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*Comparative socio-economic profile of Aboriginals, Torres Strait Islanders
and persons of mixed Indigenous origin of Australia: a census based
analysis, 1996*

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**Views expressed in this paper are those of the author and do not necessarily reflect the
views of the Aboriginal and Torres Strait Islander Commission (ATSIC).**

Abstract

Since 1971, the first census taken after the passing of the referendum which permitted the inclusion of indigenous population figures in the official population counts, the Australian Bureau of Statistics (ABS) used the definition of an Indigenous person as one who is of Aboriginal or Torres Strait Islander descent and who identify himself /herself as such. This definition produces two population subgroups: Aborigines and Torres Strait Islanders. Although six five-yearly population censuses have been conducted since 1971, none has produced indigenous population counts consistent with each other. The inconsistency of the data arises from both improved census coverage and increased tendency for indigenous persons to self-identify as such in the successive censuses. While using the same statistical definition for indigenous identification, the ABS in 1996, allowed the respondent to choose one of the three categories: Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander origin. The inclusion of the new coding category effectively nullified any meaningful comparison of trends in socioeconomic and demographic characteristics between Aboriginal and Torres Strait Islander populations. This changed coding procedure resulted in a creation of a numerically large "third Indigenous group", which has ancestral links with both Aboriginal and Torres Strait Islander groups. The objective of this paper is to compare the socioeconomic and demographic characteristics of the persons of "mixed indigenous origin" as identified in the 1996 Census with those of the Aboriginal and Torres Strait Islander peoples. Comparisons focus on analysis of a number of key indicators of population characteristics such as geographic and age-sex distributions, cumulative fertility, school attendance, employment, unemployment, industry and occupational distribution and personal income.

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Background

In 1970, the Department of Aboriginal Affairs developed a definition of an aboriginal person to be used in identifying an Indigenous person for official policy. This definition had three elements: (a) an Indigenous person is a person of Aboriginal or Torres Strait Islander origin, (b) who identifies himself (herself) as such, and (c) Indigenous community accepts such persons as of Aboriginal or Torres Strait Islander origin. The 1971 Census, the first national population census carried out after the referendum was passed which paved the way to include the Indigenous population counts as part of the population, used first two elements of the official definition. The last element was dropped due to difficulty in applying it in statistical data collections. This definition has been used since then by ABS for all censuses, and ABS suggested it be used in all other collections as well. In censuses conducted from 1971 to 1991, the census form provided the option for a person of Indigenous origin to identify as either of Aboriginal or of Torres Strait Islander origin by ticking an appropriate box provided for the purpose. Those who ticked both boxes either by mistake or by choice, were coded by ABS as Aboriginal persons. The 1996 Census, however, allowed persons of Indigenous origin to identify themselves or their children as of Aboriginal origin, Torres Strait Islander origin or both Aboriginal and Torres Strait Islander origin. The definition of an Indigenous person remained the same, but this additional option effectively created a third category among Indigenous population groups, persons of 'mixed Indigenous origin'. This group apparently consists of Indigenous people who were the first or second generation offspring of Aboriginal and Torres Strait Islander marital unions.

While the introduction of the third coding option caused a break in the series of Aboriginal and Torres Strait Islander population trends, it nevertheless identified an Indigenous subgroup sufficiently large to examine at the national level its socio-economic profile separately from the other two Indigenous groups, who were Aboriginal or Torres Strait Islander origin. The objective of this paper is to assess demographic and socio-economic status of the three Indigenous population groups identified as being of Aboriginal, Torres Strait Islander and both Aboriginal and Torres Strait Islander origin (termed in this paper as mixed Indigenous origin). This comparative assessment of demographic and socio-economic status between the three Indigenous groups focuses on key population characteristics: spatial distribution, age-sex patterns, cumulative fertility, school attendance, labour force status, and individual income.

The data

The data for this analysis have been compiled by aggregating the state and territory level statistical tables from the 1996 Census of Population and Housing provided by ABS to the

Office of Evaluation and Audit of ATSIC. The detailed data tables used were randomised according to ABS policy to safeguard confidentiality of the personal information. Although the censuses are the primary source of comprehensive socio-economic information on Indigenous population groups, census data suffer from substantial data quality problems. The main problem is that censuses conducted since 1971 were unable to provide Indigenous population counts that are consistent with the previous census. The intercensal increases in the Indigenous population observed to date were beyond the increases expected from natural increase. The inconsistency in the population counts was a result of two main factors, both of which were related to the two elements of the statistical definition of the Indigenous people. ABS, in successive censuses adopted numerous measures to obtain the cooperation of the Indigenous people in remote areas (Barnes, 1996; Taylor, 1997:10). These measures resulted in achieving a progressively improved coverage of Aboriginal and Torres Strait Islander people. The second major factor is the increasing propensity for self-identification, leading to the rise in the Indigenous population identified as Aboriginal and Torres Strait Islanders (Choi and Gray; 1975; Smith, 1980, ABS 1989). The increase in the number of Indigenous people due to changes in attitudes towards self-identification is related to the second element of the statistical definition.

