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Discussion Paper



**Aboriginal economic status by ATSIIC
regions: analyses of 1986 Census data**

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ABSTRACT

This paper examines differences in Aboriginal socioeconomic status between Aboriginal and Torres Strait Islander Commission (ATSIC) regions. The administration of programs administered by ATSIC Australia-wide have been largely decentralised into 60 regions under the Commonwealth *Aboriginal and Torres Strait Islander Commission Act 1989*. This is an exploratory regional analysis of Aboriginal socioeconomic status; it utilises 1986 Census data tabulations by ATSIC regions, which were produced by the Australian Bureau of Statistics for the Commission. The methods used include a comparative examination of selected socioeconomic indicators at regional level, as well as a spatial analysis of an Aboriginal socioeconomic status index. The analyses reveal marked regional variations in Aboriginal socioeconomic status. The paper concludes with a discussion of some important implications for policy formulation of these regional differences.

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RESUME

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References

1. Smith, J. (1998). The effect of...
2. Jones, M. (2001). The effect of...
3. Brown, K. (2003). The effect of...
4. White, L. (2005). The effect of...
5. Black, N. (2007). The effect of...
6. Green, P. (2009). The effect of...
7. Gray, Q. (2011). The effect of...
8. Hall, R. (2013). The effect of...
9. King, S. (2015). The effect of...
10. Lee, T. (2017). The effect of...

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The establishment of the Aboriginal and Torres Strait Islander Commission (ATSIC) in March 1990 by the Commonwealth *Aboriginal and Torres Strait Islander Commission Act 1989* resulted in the administration of Aboriginal and Torres Strait Islanders' affairs and programs Australia-wide being largely decentralised to 60 regional jurisdictions. The objectives of the Act are to ensure participation of Aboriginal people in decision-making and in the formulation and implementation of government policies that affect them; to promote the development of self-management and self-sufficiency among Aboriginal people; to advance Aboriginal economic, social and cultural development; and to ensure coordination in the formulation and implementation of policies affecting Aboriginal people between all levels of government. Regions vary greatly in geographical and population size; their constituents elect councils (with between 10 and 20 members) which formulate and assist in the implementation of regional plans, make proposals for expenditure, represent the interests of the residents of their region, and elect representatives to their Zone. ATSIC is run by 20 Commissioners, 17 elected by the regional councillors in each of 17 Zones, and the Chairperson and two commissioners who are appointed by the Minister for Aboriginal Affairs.

The process of establishing ATSIC regions and zones was primarily undertaken in 1988-89 by the then Minister for Aboriginal Affairs, Mr Gerry Hand, and his staff assisted by a Task Force set up in the Department of Aboriginal Affairs (DAA). The determination of the various jurisdictions and boundaries was essentially based on a process of extensive consultations with Aboriginal communities and organisations around the country, both as to the numbers of regions and zones, and as to their actual boundaries. There is little information on public record indicating how these regions were demarcated, but they were based on the following factors: Aboriginal cultural, linguistic and social factors, contemporary geographic realities (like location of service centres), and possibly other factors which Aboriginal organisations articulated. The consultations with Aboriginal groups resulted in a much larger number of zones and regions being created than originally planned, and the dropping of the original administrative criterion for zone and region boundaries in favour of criterion based on commonality of culture and other such factors. The consultation process resulted in the number of zones being increased to 17 from the planned six, and the number of regions to 60 from the planned 28. Population size was not the major consideration as there is a wide range; the Senate Select Committee which considered the *Aboriginal and Torres Strait Islander Commission Bill 1988*, in recognition of the inequalities in representation that this could cause, adopted a sliding scale to link the size of regional councils to their populations (pers. comm. M.C. Dillon, former member of ATSIC Task Force).

The purposes of the analysis

As regions form important ATSI planning and expenditure target units, it is of interest to examine whether there are any substantial differences between the socioeconomic status of their Aboriginal residents. Previous analyses have shown considerable geographic differences in Aboriginal socioeconomic status between states and sections-of-State (Altman and Nieuwenhuysen 1979; Fisk 1985; Tesfaghiorghis and Altman 1991; Tesfaghiorghis 1991). It has been shown that the Aboriginal demographic structure, characterised by a rapid growth of the working-age population, poses a serious challenge to improving future levels of employment and achieving employment equality with the rest of the Australian population by the year 2000 (Tefaghiorghis and Gray 1991). This paper uses detailed 1986 Census tabulations by ATSI regions, prepared by the Australian Bureau of Statistics and made available to the Centre for Aboriginal Economic Policy Research by ATSI, to test for variability in Aboriginal socioeconomic status between ATSI regions. Because it is difficult to get a concise summary of a large number of census variables for 60 regions, the analysis here is limited to a few selected indicators. These are population size, proportion of the 15-24 age group still attending school, per cent of those aged over 15 years with educational qualifications, employment/population ratio of the 15-64 year old population, the labour force as a proportion of the 15-64 age group, unemployment level of the labour force aged 15-64 years, annual individual gross median income and home ownership. These indicators along with measures of central tendency and dispersion by regions are presented in Table 1.

Population

The 60 ATSI regions show considerable variation in population size, ranging widely from about 600 people in Deakin and Yulara Regional Councils in the Central Australia Zone to 18,751 in Sydney Regional Council; indicating that the maximum regional population was 31 times larger than the smallest. Between these extremes, population size by regions was not evenly distributed: 19 regions had populations between 600 and 2,000, 27 had between 2,000 and 5,000, 11 had between 5,000 and 10,000 and three had 10,000 or more (see column 2 of Table 1). Population sizes were smallest (under 5,000) in all the regional councils within Western Australia-North, Central Australia and Western Australia-South Zones. Other zones also contained regions with small population size, but had one or two regions within them with larger populations. The metropolitan regional councils had the largest Aboriginal population: Sydney, 18,751; Brisbane, 13,436; Karkarnyiny (Perth), 10,283; Melbourne, 6,173; and Kaurna (Adelaide), 5,826. Other regions with

relatively large Aboriginal populations were Cairns (8,837), Townsville (8,395), Taree (7,214), Wirawongam (7,176), Launceston (6,716), Yilli/Rreung (6,480), Rockhampton (6,219), Peninsula (5,240) and Miwatji (5,155).

