



CENTRE
FOR ABORIGINAL ECONOMIC
POLICY RESEARCH



Kimberley Land Council

The Relative Socioeconomic Status of Indigenous People in the Kimberley

John Taylor
Centre for Aboriginal Economic Policy Research
The Australian National University

A feature of Indigenous Affairs policy analysis since the 1980s has been the measurement of absolute and relative socioeconomic status of Indigenous populations at the regional level. Typically, this has been based on the development of a single index of socioeconomic status derived from a combination of key indicators of access to economic resources. Such indices are then used to rank regions or areas within regions. A number of authors have created such summary measures for Indigenous populations using mostly census data. This paper summarises the findings from these studies with a view to locating the socioeconomic status of Indigenous peoples in the Kimberley region and its constituent parts relative to that of Indigenous peoples in other regions of Australia over time. The findings and interpretation draw heavily from the work of Biddle (2009) which defines advantage/disadvantage as 'people's access to material and social resources, and their ability to participate in society' (ABS 2008: 5).

Concept of advantage/disadvantage

The indices developed to date reflect individual potential and actual access to economic resources. This focus is determined by a reliance on census data which necessarily restricts the range and type of data input for the development of indices. As such, there are limitations that should be kept in mind when interpreting such indices. According to Biddle (2009), these include:

- The concept is highly skewed towards mainstream or non-Indigenous notions of relative advantage/disadvantage and as such represents only a partial analysis (Taylor 2008). For example, it is not possible to include resources gained from customary land and sea-base activities (Altman, Buchanan and Biddle 2006).
- Being an individual level analysis, it does not capture community level indicators. Examples that might be important and vary across geographic areas are access to services and infrastructure, crime rates, environmental quality and social capital.

**INDIGENOUS SOCIOECONOMIC STATUS
A REPORT TO THE KIMBERLEY LAND COUNCIL**

- It is not possible to take into account the variation in supply and costs of goods and services which a person's income is used to purchase. For example in remote and even regional areas fresh fruits and vegetables are likely to be more expensive, whereas in other areas rental and house prices are quite high.

Indices of Indigenous Socioeconomic Status

The creation of ATSIC and its regional structure in 1990 generated a policy need for analysis of regional-level social indicators in order to assist in identifying relative levels of need for priority planning. This demand stimulated a subsequent series of studies aimed at providing summary measures of socioeconomic status according to various regional configurations.

Thus, in 1991, Tesfaghiorghis (1991) used three variables representing education, employment and income to construct an index of socio-economic advantage at the ATSIC Region level for the Indigenous population using 1986 census data. In 1994, Altman and Liu (1994) used a similar list of variables from 1991 census data to examine socio-economic status for a reduced number of regions (in 1993 there were legislative changes reducing the number of ATSIC regions from 60 to 36). They also drew some comparison with results for the 1986 Census.

In 2000, two sets of analyses constructed indices of socioeconomic outcomes at the area level for the Indigenous population, both using ATSIC Regions as their unit of analysis. Gray and Auld (2000) constructed an index of relative disadvantage using four variables representing family income, housing, educational attainment and employment. Importantly, Gray and Auld (2000) augmented their Census-based analysis with administrative data to attempt to control for the CDEP scheme. The authors found a reasonable level of stability between 1991 and 1996 in terms of how regions ranked.

In the same year, the Commonwealth Grants Commission funded the ABS to undertake a major study to construct indices of Indigenous socio-economic disadvantage (ABS 2000). One major difference between ABS (2000) and the previous studies was the combining of data from the 1996 Census and both the 1992 National Aboriginal and Torres Strait Islander Survey (NATSIS) and perinatal statistics. Another difference was that nine separate indices were created representing different aspects of socio-economic advantage or disadvantage. The authors found that a fair degree of consistency existed across the indices if the regions were grouped into quartiles. The major exception to this was the index that used health administrative data (ABS 2000: 97). However it is worth noting that Zubrick et.al (2004) found a health gradient across regions that did not necessarily correlate with remoteness therefore lending some support to the idea indices including health measures do differ from other socioeconomic indices.