Apart from these factors which pose problems in the analysis of Indigenous population trends, socio-economic status comparisons are affected by substantial non-response rates to key census questions. About 3% (or 525,000 persons) of the 17.8 million people counted at the 1996 Census did not answer the census question 'racial origin'. Some of these people undoubtedly would have been Indigenous persons, judged by the fact that the non-responses to the racial origin question were frequent in census collection districts that were predominantly Indigenous. The Post Enumeration Survey of 1991 revealed that Indigenous persons who did not respond to the ethnic origin question were mostly elderly persons (Evans, Kahles, and Bate, 1993). If the non-response rates are different between segments of the Indigenous population then this will have an impact on the study of socio-economic differentials. In addition to the racial origin non-stated category, there is a considerable degree of non-response to other census questions by those identified as persons of Indigenous origin.

A high non-response was found for socio-economic characteristics, except for the two categories age and marital status, where the ABS impute missing values using a well designed random imputation procedure¹. In any analysis of socio-economic differentials one would normally assume that non-response to specific questions under reference is approximately similar between comparison groups, or if any variations exist, they are not large enough to affect the results.

¹ ABS commenced imputing missing values for data items, age and marital status, with the 1976 Census.

Table 1: Non-response rates (%) by Indigenous persons to key census question items, 1996

Population characteristic	Aboriginal	Torres Strait Islander	Mixed Indigenous
	Percentage		
Number of children ever born *	8.5	9.1	8.2
Labour force status**	4.8	3.6	3.6
Occupation of the employed**	3.5	3.8	4.1
Industry of the employed**	4.1	4.5	5.1
Employment sector **	4.5	5.0	4.9
Hours worked	4.8	5.2	5.0
School attendance (aged 15-24 years)	8.6	7.7	4.4
Individual income	9.2	9.0	7.8

* Women aged 15-49 years

** Persons aged 15-64 years

Source: ABS unpublished data, Census of Population and Housing, 1996.

The examination of the 1996 Census data for several socio-economic characteristics revealed that the non-response rates were higher among the Indigenous population than among other Australians overall. Among the Indigenous population there was substantial non-response to most census questions, and the non-response varied across the question items and three Indigenous subgroups. Among the socio-economic characteristics chosen for the analysis the non-response rate varied from 3.6% (labour force status) to 9.2% (individual income). Although the non-response rate for specific socio-economic characteristics varied only at a narrow range across Aboriginals, Torres Strait Islanders and persons of mixed Indigenous origin, these variations could affect the results of the analysis, and this factor should be kept in mind when interpreting the results.

Indigenous population: overall distribution

The 1996 Census identified 352,970 persons as Indigenous origin, who formed 2 per cent of the total Australian population². About 89% per cent (or 314,119) of these persons were Aboriginal, and about 8 per cent (or 28,734) were Torres Strait Islanders. The balance of 3 per cent (or 10,107) were identified as of 'mixed Indigenous origin', being stated in the census as of both Aboriginal and Torres Strait Islander origin. Among the total persons of Aboriginal origin, (ie. Aboriginal persons and mixed Indigenous persons combined), 3% had Torres Strait Islander ancestry, and about 26% of the total Torres Strait Islanders had Aboriginal ancestral links.

Geographic distribution

Nearly 30% of the Aboriginal people were living in NSW and 24% in Queensland in 1996. About 16% of Aboriginal persons were enumerated in Western Australia and a further 14% were in the Northern Territory. Although Torres Strait Islanders originated from the Torres

² These figures were derived by aggregating the randomised data at the state level and hence could be slightly different from those published by ABS. Figures also do not include 150 Indigenous people in Yam Island, for whom socio-economic and ethnic origin information is not available.

Strait Islands, only 16% were actually living in the Strait. The vast majority (84%) of the Torres Strait Islanders were living on mainland (including Tasmania). Nearly 51% of the Torres Strait Islanders enumerated in 1996 were living on the mainland areas of Queensland. NSW had 19% and Victoria had about 9%. Although 5% of Torres Strait Islanders were recorded living in Tasmania, the exact number of Torres Strait Islanders in this state is unknown as it has been observed that some community groups misrepresented as Torres Strait Islanders due to a misunderstanding of the census question (ABS, 1989).