Not only do ATSI regional councils differ in population size, but they also exhibit enormous differences in area. Their areas range from under 1,000 to 499,220 square kilometres. The remote regions are mostly large and sparsely populated, though they also show considerable variations. In these regions population may be clustered in a few localities.

Education

Aborigines in general have low formal educational status (Tesfaghiorghis and Altman 1991). Their low educational status is associated with low socioeconomic outcomes like low incomes, low employment and high youth and overall unemployment (Jones 1991; Ross 1991). The generally low Aboriginal educational status masks the marked differences between ATSI regions. These variations are shown in Table 1 using two education indicators: the percentage of 15-24 age group still attending school and the percentage of the population aged 15 years and over that had some formal qualifications (see columns 4 and 5 of Table 1).

The percentage of the 15-24 age group still attending school varied from 2 per cent in Yulara to 26 per cent on Thursday Island. The extremity of the difference was such that while in 11 regions under 10 per cent of the 15-24 age group were still attending school, this proportion was as high as 15 to 26 per cent in 27 regions. The percentage who were qualified also varied considerably. Educational qualification showed the largest variation after population, as indicated by a coefficient of variation of 66 per cent. The percentage qualified varied from zero or a low of under 5 per cent qualified in 20 regions, to 10 to 19 per cent qualified in another 19 regions. The regional councils where Aborigines had relatively high educational qualifications were all the regions in Victoria and the New South Wales-East Zones, the regions of Sydney, Launceston, Brisbane, Kurna, Karkarnyiny, Yilli/Rreung, Mount Barnett, Wangkumara, Wirawongam and Murrumbidgee. In general, the higher the proportion of the 15-24 age group who stay in school, the higher the proportion of persons with educational qualifications. The correlation between school attendance and educational qualification is positive, though not strong ($r = 0.50$). Regions such as Thursday Island, all the regions in Queensland-South Zones, Townsville, and Alice Springs have relatively high proportions of Aborigines staying at school, but they leave school with low levels of qualifications.

Employment

Aboriginal employment is measured by the ratio of the number of employed persons aged 15-64 years to the total population aged 15-64 years times 100. This measure is referred to as the employment/population ratio (see column 5 of Table 1). The ratio measures the current level of employment among the Aboriginal population while avoiding problems, such as the 'discouraged worker effect', associated with accurately defining those who are unemployed. Lower employment/population ratios may reflect either Aboriginal decisions not to seek employment in the formal labour market at the wage currently offered or a lack of demand for labour in the areas where most Aborigines live. Aboriginal employment/population ratios varied from 13 to 57 per cent, compared to an overall average of 33 per cent for all Aborigines and 68 per cent for the non-Aboriginal populations. When compared to the labour force indicator, the employment/population ratio reveals a much greater difference between the Aboriginal and non-Aboriginal populations. Eighteen regions had 25 per cent or less of their working age population employed, while at the other extreme, nine regions had employment/population ratios of 40 to 55 per cent.

The differences in employment/population ratios between regions are statistically significant at the 5 per cent level, and the variation is considerable as measured by a coefficient of variation of 29.7 per cent. The employment/population ratio shows a moderate to strong positive correlation with educational qualifications ($r = 0.49$), median income ($r = 0.68$), labour force ($r = 0.57$), school attendance ($r = 0.28$), and a negative correlation with the unemployment rate ($r = -0.71$).

Labour force

Levels of labour force participation of a population indicate the prevailing degree of economic activity and the availability of employment opportunities. Comparisons of labour force participation of Aboriginal people by regional councils and between the Aboriginal and non-Aboriginal populations give useful insights into their employment situation and the degree of integration or exclusion from the mainstream labour market. Labour force participation is positively related to educational qualifications ($r = 0.61$), median income ($r = 0.44$) and home ownership ($r = 0.44$).

An examination of Aboriginal labour force participation by regional councils (see column 6 of Table 1) shows that the variations were more marked between Aborigines than between the Aboriginal and non-Aboriginal populations. Bogong, Melbourne, Launceston and Sydney had high levels of labour force participation; the level of labour force participation in regions such as these was about 2.5 to 3.3 times higher

than that in regions with the lowest level. In many regions the majority of the working age population was not in the labour force. Extreme cases of low participation were Daly River, Jabiru, Yarleyel, Papunya, Victoria River and Miwatji where the proportion of the population in the labour force was only between 19 and 36 per cent. Only in 28 out of the 60 regions were more than half of the working age population in the labour force. These low labour force participation rates (which are due to comparatively low and declining employment and high and rising unemployment, see Tesfaghiorghis and Altman 1991), have adverse effects on income. As regions with low labour force participation rates are mainly rural and remote, the cause of such low participation is largely due to an absence of formal employment opportunities in these areas.

Unemployment levels

Aborigines experience relatively high unemployment (see column 7 of Table 1). The majority of regions (45) had unemployment levels three times higher than the level for the non-Aboriginal population. Even Aborigines in the metropolitan centres of Sydney, Brisbane, Karna and Karkarnyiny experienced high unemployment. Of the metropolitan centres, Aborigines in Melbourne experienced the lowest unemployment, with a rate of 18 per cent. The extent of unemployment is demonstrated when it is recognised that 26 regional councils had 40 per cent or more of their labour force unemployed. In 16 of these regions the unemployed comprised about 50 per cent or more of the labour force. However, there were some regions with apparent low levels of unemployment, 8 to 12 per cent, comparable to the rates of 9 per cent for the non-Aboriginal population; these were Gulf, Kutjungka, Western Desert, Victoria River and Daly River. There were other regions with comparatively low levels of unemployment: Warburton (14 per cent), Bogong (15 per cent), Indulkana (16 per cent) and Deakin (17 per cent). However, it is unclear to what extent such low levels were due to under-enumeration of the unemployed (Smith 1991a). Compared to the employment/population ratio and labour force, Aboriginal unemployment showed the largest variation by region, as measured by the maximum/minimum ratio and the coefficient of variation (see Table 1).

