0
Non-indigenous				
Employed	3,839.9	84.7	4,614.6	85.2
Unemployed	213.7	4.7	170.5	3.1
Not in labour force	481.1	10.6	630.6	11.6
Total	4,534.8	100.0	5,415.7	100.0

Overall, there has been a slight increase in the contribution of employment income to total income. In 1991, 73 per cent of income for indigenous people was derived from employment. By 1996, this proportion had risen to 74.5 per cent. However, compared to the equivalent figure of 85.2 per cent for the non-indigenous population this means that a higher proportion of indigenous people (25 per cent compared to 15 per cent) remain dependant on non-employment sources of income.

At the same time, it may also suggest that employment continues to be concentrated in relatively low-wage occupations. This is of crucial policy significance as it signals that improvements in labour force status alone are not sufficient to enhance income status. Of equal importance to job creation is the nature of the work involved and the income it generates.

Actual shifts in mean employment and non-employment incomes are shown in Table 15. In 1996, the average income for indigenous employees stood at \$22,250. While this was higher than in 1991, income levels for all others in employment also rose. Consequently, the ratio of mean employment income for

indigenous people compared to others remained roughly the same at around 0.84. As for non-employment income, the mean individual income of unemployed indigenous people in 1996 was \$7,780 and \$8,140 for those not in the labour force. Compared to income from employment, these figures have remained essentially unaltered with the result that the income gap between those indigenous people in work and those more directly dependant on income transfers from the State has widened.

Table 15. Mean employment/non-employment income of indigenous and non-indigenous people: Tasmania, 1991 and 1996

Labour force status	Mean income (\$000s)		Change	
	1991	1996	Net	Per cent
Indigenous				
Employed	18.88	22.25	3.4	17.8
Unemployed	8.63	7.78	-0.9	-9.8
Not in labour force	7.08	8.14	1.1	15.0
Total	13.51	15.36	1.9	13.7
Non-indigenous				
Employed	22.83	26.51	3.7	16.1
Unemployed	8.61	8.21	-0.4	-4.6
Not in labour force	6.95	7.86	0.9	13.1
Total	17.29	19.61	2.3	13.4
Ratio of indigenous/ non-indigenous				
Employed	0.83	0.84	0.01	1.49
Unemployed	1.00	0.95	-0.05	-5.46
Not in labour force	1.02	1.04	0.02	1.66
Total	0.78	0.78	0.00	0.24

Policy implications

Although census data remain the primary source of information on the economic status of indigenous Australians, and certainly the most comprehensive, its utility as a tool of public policy analysis is diminished in Tasmania. This is because the economic characteristics of indigenous people who identify at the beginning of the intercensal period can not be re-calibrated at the end of the period. As a consequence, the fundamental question about whether circumstances for indigenous Tasmanians are better or worse over time cannot be answered. Less concern about this has been expressed using cohort data at the national scale due to a lack of indication of significant intercensal compositional change in selected fixed indicators (Hunter 1998). However, in a growing number of regional situations where non-biological population increase has been substantial, as in Tasmania, variable indicators such as employment and income are increasingly less useful as a measure of change in circumstances. The best that can, and

should, be done in this event is to estimate aggregate characteristics for the initial population using ABS experimental population estimates derived from reverse survival procedures. This, at least, has the effect of properly aligning data levels for time series analysis.

At a conceptual level, it should be noted that as long as the census question on Aboriginal and Torres Strait Islander origins remains the sole means of comprehensively defining the indigenous population, then it is possible that the numbers identified in this way will continue to rise steadily due to improved enumeration, changes in identification and the flow-on effects of inter-marriage (Gray 1997; ABS 1998d). At a time of growing pressure for targeted service delivery that is cost-effective and based on demonstrated need, this prospect of an ever-expanding population requires careful consideration. The main drawback here seems to be over-reliance on the census as the main source of vital information regarding the economic circumstances of indigenous people as this is increasingly unable to provide a long-term perspective for a population that is self-identified. The optimal solution to this problem would be the establishment of a confidentialised link between unit record data from one census to the next, along the lines outlined by submissions to the recent House of Representatives' report on the inquiry into name-identified census forms (Commonwealth of Australia 1998a: 98-103). Unlike some requests to this inquiry, the retention of names would not be required, simply a means of tracking anonymous individuals over time.

More realistic options for measuring change over time would therefore appear to fall back onto the different arms of government charged with responsibilities for delivering citizen entitlements and special programs. With governments rhetorically committed to benchmarking the achievement of enhanced outcomes for indigenous people the question of how will this be measured is looming as a key issue (Council for Aboriginal Reconciliation 1998). Apart from the census, there has rarely been an adequate vehicle for answering some of the most basic questions of public policy concern such as: how many indigenous people are employed? where? in what occupations? what qualifications do they have? how much do they earn? are they adequately housed? More importantly, the issue of how individuals are faring over time has been left to drift, despite notable exceptions such as the DEETYA longitudinal survey of jobseekers (although results from this are yet to be seen). It has to be asked, in situations such as in Tasmania, whether census data are any longer adequate to the task of profiling changing indigenous client needs and assessing the effectiveness of policies designed to achieve improvements? If they are not, what measures should be taken to fill the statistical void?