Like the Torres Strait Islanders, the majority of the persons (70%) of ‘mixed Indigenous origin’ were concentrated in two States: Queensland had 47% and NSW had 22%. Contrary to the distribution pattern of Torres Strait Islanders, only 3% of the persons of mixed Indigenous origin were residing in the Torres Strait. Torres Strait Islands were never an attractive place for mainland Aboriginal people to live, and consequently their presence in the Strait is negligible. Persons of mixed Indigenous origin were normally found in geographic areas with both Aboriginal population and Torres Strait Islanders living in proximity to each other. Greater proportions of persons of mixed Indigenous origin than Torres Strait Islanders were found in WA and in the Northern Territory (Table 2). These persons may have been the offspring of the Torres Strait Islanders who had married to Aboriginal women when they came to the Northern Territory for pearling and for work on railway lines. The Torres Strait Islander contacts in WA began in the mid 1960’s with railway work.

Table 2: Distribution of Aboriginal, Torres Strait Islanders and mixed Indigenous persons in States and Territories, 1996

State and Territory	Aboriginal		Torres Strait Islander		Mixed Indigenous	
	Number	%	Number	%	Number	%
NSW	94,181	30.0	5,318	18.5	2,171	21.5
VIC	18,384	5.9	2,522	8.8	568	5.6
Qld	74,248	23.6	16,346	56.9	4,774	47.3
Torres Strait Islands	130	0.04	4,740	16.4	318	3.1
SA	18,942	6.0	1,136	4.0	366	3.6
WA	48,998	15.6	1,086	3.8	731	7.2
TAS	12,023	3.8	1,475	5.1	375	3.7
NT	44,486	14.2	714	2.5	1,077	10.7
ACT	2,712	0.9	147	0.5	40	0.4
Total	313,974	100.0	28,744	100.0	10,102	100.0

Note: Excluding the Indigenous population in Yam Island, whose information on ethnic origin is not available.

Source: ABS unpublished data, Census of Population and Housing 1996.

Table 3: Distribution of Aboriginal, Torres Strait Islanders and mixed Indigenous persons by section of state, 1996

Section-of-state	Aboriginal		Torres Strait Islander		Mixed Indigenous	
	Number	%	Number	%	Number	%
Major urban	93,846	29.9	10,083	35.1	3,008	29.7
Other urban	133,403	42.5	11,179	38.9	4,687	46.4
Rural	86,607	27.6	7,463	25.9	2,402	23.8
All	313,856	100.0	28,725	100.0	10,101	100.0

Source: ABS unpublished data, Census of Population and Housing 1996.

Note: Major urban areas are urban centres with 100,000 or more persons; Other urban areas are urban centres with a population between 10,000 to 100,000 and all other areas are considered as rural.

In 1996, an equal percentage (30%) of Aboriginal and mixed Indigenous people each were living in major urban areas, while the percentage living in major urban areas was higher among Torres Strait Islanders (35%). While the Torres Strait Islanders were mainly living in Brisbane, Townsville, Sydney and Melbourne, Aboriginal and mixed Indigenous origin persons were mainly concentrated in Other urban centres. The other urban category covers a range of towns that differ widely in terms of commercial activities, trade and the level of development. Torres Strait Islanders were generally living in developed regional town centres whereas Aboriginal persons were located in small to medium sized country towns (Taylor, 1991).

The same is true for persons of mixed Indigenous origin, where approximately 46% were located in Other urban centres mainly developed towns compared to regional small townships where Aboriginal persons were living. There is little variation in the proportion of people living in rural areas, the percentages ranged from 24% for mixed Indigenous persons to 28% for Aboriginal persons.

Age distribution

All three Indigenous groups exhibited age-structures that are heavily weighted towards younger ages, and low proportions of elderly persons aged 65 years or more. Persons of mixed Indigenous origin had, in 1996, the highest proportion of persons below age 15 (44 per cent), followed by those of Aboriginal origin (40 per cent). Although Torres Strait Islanders showed the lowest proportion (38 per cent) of their population in this age group, their proportion of the young population was high compared to the Australian total population (21 per cent). The high concentration of Indigenous people in the young age groups demonstrates relatively high fertility levels prevailing (or prevailed in the recent past). This is also could be due to the less propensity of the older Indigenous people to identify themselves as such in censuses.