The high levels of Aboriginal unemployment in the majority of regional councils indicates a lack of employment opportunities. The difference between metropolitan and remote communities is one of degree, but in both geographical contexts Aboriginal unemployment is very high. The analyses here are restricted to the overall unemployment levels in the Aboriginal labour force, but previous analyses have shown that the problems and magnitude of Aboriginal unemployment are even greater among young people and women (Daly 1991; Miller 1991; Tesfaghiorghis and Altman 1991; Tesfaghiorghis 1991).

In the light of the high overall Aboriginal unemployment levels, one has to be a little sceptical about the apparently low levels of unemployment in some regions. On one hand, such low levels may merely reflect a discouraged worker effect, 'which suggests that where job prospects are depressed, individuals may be discouraged from actively seeking work' (Miller 1991: 80). Alternatively, low rates could reflect participation in the Community Development Employment Projects (CDEP) scheme in some communities, or be a result of inaccurate statistics. Finally, low unemployment rates may be merely caused by low labour force participation, as is the case in Daly River, Jabiru, Victoria River, and Miwatji.

Annual individual median income

Low educational and employment status generally result in low income. Previous analyses have shown that Aboriginal individual, family and household incomes at the national, State, and section-of-State levels were considerably lower than that for the non-Aboriginal population (Treadgold 1988; Gray and Tesfaghiorghis 1990; Jones 1991; Tesfaghiorghis 1991; Tesfaghiorghis and Altman 1991). Studies have also shown that Aboriginal incomes were higher in urban than in rural areas; that Aborigines in major urban areas had higher incomes than those in other urban areas; and that considerable differences in Aboriginal income exist between States and sections-of-States (Altman and Nieuwenhuysen 1979; Fisk 1985; Gray and Tesfaghiorghis 1990; Tyler 1990; Tesfaghiorghis 1991; Tesfaghiorghis and Altman 1991). The studies also showed that Aboriginal incomes were especially low at the level of the individual, lone-person-households and single-parent families, irrespective of location. On the other hand, families other than single-parent families had relatively high incomes (Gray and Tesfaghiorghis 1990; Tesfaghiorghis 1991; Tesfaghiorghis and Gray 1991). Low individual and single-parent family incomes are mainly due to low employment incomes and high dependence on welfare payments or the CDEP scheme. The higher incomes of families (other than single parent families) probably resulted from the pooling of employment incomes and the social welfare payments of family members. As expected, individual median incomes positively correlated with employment/population ratios ($r = 0.68$), education ($r = 0.61$) and labour force ($r = 0.44$), and negatively correlated with unemployment ($r = -0.40$). Thus, annual individual median income is used for regional comparison as a rough indicator of variation in income between regional councils.

Individual incomes for all regions, but one, fell far short of the overall average income for the non-Aboriginal population. With the exception of the high income of Aborigines in Bogong Regional Council (because of its

incorporation of the high-income Australian Capital Territory), regions annual median individual incomes ranged from \$4,600 in Warburton to \$8,500 in Melbourne, compared to an overall average of \$6,200 for Aboriginal and \$9,700 for the non-Aboriginal populations. The real disposable income for many Aborigines might be much lower than suggested by these gross incomes. Incomes were lower or near the Aboriginal average of \$6,200 in 44 out of the 60 regions. These low-income regions were concentrated in the following zones: New South Wales-West Zone, New South Wales-East Zone (except for Bogong Regional Council), Central Australia, Western Australia-South, Northern Territory-Northeast, Northern Territory-Northwest (except Yilli/Rreung Regional Council), South Australia Zone (except Kurna Regional Council), Western Australia-metropolitan, and Western Australia-North (except Mount Barnett Regional Council). Aborigines had comparatively high incomes in all regional councils within Victoria, and in the regional councils of Bogong, Launceston, Sydney, Yilli/Rreung, Kurna and Mount Barnett. It has been shown that the better socioeconomic status of Aborigines in the Australian Capital Territory, Victoria and Tasmania was due to their relatively higher education and employment levels, and their relatively lower levels of unemployment (Tefaghiorghis 1991: 15-21). In the case of the Australian Capital Territory and Victoria, this was also related to the better economic status of the non-Aboriginal population in these States/Territories compared with other States/Territories.

Home ownership

Home ownership is a useful indicator of economic status and well-being. In the case of Aboriginal people, 'There seems to be, in housing, the clearest possible indication of the under-privileged socio-economic position of Australia's Aboriginal population.' (Altman and Nieuwenhuysen 1979: 16). 1986 Census data show that Aboriginal home ownership had a moderately positive correlation with educational qualifications ($r = 0.69$), labour force participation ($r = 0.44$), median individual income ($r = 0.38$) and the employment/population ratio ($r = 0.26$); and a very low correlation with the unemployment level ($r = 0.08$).