All of the above analyses of Indigenous outcomes sit alongside the ongoing production by the ABS of the Socio-Economic Indexes for Areas (SEIFA) indices

created for the total Australian population. For the Australian population as a whole, the SEIFA indices are widely used measures of relative disadvantage at the area level and have been found to correlate with other characteristics of the individuals who live in the areas. For example, Adhikari (2006) found a strong correlation between the 2001 SEIFA scores and the proportion of people in an area who report poor health, obesity and other health risk factors. Despite this, the indices are not always useful when it comes to the Indigenous population for three main reasons:

- Given the relative size of the Indigenous population, only a small proportion of the population in the areas used as the basis for the indices are likely to be Indigenous. Therefore, the standard SEIFA indices will be dominated by the characteristics of the non-Indigenous population and will not adequately show the distribution of Indigenous disadvantage.
- One of the variables that is used to calculate the Index of Socio-economic Disadvantage (one of the most commonly used SEIFA index) is the proportion of people in the area who identify as being Indigenous. While this may be useful when analysing the total population as Indigenous status correlates highly with other aspects of disadvantage not included in the Census,ⁱ clearly it will tend to introduce a strong upward bias on any measures of the average levels of disadvantage of the areas in which the Indigenous population live. That is, any correlations of this particular index against the proportion of Indigenous persons will always be significant, because the proportion of Indigenous persons is an input variable.
- There are variables in the standard SEIFA indices that may not be as relevant or have a different meaning for the Indigenous population compared to the non-Indigenous population. For example, the presence of Community Development and Employment Projects (CDEP) programs in a number of areas makes the interpretation of the unemployment rate quite difficult. Alternatively, the cut-offs for some of the variables like income or rent may not reflect the distribution of Indigenous outcomes.
- The SEIFA indices constructed by the ABS are not comparable between Census years as the variables included differ through time, as do the geographic boundaries. Hence it would not be possible to compare the change in the distribution of socio-economic outcomes through time, Indigenous or otherwise.

Given these problems with using SEIFA indices to analyse the geographic distribution of Indigenous socio-economic outcomes, and the fact that the most recent published set of indices specific to the Indigenous population used 1996 Census data, no further consideration is given to these measures.

The relative socioeconomic status of Indigenous people in the Kimberley

The first study to attempt to rank regions according to socioeconomic status was that of Tesfaghiorghis (1991). This used 1986 Census data to create a Socioeconomic Status Index (SSI) for the original 60 ATSI Regions. The SSI was based on just three indicators: percent of Indigenous adults with post-school qualifications, the employment/population ratio, and median individual income.

By locating regions around the average SSI score, Tesfaghiorghis was able to group them into four categories ranging from high SSIs (high status) to low. In the Kimberley, the Fitzroy Crossing and Kununurra regions fell into the low socioeconomic status grouping, Halls Creek and Broome regions were among the average scores, while Derby was found to be moderately high.

Altman and Liu (1994) extended this original work by enabling a comparison of change in regional rankings between two censuses (1986 and 1991). They used the same variables as Tesfaghiorghis (1991) to create an Index of Socioeconomic Advantage (ISA). However, this was calculated for what had become just 36 ATSI Regional Council areas. At that time, there were three such regions in the Kimberley: Kullarri, Derby and Wunan equivalent to the Indigenous Regions today of Broome, Derby and Kununurra.

By ranking the ISA scores for all regions across Australia and grouping these into quartiles, Altman and Liu found that in 1986 Wunan and Derby were ranked 28th and 29th down the list of 36 regions and were therefore located in the least advantaged group of regions in the country based on a quartile distribution. The remaining regions below them were in remote parts of the Northern Territory but also included Kaata-Wangkinyiny (Narrogin) and Western Desert (Warburton) in Western Australia. Kullarri was ranked 13th out of 36 and therefore among the more advantaged regions which included regions such as Alice Springs and Townsville (Altman and Liu 1994: 14). By 1991, Wunan had fallen to 30th in the ranking while Derby had risen to 23rd and now grouped among the 'less advantaged' quartile. However, Kullarri had also slipped down the rankings to 18th exactly half way in the distribution (Altman and Liu 1994: 16).