These variations between the three Indigenous groups are reflected in the median ages of the three population groups. The median age was as low as 17.7 years for persons of mixed Indigenous origin. This figure is nearly half the median age observed for non-Indigenous Australians (34.2 years). The median age of the Aboriginal population was 20.0 years, compared to 21.5 years for Torres Strait Islanders.

Table 4: Indigenous population groups by broad age group, 1996

Indigenous group	Under 15		15-64 years		65 years & over		All ages	
	Number	%	Number	%	Number	%	Number	%
Aboriginal	126,082	40.1	180,329	57.4	7,708	2.5	314,119	100.0
Torres Strait Islander	108,25	37.7	16,607	57.8	1,302	4.5	28,734	100.0
Mixed Indigenous	4,487	44.4	5,295	52.4	325	3.2	10,107	100.0
All Indigenous	141,394	40.1	202,231	57.3	9,335	2.6	352,960	100.0

Source: ABS unpublished data, Census of Population and Housing 1996.

The low percentage of elderly people mainly demonstrates their poor health and poor living conditions and less self-identification. According to estimates available, Indigenous Australians have life expectancies about 15-20 years lower than those of the general population. The relative proportion of persons of working age was similar for Aboriginals and Torres Strait Islanders (each showing 57%), but was lower (52%) for persons of mixed Indigenous origin.

The age-structure of the population points to another measure relevant to economic policy; dependency burden. In constructing this indicator, it is assumed that young persons below 15 years of age in the population do not contribute to production, but depend on goods and services produced by the working-age population. Hence children under 15 years are called young dependents. The population 65 years and over are equally considered as not contributing to production, and hence are treated old dependents. The overall dependency ratio is calculated by dividing the young and old dependents combined by the number in the working age and expressed as a percentage.

Not surprisingly, the persons of mixed Indigenous origin exhibited the highest overall dependency ratio as this group had the highest proportion of child dependents, and the lowest proportion of working-age persons than the other two Indigenous groups. For persons of mixed Indigenous origin, for every 100 persons of working-age there were an additional 91 persons to support. The corresponding figure was similar for Aboriginal and Torres Strait Islanders, and stood at around 74.

Sex distribution

The three Indigenous populations without exception had more females than males for the total population and in most age groups. Torres Strait Islanders exhibited an overall sex-ratio close to 100, while both the Aboriginal and mixed Indigenous groups showed slightly more females than males in their population at all ages (for every 100 females there were

97 males). All three Indigenous groups showed higher sex-ratios at young ages, and gradually increasing female population at upper age groups. This phenomenon is consistent with the general pattern of sex-ratios found among human populations. In general, at birth males in general outnumber females (say ratio of 105 males to 100 females), but their numerical dominance disappears progressively due to higher male mortality with advancing age. The high adult mortality, male mortality in particular, is a common feature among the contemporary Australian Indigenous people (Gray and Tesfaghiorghis, 1991).

Table 5: Sex ratio* of the Aboriginal, Torres Strait Islanders and persons of mixed Indigenous origin, by age group 1996.

Age group	Aboriginal	Torres Strait Islander	Mixed Indigenous
Under 15 years	104.1	107.4	105.2
15 – 64	93.0	97.1	91.7
65 years and over	75.3	72.0	72.0
All ages	96.8	99.5	96.7

* Males per 100 females.

Source: ABS unpublished data, Census of Population and Housing, 1996.

Cumulative fertility: mean parity

The average number of children per women (mean parity) aged 15-49 years has been used in this analysis as a proxy measure for comparison of fertility between the three Indigenous groups. This measure is, however, affected by a number of factors including age at marriage (or entry into sexual unions), duration of marriage, age of woman, and reporting errors. The ABS data available for the analysis were classified by age of woman only. To eliminate effects of variations in the age structure of women between the three comparison groups, the mean parity data have been standardised for age. Also there was a sizeable proportion of women who did not respond to the census question on the number of children ever born. Using the El-Badry correction procedure the number of women childless was adjusted³.

The mean number of children born to women varied in a narrow range, the women of both mixed Indigenous children and Aboriginal women each showing a slightly higher mean number of children born (1.9 per woman) than Torres Strait Islander women (1.8 per woman). This was in conformity with the earlier findings (Gaminiratne, 1992) that the estimated total fertility rate of Aboriginal woman (3.25) was higher than that of Torres Strait Islander woman (2.96)

³ The number of women childless were adjusted using the El-Badry procedure, although the relationship between the number of women who did not respond and those childless were not linear.