In 1971, only 19.9 per cent of Aboriginal private dwellings were owner-occupied compared with 67.3 per cent for the total population (Altman and Nieuwenhuysen 1979: 16-7). The situation in 1986 has shown only modest improvement, assuming that housing data are comparable. In 1986, Aboriginal home-ownership was 10.6 per cent and another 15.9 per cent were in the process of purchasing their houses, giving a total of 25.6 per cent of Aboriginal homes that were either owned or being purchased. In contrast, 38.5 per cent of the non-Aboriginal population own their homes and another 31.1 per cent were purchasing their homes, giving a

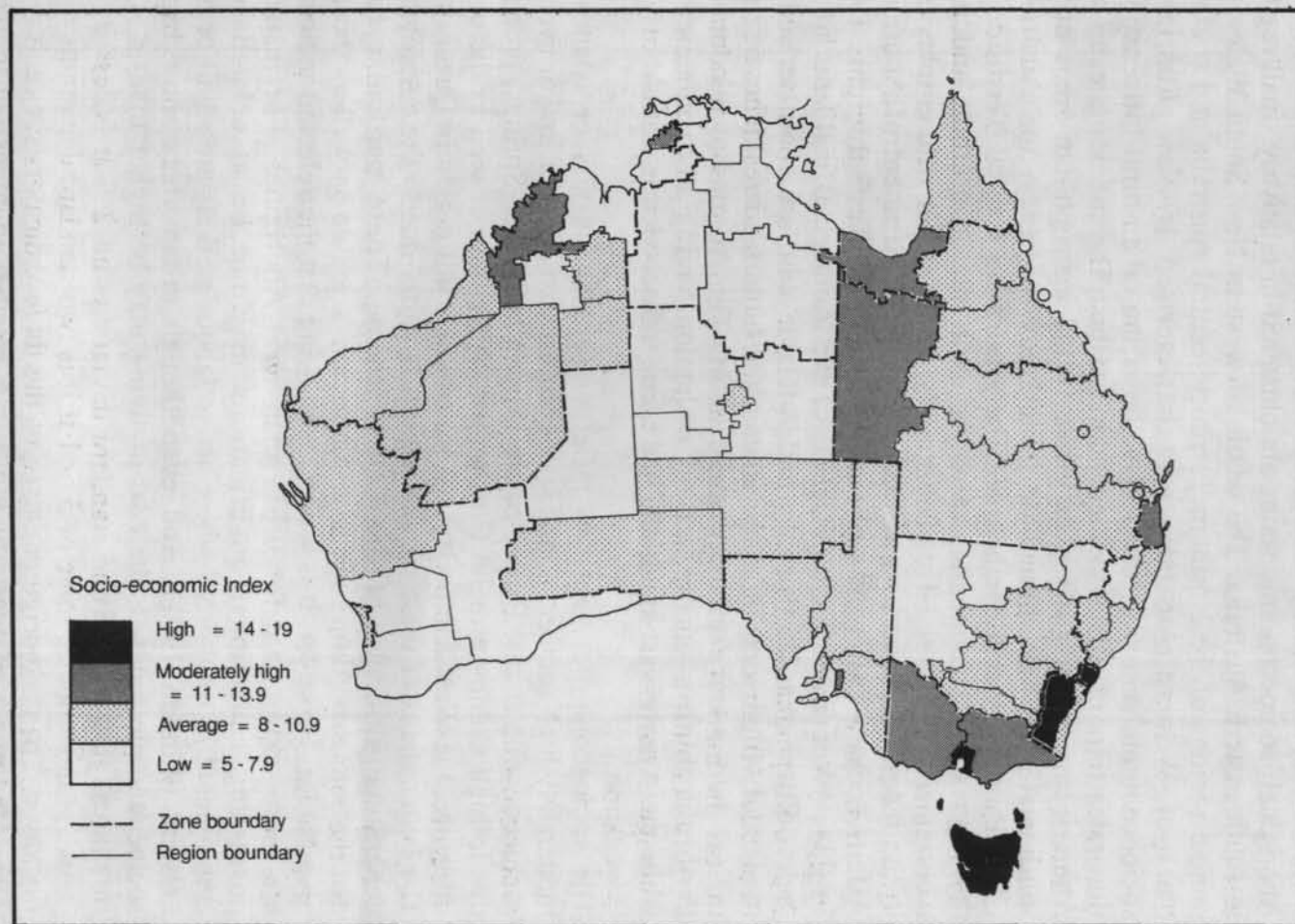
total of 69.6 per cent of non-Aboriginal homes that were either owned or being purchased. The proportion of homes which were owned, plus those being purchased, is used here as an indicator to reflect Aboriginal home-ownership by region (see last column of Table 1). It must be noted though that this indicator reveals nothing about the quality of Aboriginal housing, nor the cultural appropriateness of the housing stock.

There were significant differences in the levels of Aboriginal home-ownership between regions; this varied from no or little ownership in several regions, to 43 per cent in Melbourne and 56 per cent in Launceston. Part of the reason for the low level of home-ownership in some regions is the community ownership of homes. In general, home-ownership is relatively high in metropolitan centres where it ranged from 25 to 33 per cent, excluding the high figure for Melbourne. Among the non-metropolitan regions, above average Aboriginal home-ownership (from 28 to 37 per cent) was observed in Halls Gap, Bairnsdale, Taree, Quirindi, New South Wales-Far West and Gulburri Regions. In 10 regions (Woorabinda, Gulf, Deakin, Tiwi Islands, Daly River, Ngarda Nguli, Kutjungka, Indulkana, Western Desert and Wunan) either none or less than 10 per cent of Aborigines owned their homes. These figures reveal the marked regional contrast in Aboriginal home-ownership, and clearly demonstrate the extent of low home ownership in some areas by average Aboriginal standards, let alone those of the non-Aboriginal population.

Socioeconomic status index

Regional variations in Aboriginal socioeconomic status can be demonstrated using an index of socioeconomic status calculated for the Aboriginal population of each region. There have been some such studies for the total population, but none for the Aboriginal population (Sorensen and Weinand 1991). Three variables were arbitrarily chosen to capture the wide Aboriginal differences between regions. These were the percentage qualified, the employment/population ratio and median individual income. Scores were assigned for each region on each of the three indicators as follows: a score of 3 if the indicator for a particular region is equal to the mean of the distribution; a score of 4 if the value for the region is plus one standard deviation and 2 if it is less by one standard deviation; a score of 5 or 1 if it is two standard deviations higher or lower. Then the scores on each of the three indicators for each region are added to get an overall index, which ascribes equal weight to each of the indicators. If a region is average on each of the indicators, then it would have an index of 9. The index for the regions ranged from 5 in several regions to 19 in Bogong.