Leaving aside these complexities of data collection, a key policy question that can still be addressed from cross-sectional examination of census data is whether growth of the population identified by the census question on indigenous origins has resulted in any alteration at the aggregate level in the absolute and relative economic status of indigenous people in Tasmania. Results from the above analysis regarding employment and income status suggest that it has not.

In assessing this, the first point to note is that change in social indicators for the period 1986-91 (Taylor and Roach 1994), and now for the 1991-96 period, provides a ten-year perspective on the economic status of indigenous people in Tasmania. This essentially covers a period of substantial efforts by the former federal Labor Government to enhance employment outcomes and income levels.

Over this period, each indigenous population identified by the census in Tasmania reports a similar level of absolute and relative economic status. On the one hand, the number of indigenous people recorded as employed has risen, but there has been no narrowing of the employment gap between the census-derived indigenous population and the rest of the State's population. The indication is that growth in mainstream, or non-program linked employment, has barely kept up with population growth and that the true level of indigenous employment has been static for some time at around three-quarters of that recorded for other Tasmanians.

The other consistent feature of the past decade is that the relatively low income status of indigenous people has remained effectively unaltered. The fact that employment incomes also emerge as persistently lower than for other wage and salary earners underlines the need for quality, as well as quantity, in job acquisition if the overall aim of government policy to raise economic status is to be achieved. From a labour market perspective, one difficulty continues to be the substantial proportion of indigenous adults of working age who are not in the labour force. This is especially so among females and accounts, in large part, for the persistence of relatively high levels of welfare dependence.

Against this background, the key economic policy issue facing indigenous people is a re-orientation towards private sector activities as the primary source of future employment growth. This trend appears inevitable given the downsizing of public sector opportunities and the fiscal squeeze on many indigenous organisations and areas of the mainstream public sector where indigenous people have, to date, found an employment niche. A parallel development of substantial significance is the replacement of the Commonwealth Employment Service by contracted employment provision agencies and the dismantling and restructuring of government employment assistance. Under the new Job Network system, intensive assistance is available to job seekers who encounter the greatest employment placement difficulty. In this assessment Aboriginal and Torres Strait Islander status assumes considerable weighting as do other characteristics, such as duration of unemployment and low educational status, which will 'favour' indigenous people (Commonwealth of Australia 1998b). However, just what effect these new arrangements will have on employment outcomes for indigenous people remains to be seen. As it stands, there are 28 Job Network member agencies registered in Tasmania, 15 in Hobart and Southern Tasmania and 13 in North Tasmania and the Mersey-Lyell region. None of these are indigenous organisations.

It seems inevitable that this privatisation of employment services will produce greater fluidity in the labour market circumstances of indigenous people.

As far as further engagement with the private sector is concerned, research based on the 1994 National Aboriginal and Torres Strait Islander Survey suggests that some of the issues likely to be encountered include a possible lowering of average incomes and the likelihood of less job security, more casual/part-time work and fewer opportunities for women and older people (Taylor and Hunter 1997).

In terms of anticipating where opportunities in the private sector will be generated, an important consideration in Tasmania is the continued widespread distribution of the population with a focus on residence away from Hobart. In this context, it is important to ask how the broad strategy of raising employment levels might be targeted to suit particular regional and local circumstances. An initial requirement is for detailed regionally-based quantitative assessments of the supply of, and demand for, indigenous labour for different economic activities that either exist already or that may be created at the local level. Only then, can the appropriate mix of resources for enterprise development and training be appropriately channelled. At the whole of government and industry level this is an obvious role for the Tasmania Area Consultative Committee, but there should also be scope for indigenous organisations acting as employment providers within the new Job Network and engaging in the development of employment and training strategies. It is important to note, however, that even if indigenous people were to find employment in sufficient numbers to satisfy growing demand, the enhancement of occupational status, and not just labour force status, will be necessary to impact on the persistent gap in average incomes

Notes

1. It is worth noting that the census question refers to 'origins' while the official Commonwealth definition refers to 'descent'. These may well be construed differently by respondents to official statistical collections. I am grateful to Dr Len Smith of the Australian National University for pointing this out.
2. The term, error of closure, derives from the basic demographic balancing equation and refers to the amount needed to make intercensal change in numbers balance after accounting for births, deaths and migration. Error of closure is usually small, but in populations defined by self-identification it is often large due to shifts in the propensity to so identify. For further discussion see Passel (1997).
3. This is based on recalculating the non-indigenous employment rates in 1991 and 1996 using data supplied by DEETYA on non-indigenous participation in job-related labour market programs. This indicates that 574 non-indigenous Tasmanians were in such programs in 1991 and 2,238 in 1996.

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