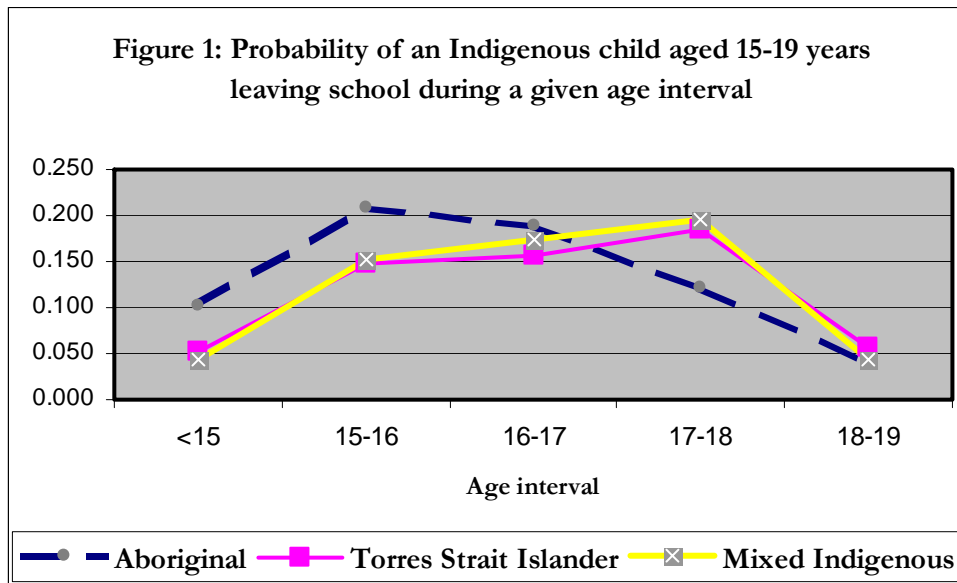
School attendance

The proportion of children 15-19 years of age who had never attended a school⁴ was very low, less than 2 per cent for any Indigenous group. There are, however, substantial differences in the proportion of children who continue with secondary education. For instance, only 33% of the Aboriginal children aged 15-19 years at the time of the 1996 Census were attending school. The corresponding proportions for the Torres Strait Islanders and mixed Indigenous origin persons were 40% and 38% respectively. Indigenous girls were more likely than boys to be in school, and their proportions attending school ranged from 34% for Aboriginal children to 42% for Torres Strait Islanders (Table 6).

Table 6: Indigenous children 15-19 years of age attending school by Indigenous group and sex, 1996

Indigenous group	Number of children			Percentage of children attending school		
	All	Male	Female	All	Male	Female
Aboriginal	27,993	140,48	13,945	33.4	32.6	34.2
Torres Strait Islander	2,492	1,266	1,226	39.8	37.8	41.8
Mixed Indigenous	883	418	465	37.8	35.1	40.2

Source: ABS unpublished data, Census of Population and Housing 1996.



Source: Table 7

The probability of children aged 15-19 years leaving school at a given age calculated from the data⁵ revealed that Aboriginal children tend to leave the school system much earlier than the children of Torres Strait Islander or mixed Indigenous origin, even before the age of compulsory schooling of 15 years (Table 7). Despite the policy focus on encouraging

⁴ This percentage is computed excluding the non-stated category.

⁵ Excluding the 'not-sated' category.

Indigenous children to complete schooling beyond the secondary level, about a fifth of the Aboriginal children were leaving school during the age interval 15-16. The probability of an Aboriginal child leaving school at that age interval was about 29% higher than that for Torres Strait islanders and 27% higher than for children of mixed Indigenous origin. For an Aboriginal child who passes this critical age interval, the probability of leaving school tends to fall far below that for the Torres Strait Islander or mixed Indigenous children (Figure 1).

While a child of Torres Strait Islander or mixed Indigenous origin was more likely than an Aboriginal child to continue schooling beyond age 15 years, age of leaving school among these children tends to concentrate at the 17-18 interval coinciding with the age of transition from post-secondary to tertiary education. The overall advantage of girls in school attendance persists throughout most of the secondary school ages. However, between the age intervals 16-17 and 17-18, the probability of leaving school tends to be greater for girls. For both Aboriginal and mixed Indigenous children, the higher probability of leaving school for boys tends to fall below that for girls at age interval 16-17. For Torres Strait Islanders this crossover occurred in the 17-18 age interval.