Figure 1. Aboriginal socioeconomic status index by ATISIC Regions: 1986 Census.



Geographic variation in the socioeconomic status index, revealing some interesting patterns, is displayed in Figure 1. The areas of high Aboriginal socioeconomic index scores are separated from the regions of low socioeconomic status by a large area of average index. Areas of high Aboriginal socioeconomic status are clustered in relatively small regions in south-eastern Australia. The whole of western New South Wales, the remote regions of the Northern Territory, central Australia and southern parts of Western Australia are characterised by low Aboriginal socioeconomic status. Figure 1 also shows the urban-rural influence and illustrates tiers of urban socioeconomic status. The index indicates that Aborigines are better off if they live in the metropolitan areas of the south-east and their immediate hinterlands - Sydney, the Australian Capital Territory and Melbourne. The Australian Capital Territory has the highest socioeconomic status for both the Aboriginal and non-Aboriginal populations. This is primarily due to better paid employment in the federal bureaucracy, particularly in the Department of Aboriginal Affairs (now ATSIC) and associated institutions (Teschfaghiorghis 1991: 15-23). A second tier is comprised of the Aboriginal residents of the metropolitan areas of Brisbane and Adelaide who are characterised by moderately high socioeconomic status; the hinterland residents of these regions had average socioeconomic status. The Aboriginal residents of Perth, the third urban tier, are the exception having an average status, while those in the vast hinterland had a low socioeconomic status.

The socioeconomic map also reflects regional clusters or islands of moderately high socioeconomic status amidst vast areas of low or average socioeconomic status. Examples are Darwin and Alice Springs, probably due to high Commonwealth Government subvention as well as the urban influence, the West Kimberley, Mt Isa and the Gulf region in Queensland. The better status of these remote regions is partly due to the employment generating influence of the CDEP scheme. These particular cases demonstrate that Aborigines in some remote areas do as well as those in urban areas. However, it is worth recognising that the selected indicators are more appropriate for urban than rural Aborigines. For instance, possessing educational qualifications may not be associated with employment in rural areas where active labour markets are small or non-existent (Altman 1991). And even though urban areas show higher socioeconomic indexes, the cost of living may be higher than in some rural areas (Smith 1991b).

Factors affecting Aboriginal employment and income

The foregoing variables are jointly analysed here to establish which factors have a significant and important influence on Aboriginal unemployment and individual incomes. The relationship between the dependent and independent variables is assumed to be linear and a multiple regression is fitted with the regions taken as the units of analysis.

A regression is fitted, taking average individual income for the region as a dependent variable and the employment/population ratio, educational qualifications and home ownership as independent variables. The computation uses a forward stepwise regression, which selects, for the regression model, the next independent variable with the highest partial correlation with the dependent variable; and eliminates insignificant or unnecessary variables.

The regression model fitted to individual income shows that employment/population ratio and education were the significant factors affecting individual income ($F = 37.1, 2, 57$ degrees of freedom, significant at 0.05 level). These two variables accounted for 55 per cent of the variance in individual income (adjusted R-squared). The employment/population ratio is the most important determinant of income as it explained 45 per cent of the variance in individual income.

This multivariate analysis did not consider all factors that could affect Aboriginal incomes because of lack of appropriate data. The results, however, clearly indicate that increasing education and employment will significantly improve incomes. The regional indicators used here have to be related to other factors that affect regional differences, such as ATSIIC and other government departments' program expenditures and provision of infrastructure, as well as cultural variations within Aboriginal society itself (Taylor 1991). While the results of this study are informative for policy makers and planners, and are in that sense useful, further detailed research that jointly considers all the relevant factors that influence variability in Aboriginal regional socioeconomic status is needed. The data analysed here predate the implementation of the Aboriginal Employment Development Policy (AEDP). It will therefore be necessary to undertake comparative analysis of these indicators and the indicators from the 1991 Census in order to assess the impact of the AEDP on Aboriginal employment, income and educational status.

Conclusion and policy implications

Under the rubric of generally low Aboriginal socioeconomic status, ATSIIC regions exhibit marked differences. The socioeconomic status index showed that there are some areas that are doing relatively well. However, it was shown that the socioeconomic status of Aborigines varies widely even between neighbouring areas. For example, within New South Wales, Aboriginal people have relatively high and low socioeconomic status in adjoining eastern and western parts. The index also indicated some exceptions to the generalisation that remote regions had low socioeconomic status. Aboriginal people living in some of these regions, such as those in Darwin and its environs, the West Kimberleys and the

Gulf had a higher index. These spatial variations in the socioeconomic index have policy relevance if the attainment of minimum standards of living in all regional council jurisdictions is taken as a public policy goal. The key point to note about this relative socioeconomic index is that it does not involve any comparison with the mainstream society's economic status. The regional councils also show extreme differences in size, both in terms of geographic areas and population. The regions with small populations have vast areas which may pose serious administrative problems in the provision of physical infrastructure and essential services.

The Federal Government is committed to raise Aboriginal economic status through implementation of the AEDP. The AEDP has goals of employment and income equality between Aborigines and the rest of the Australian population by the year 2000; and the reduction of welfare dependency to commensurate levels for both segments of the total population. In view of demonstrated regional differences in socioeconomic status, a key policy issue is whether the same level of program expenditure is to be devoted to each region, or whether resources should be allocated to regions on the basis of relative need. Regional differences suggest that the ATSIC expenditure cake should not be divided merely on simple measures like population size. Remote regions face a high degree of locational disadvantage as they cannot access mainstream programs to the same extent as the residents of urban areas. They are also locationally disadvantaged with respect to access to mainstream labour markets. Taking such above factors into account accords with principles of equity and social justice, but it is not clear whether such factors are of primary concern in the discretionary decisions of ATSIC Commissioners. Furthermore, as ATSIC programs only account for an estimated 40 per cent of total Commonwealth expenditure on Aborigines (Altman and Sanders 1991), the allocation of ATSIC funds based on relative need may be offset by the allocations of other government departments. Consequently, there is an urgent need for total coordination of Aboriginal programs and expenditures, and the setting of consistent policy goals. These findings highlight the establishment for both general and particular policies to improve the overall economic status of Aboriginal people and to address economic and social imbalances between regions.

Table 1. Selected socioeconomic indicators by ATSI Regional Councils: 1986.

Regional Council	Pop.	% at school 15-24	% qualified at 15 yrs	Emp/pop ratio %	% 15-64 in labour force	% labour force unemp.	Annual median income	Home owner %
NSW-Metropolitan, Sydney	18,751	16	16	44	60	27	7,900	33
NSW-West								
Wangkumara	3,407	14	6	23	48	53	5,700	24
Deniliquin	990	19	10	27	52	49	5,400	25
Wirawongam	7,176	20	10	26	50	48	5,900	27
Gomilaroi	3,022	12	7	21	52	59	5,700	17
Murrumbidgee	3,911	17	10	31	53	42	6,000	24
NSW-Far West	1,662	12	4	21	46	55	5,600	29
NSW-East,								
Northern Rivers	4,832	21	10	24	51	54	5,700	26
Bogong	1,984	13	19	57	67	15	11,200	32
Umbara	2,854	17	10	29	52	44	5,800	26
Quirindi	2,388	17	10	32	54	41	5,900	31
Taree	7,214	17	13	29	51	43	6,000	32
Tingha	2,002	16	10	20	48	58	5,700	17
Victoria								
Bairnsdale	3,032	16	22	37	54	32	6,800	31
Halls Gap	3,405	15	15	40	56	30	6,900	37
Melbourne	6,173	16	18	50	62	18	8,500	43
Qld-Metropolitan								
Brisbane	13,436	16	13	39	56	32	6,800	31
Qld-Far North & communities								
Peninsula	5,240	12	3	33	45	26	6,800	8
Gulf	2,370	10	3	48	52	8	7,400	3
Woorabinda	1,676	14	2	33	51	36	6,300	0
Yarrabah/Palm	2,959	11	2	22	52	57	5,600	12
Qld-North								
Cairns & district	8,837	12	9	25	49	50	5,600	24
Townsville	8,395	19	9	34	52	35	6,400	20
Qld-South								
Gulburri	4,331	18	6	35	55	37	6,300	28
Mount Isa	3,535	16	7	38	53	28	7,600	25
Rockhampton	6,219	19	8	38	56	31	6,300	26
Torres Strait								
Thursday Island	4,224	26	8	36	46	20	6,000	26
Central Australia								
Alice Springs	3,800	16	6	32	44	27	6,300	14
Deakin	654	6	7	39	47	17	6,400	4
Harts Range	1,620	8	1	16	59	72	5,600	22
Indulkana	2,012	9	2	41	48	16	6,100	7
Papunya	3,963	6	1	13	33	62	5,500	22
Warburton	991	8	1	33	39	14	4,600	11
Yulara	599	2	3	25	61	59	5,300	23
South Australia								
Kaurna	5,826	14	14	34	54	37	6,600	25
PtAugusta & area	2,813	14	7	29	50	42	5,900	14

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Table 1. Continued

Regional Council	Pop.	% at school 15-24	% qualified at 15	Emp/pop ratio %	% 15-64 in labour force	% labour force unemp.	Annual median income	Home owner %
Murrundi	2,182	17	9	34	54	37	6,100	24
Wangka Pulka	1,083	17	7	29	53	46	5,800	13
WA-Metropolitan								
Karkarnyiny	10,283	11	12	26	45	41	6,000	28
WA-North								
Kutjungka	760	15	1	44	48	9	5,500	7
Fitzroy Crossing	1,473	13	0	18	38	52	4,900	10
Yarley	1,317	11	3	23	30	23	6,800	12
Western Desert	1,116	8	1	44	49	9	5,700	8
Wunan	1,703	10	5	31	47	35	5,400	8
Kularri	2,473	15	7	32	43	26	7,400	13
Ngarda Nguli	3,668	10	7	27	47	42	5,900	6
Jayida Buru	1,783	14	11	36	48	27	7,700	13
WA-South								
Yamatji	4,297	12	6	26	48	45	6,300	16
Wongi	2,417	9	5	22	44	50	5,500	20
Kaatanyiny	3,591	10	7	22	44	50	5,700	20
Wyalcatchem	1,587	11	5	25	46	46	5,800	15
Tasmania								
Launceston	6,716	17	16	49	62	21	7,500	55
NT-Northwest								
Daly River	1,480	9	3	17	19	12	5,200	6
Yilli/Rreung	6,480	21	11	36	49	27	8,300	26
Tiwi Islands	1,651	17	3	30	41	27	6,100	5
NT-Northeast								
Jabiru	2,538	12	3	18	24	25	5,900	27
Victoria River	1,708	6	1	32	36	10	6,000	13
Mataranka	3,480	10	5	27	42	34	5,900	17
Yapakurlangu	2,255	4	3	20	41	51	6,900	24
Miwatj	5,155	16	2	27	36	24	5,400	25
Aborigines	227,495	16	9	33	50	35	6,200	27
Non-Aborigines	15,374,661	22	30	68	69	9	9,700	70
Max/min ratio	31	13	19	4.4	3.5	9	2.4	18
Mean	3,845	13.6	7.1	30.8	48.2	35.7	6,263	20.7
Standard dev.	3,218	4.5	4.7	9.2	8.7	15.4	1,029	10.9
Coef. var. (%)	83.7	33.5	66.0	29.7	18.0	43.2	16.4	52.5

Thirty two regional councils have changed their name as allowed by the *Aboriginal and Torres Strait Islander Commission 1989*; the updated names are used here and in the attached ATSI map. The maximum/minimum ratio excludes zero values from the calculations. 'Coef. var.', the coefficient of variation, gives the ratio of the standard deviation to the mean multiplied by 100.