Table 7: Probability of an Indigenous child 15-19 years old leaving school during a given age interval, by Indigenous group and sex, 1996

Age interval (years)	Aboriginal	Torres Strait Islander	Mixed Indigenous
Boys			
Before 15	0.1117	0.0561	0.0502
15-16	0.2179	0.1548	0.1866
16-17	0.1887	0.1769	0.1675
17-18	0.1135	0.1651	0.1818
Girls			
Before 15	0.0916	0.0481	0.0366
15-16	0.1986	0.1395	0.1204
16-17	0.1910	0.1354	0.1785
17-18	0.1293	0.2086	0.2086
Both sexes			
Before 15	0.1017	0.0522	0.0430
15-16	0.2083	0.1473	0.1518
16-17	0.1898	0.1565	0.1733
17-18	0.1214	0.1842	0.1959

Note: Probabilities were computed excluding 'non-stated' category.

Source: Computed from unpublished data, ABS, Census of Population and Housing, 1996.

A further examination of the data revealed (data not shown) that the school leaving patterns observed between the three Indigenous groups were similar across all States (including the Northern Territory), and were therefore not peculiar to a few States. Interestingly, Aboriginal children residing in major urban and other urban areas also exhibited the pattern similar to the Torres Strait Islander and mixed Indigenous children, and showed the higher probability of leaving school at the 17-18 age interval.

However, for Aboriginal children residing in bounded localities or remote regions the age of leaving school peaked at the 15-16-year age interval. These patterns tend to suggest that accessibility to post-secondary education is a major factor for Aboriginal children leaving school at an early age of 15-16 years and could be dependent on the geographic location (Long, Frigo, and Batten, 1999). Locational disadvantage was recognised by the Task Force on Aboriginal Educational Policy as the major hindrance to Aboriginal participation in schooling: “Geographical isolation posed a major obstacle to increased educational participation. The Task Force observed that over 11,000 Aboriginal children did not have access to a school program, and identified the expansion of local education programs to rural and remote parts of Australia as a general goal” (quoted by Commonwealth of Australia, 2000:24)

Labour force status: persons aged 15-64 years

Participation in the labour force

The labour force participation among Torres Strait Islanders was the highest among the Indigenous groups in 1996, with 58% of persons aged 15-64 identified as in the labour force, being either employed or looking for work. Aboriginal persons had the lowest (51%) labour force participation rate. The persons of mixed Indigenous origin showed a rate (53%) falling between these two groups. Torres Strait Islanders recorded the highest percentage of employed and the lowest percentage of unemployed. The employment rate of the mixed Indigenous people was higher than that for Aboriginals, but there was no difference in the unemployment rate (Table 8). Males in all Indigenous groups had higher labour force participation rates and higher employment rates. The unemployment rates recorded for males were nearly twice as high as the rates recorded for females.

The percentage of persons working full-time varied between Indigenous groups and ranged from 63% for Aboriginal persons to 70% for Torres Strait Islanders. The part-time work was common among those engaged in CDEPs. Of the total employment of Aboriginal persons (71,702) about 15.5% was contributed by the participation in the Community Development and Employment Projects (CDEP). Compared to Aboriginal employment, the relative contribution of CDEP to the total employment was somewhat lower for both Torres Strait Islanders (10.8% of 7,961) and persons of mixed Indigenous origin (9.5% of the total employed 2,203). These variations in the employment in CDEP schemes generally imply their availability in geographic locations.

Table 8: Labour force status of Indigenous persons aged 15-64 years, by Indigenous group and sex, 1996.

Labour force characteristic Indigenous(%)	Aboriginal (%)	Torres Strait Islander (%)	Mixed
Labour force participation			
<i>Both sexes</i>			
Labour force participation rate	50.7	57.9	53.8
Percentage employed	39.9	48.5	42.3
Percentage unemployed	10.8	9.4	11.5
<i>Male</i>			
Labour force participation rate	61.0	69.6	64.9
Percentage employed	46.8	57.5	50.3
Percentage unemployed	14.2	12.1	14.6
<i>Female</i>			
Labour force participation rate	41.3	46.6	43.5
Percentage employed	33.6	39.8	34.9
Percentage unemployed	7.7	6.8	8.6
Employed in CDEP			
Both sexes	5.9	5.2	3.9
Male	7.6	7.9	4.9
Female	4.3	2.7	3.0
Percentage not in labour force			
Both sexes	44.5	38.4	42.5
Male	33.6	26.7	31.3
Female	54.6	49.7	52.9

Note: Age-standardised rates per 100 persons aged 15-64. The age-structure of the total Indigenous population has been used as the standard population. Rates are from the working-age population (aged 15-64). Labour force status not stated category not shown.

Source: Computed from unpublished data, ABS, Census of Population and Housing, 1996.

Among all Indigenous groups males were more likely to participate in CDEP projects than females. Although female participation in CDEP projects through enrolment registers may be high, census data do not show these patterns accurately as males members of the family normally work in CDEP projects on behalf of the female family members. The CDEP is essentially a work-for-the dole scheme, and the 1996 Census treated participants as employed if they had worked in CDEP projects during the reference period.