References

- Altman, J.C. 1991. 'Conclusion', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Altman, J.C. and Nieuwenhuysen, J. 1979. *The Economic Status of Australian Aborigines*. Cambridge: Cambridge University Press.
- Altman, J.C. and Sanders, W. 1991. *From Exclusion to Dependence: Aborigines and the Welfare State in Australia*, CAEPR Discussion Paper No. 1. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Daly, A.E. 1991. 'Aboriginal women in the labour market', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Fisk, E.K. 1985. *The Aboriginal Economy in Town and Country*. Sydney: George Allen and Unwin.
- Gregory, R.G. 1991. "'The American dilemma" Down Under: a comparison of the economic status of US Indians and Blacks and Aboriginal Australians', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Gray, A. and Tesfaghiorghis, H. 1990. 'Social indicators of the Aboriginal population of Australia', unpublished paper prepared for the Royal Commission into Aboriginal Deaths in Custody, National Centre for Epidemiology and Population Health, Australian National University, Canberra.
- Jones, F. 1991. 'Economic status of Aboriginal and other Australians: a comparison', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Miller, P.W. 1991. 'Aboriginal and non-Aboriginal youth unemployment', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Ross, R.T. 1991. 'Employment prospects for Aborigines in New South Wales', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Smith, D.E. 1991a. *Aboriginal Unemployment Statistics: Policy Implications of the Divergence Between Official and Case Study Data*, CAEPR Discussion Paper No. 13. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Smith, D.E. 1991b. *Aboriginal Expenditure Patterns: An Analysis of Empirical Data and its Policy Implications*, CAEPR Discussion Paper No. 9. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Sorensen, T. and Weinand, H. 1991. 'Regional well-being in Australia revisited', *Australian Geographical Studies*, 29 (1): 42-70.
- Taylor, J. 1991. *Geographic Location and Aboriginal Economic Status: A Census-based Analysis of Outstations in Australia's Northern Territory*, CAEPR Discussion Paper No. 8. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.

Tesfaghiorghis, H. 1990. 'The demographic and socio-economic characteristics of the Aboriginal population in the Katherine Region', appendix in J.C. Altman and D.E. Smith, *The Possible Economic Impacts of Mining and Tourism in the Kakadu Conservation Zone on Aboriginal People*, Resource Assessment Commission Consultancy Series. Canberra: Australian Government Printing Service.

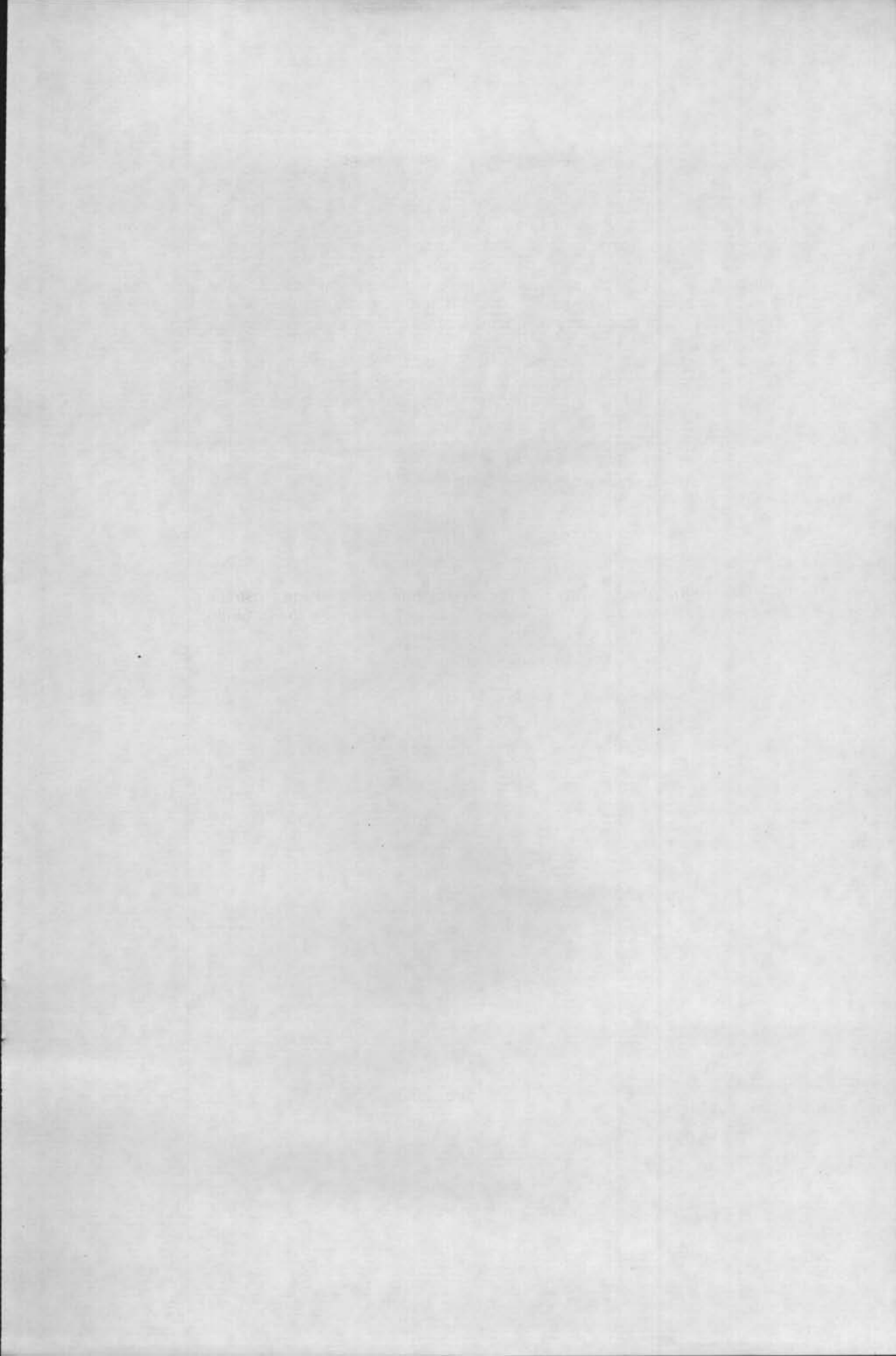
Tesfaghiorghis, H. 1991. *Geographic Variations in the Economic Status of Aboriginal People: A Preliminary Investigation*, CAEPR Discussion Paper No. 2. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.