Table 9: Employment status by hours worked and Indigenous group, 1996

Indigenous group	35 hours or more		Less than 35 hours	
	All	CDEP	All	CDEP
Aboriginal	62.9	22.8	32.6	72.9
Torres Strait Islander	70.1	47.8	24.7	48.6
Mixed Indigenous	67.5	23.4	28.0	71.0

Note: Non-stated category not shown in the table.

Source: ABS unpublished data, Census of Population and Housing, 1996.

The 1996 Census data suggest that in the absence of CDEP the unemployment rate for Aboriginal males had the potential to rise by 54% from 14.2% to 21.8%. Corresponding increases anticipated from Torres Strait Islanders and persons of mixed Indigenous origin were 65% and 34% respectively. These figures tend to show the importance of CDEP as a source of employment for the Indigenous communities.

The percentage of persons not working and not looking for work - not in the labour force - was extremely high, and ranged from 38% for Torres Strait Islanders to 45% for Aboriginal persons. This group includes categories such as home makers, retired persons, and discouraged workers who do not seek work because they believe that work is not available for them. The bulk of the persons not in the labour force were females: 50% of the Torres Strait Islander women and 55% of Aboriginal women aged 15-64 years were not in the labour force.

Occupational distribution

Over two-fifths of Aboriginal employment is concentrated in two main occupations: about a quarter of the employed were working as labourers, and 17% were doing less skilled clerical or sales jobs. While between 21% to 23% of Torres Strait Islanders and persons of mixed Indigenous were doing labour and related jobs, the proportion employed as tradespersons was approximately similar among these two groups (Table 10).

Table 10: Occupational distribution of employed persons by Indigenous group, 1996

Occupational category	Aboriginal (%)	Torres Strait Islander(%)	Mixed(%)
Managers and administrators	3.7	4.0	3.3
Professionals	10.4	7.8	10.2
Associate professionals	8.1	8.6	7.7
Tradespersons and related workers	10.9	12.0	11.9
Advanced clerical and service workers	2.3	2.2	2.4
Intermediate clerical, sales and service workers	17.1	15.8	18.0
Intermediate production and transport workers	9.4	11.2	10.8
Elementary clerical, sales and service workers	7.3	9.5	9.4
Labourers and related workers	24.5	23.4	20.7
Inadequately described	2.6	1.8	1.6
Not stated	3.5	3.8	4.1
Total	100.0	100.0	100.0

Source: ABS unpublished data, Census of Population and Housing, 1996.

The percentages of persons doing managerial and administrative jobs, as well as working in jobs at the associate professional level, were similar among the three groups, but the percentage of persons working as professionals was lower among Torres Strait Islanders and similar between the Aboriginal and mixed Indigenous groups. Torres Strait Islanders had a slightly lower proportion (8%) of persons holding professional positions than the Aboriginal and Mixed Indigenous populations; each had about 10%. Percentage of persons employed as Plant and Machinery Operators were slightly higher among Torres Strait Islanders and mixed Indigenous origin than among the Aboriginal.

Industry distribution

Over a third of Aboriginal people were employed in Government administration and defence, and Health and community services. Although the highest proportion of the Torres Strait Islanders and mixed Indigenous people were employed in these two industry categories their proportions are low at 27% and 23% respectively. In particular, persons of mixed Indigenous origin were less represented in the Government administration and defence compared to their Indigenous counterparts.

Table 11 :Industry distribution of employed by Indigenous group 1996

	Aboriginal (%)	Torres Strait Islander (%)	Mixed indigenous (%)
Agriculture, forestry and fishing	5.6	6.3	7.6
Mining	2.4	2.0	2.4
Manufacturing	9.4	12.2	11.7
Electricity, gas and water supply	0.9	0.8	0.6
Construction	7.7	8.8	8.4
Wholesale trade	3.2	3.6	2.8
Retail trade	6.0	8.3	6.6
Accommodation, cafes and restaurants	2.4	3.0	2.7
Transport and storage	5.1	6.7	6.9
Communication services	2.4	1.8	3.9
Finance and insurance	0.5	0.3	0.4
Property and business services	5.1	4.8	3.9
Government administration and defence	16.1	16.4	11.7
Education	4.6	3.4	5.0
Health and community services	15.4	10.7	11.4
Cultural and recreational services	2.3	1.7	3.1
Personal and other services	5.1	3.2	4.3
Not stated	5.8	6.0	6.7
Total	100.0	100.0	100.0

Source: ABS unpublished data, Census of Population and Housing, 1996.