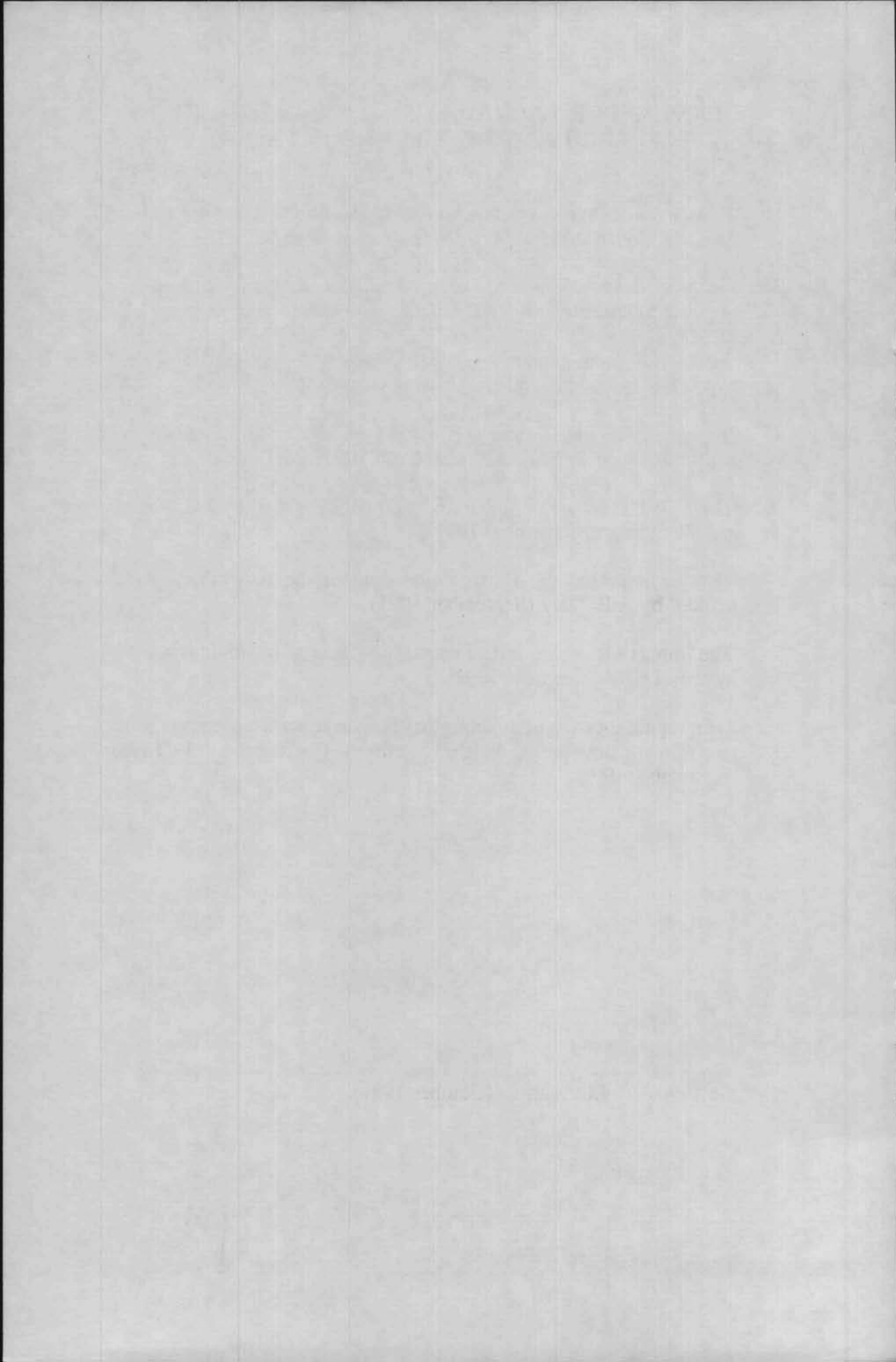
Tesfaghiorghis, H. and Altman, J.C. 1991. *Aboriginal Socio-economic Status: Are There Any Evident Changes?*, CAEPR Discussion Paper No. 3. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.

Tesfaghiorghis, H. and Gray, A. 1991. 'The demographic structure and location of the Aboriginal population: employment implications', in J.C. Altman (ed.) *Aboriginal Employment Equity by the Year 2000*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.

Treadgold, M.L. 1988. 'Intercensal change in Aboriginal incomes', 1976-1986, *Australian Bulletin of Labour* 14 (4): 592-609.

Tyler, W. 1990. 'Aboriginality and socio-economic attainment in Australia's Northern Territory', *The Australian & New Zealand Journal of Sociology* 26 (1): 68-86.





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