The proportion of Aboriginal persons employed in the Health and community services was higher than for the other two groups; 15% for Aboriginal persons compared to 11% for Torres Strait Islanders or mixed Indigenous origin (Table 11). A somewhat greater concentration of the mixed Indigenous employed were found in agriculture, forestry and fishing, communication services, education and cultural and recreation industries compared to Aboriginal and Torres Strait Islanders. A slightly higher proportion of Torres Strait Islanders, on the other hand, were employed in retail trade than Aboriginals or persons of mixed Indigenous origin. Similarly, Torres Strait Islanders and mixed Indigenous persons employed were both over-represented in manufacturing industries compared to the Aboriginal employed.

Although there were some similarities and variations in individual industry groups, overall the industry distributions of the employed did not differ much between the three Indigenous groups, as observed in the low values observed for the index of dissimilarity: between Aboriginal and Torres Strait Islanders, the index value stood at 16, between Aboriginal and mixed Indigenous origin it was 12, and between Torres Islanders and mixed Indigenous origin the index value was estimated as 9.

Individual income

Income distribution of the Indigenous population was skewed towards the base with about 50% of Aboriginal persons recording a weekly personal income below \$200 (median

income estimated as \$203). Torres Strait Islanders had, in 1996, a weekly median income of \$255, which is about 25% higher than that for Aboriginal persons. The median income of mixed Indigenous people, although 8% higher than that of Aboriginal persons was 14% lower than that for Torres Strait Islanders.

Table 12: Median weekly personal income of Indigenous group, aged 15 years and over by sex, 1996

Indigenous group	Male	Female	Both sexes
Aboriginal	203	204	203
Torres Strait Islander	291	226	255
Mixed Indigenous	238	208	219

Source: ABS unpublished data, Census of Population and Housing, 1996.

The median income of Aboriginal persons did not differ very much between males and females. The lack of difference may have been caused by the broad income groupings (class interval of \$200) used in the ABS tabulation. In contrast, the median income of males was substantially higher among both Torres Strait Islanders and mixed Indigenous people. The relatively higher weekly income levels of the Torres Strait Islanders and mixed indigenous population largely reflect their more urban residence, somewhat higher paid occupational structure and higher proportion of full-time workers, compared to Aboriginal people.

Conclusion and policy implications

Using the data derived from the 1996 Census of Population, this paper examined key socio-economic characteristics of the Indigenous population according to three subgroups: Aboriginal, Torres Strait Islander and mixed Indigenous origin. The paper drew attention to major data quality concerns, mainly the non-response to the census question on ethnic origin, and non-responses to the key census questions on socio-economic characteristics. The results of the analysis confirmed earlier findings (Taylor and Gaminirtane, 1993) that Torres Strait Islanders had a higher socio-economic status than Aboriginal persons. This was mainly a result of the Torres Strait Islander greater concentration in urban areas compared to Aboriginal persons. For socio-economic characteristics such as the patterns of school leaving, employment, and personal income, and proportions not in labour force, mixed Indigenous origin people showed characteristics very similar to those of the Torres Strait Islanders. The mixed Indigenous group had the highest dependency burden of the three Indigenous groups. The proportion of persons living in major urban areas was highest among Torres Strait Islanders and did not differ much between mixed Indigenous and Aboriginal persons.

It is doubtful, however, whether these variations were due to the Indigenous origin per se, but could instead be due to differences in the accessibility and availability of services for the Indigenous groups. For instance, Torres Strait Islanders had a higher personal income

than Aboriginal or mixed Indigenous people. This could be the result of the greater availability of income opportunities and accessibility to employment in urban areas for the Torres Strait Islanders, who are largely concentrated in urban areas. The employment outcomes, relatively better paid jobs and full-time work were associated with urban-based occupations. In remote areas not only were job opportunities lacking, but also the available jobs, such as those provided through CDEP, do not normally give full-time work. The low level of education, low paid unskilled jobs, part-time nature of work and high dependency burden were all connected as a vicious cycle among the Indigenous population where the levels of education play a crucial role. Despite extremely positive policy initiatives to improve the level of education of Indigenous people, a substantial proportion of children drop-out from schools as early as 15 years. Those opting to continue post-secondary schooling tended to drop out at age 17, around the year of transition from post-secondary to higher education. Although some of these children dropping out were enrolled in TAFE or Vocational training courses, the vast majority were dropping out from the higher educational stream (Long, Frigo and Batten, 1999). If this tendency continues the vicious cycle of poverty will continue in the future.

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