The next index to be produced was an Index of Socioeconomic Disadvantage (ISD) using 1996 Census data (Gray and Auld 2000). Reflecting the focus on disadvantage as opposed to advantage, the variables chosen to make up this index included: the proportion of households in poverty after housing costs, the proportion of working-age population not employed, the proportion of working-age population with no qualification, and the ratio of bedrooms needed to the number of dwellings (Gray and Auld 2000).

The results from this exercise were broadly in agreement with the earlier findings of Altman and Liu, with the main difference being a notably worse outcome for the Broome ATISIC Region. According to the ISD scores, Kununurra was ranked 30th out of 36 regions in 1991 and was barely changed at 29th in 1996. Derby was the next ranked at 29th and 28th respectively placing these both among the most disadvantaged quartile of regions. Interestingly, given the variation noted in Altman and Liu's ISA, Broome was not far behind the rest of the Kimberley being ranked 26th in 1991 and 25th in 1996 (Gray and Auld 2000: 13).

Also using 1996 Census data, augmented by information from the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) and perinatal data, the ABS experimental Indigenous Socioeconomic Disadvantage index (ABS 2000) produced very similar results. Both Derby and Kununurra were again listed

among the most disadvantaged regions ranked 31st and 28th respectively, whilst Broome was high in the listing of more disadvantaged regions and placed 26th.

Most recently, Biddle (2009) has developed a more sophisticated Index of Socioeconomic Outcomes (ISO). This is also based on census data (from the 2001 and 2006 censuses) and includes the usual combination of indicators—labour force status, education, income and housing—but draws on a wider range of variables as shown in Table 1.

ISO scores produce very similar results for those generated by slightly different indices using earlier census data. In both 2001 and 2006, Kununurra was ranked 32nd (out of 37 Indigenous Regions) and Derby was ranked 30th, both still amongst the worst regional outcomes in the country. Not far behind was Broome ranked 23rd in 2001 and 21st in 2006.

While these results refer to Indigenous Regions (similar in coverage to ATSI Regions), Biddle has also produced equivalent results for the much smaller geographic areas referred to as Indigenous Areas (IAs) within the ABS' Australian Indigenous Geographic Classification (AIGC). Analysis at this level allows some of the fine-grained variation in socioeconomic outcomes within the Kimberley to be revealed.

Table 1. Average values for variables used to capture access to economic resources

Variable	Indigenous		Non-Indigenous	
	2001	2006	2001	2006
Employed *	42.2			
	3	45.55	66.49	69.51
Employed as a manager or professional *	6.18	7.35	18.08	19.53
Employed full-time in the private sector *	13.7			
	4	15.01	36.35	38.20
Completed Year 12 *	16.8			
	4	20.74	38.13	44.21
Completed a qualification *	14.1			
	5	20.67	40.78	46.52
15 to 24 year olds attending an educational institution	29.2			
	3	29.73	39.86	40.19
Individual income above half the Australian median *	57.5			
	2	53.34	77.24	76.16
Lives in a house that is owned or being purchased	20.1			
	6	22.31	56.07	56.58
Lives in a house with at least one bedroom per usual resident ⁱⁱ	32.9			
	3	36.75	62.90	66.84

Notes: *Calculated for those aged 15 years and over. As the values in the above table are averaged without population weights across the 37 Indigenous Regions rather than calculated for Australia as a whole, the figures will differ slightly from Australian averages

Source: Biddle 2009

Table 2. Indigenous ISO score rank position: IAs in the Kimberley Region, 2001-2006

**INDIGENOUS SOCIOECONOMIC STATUS
A REPORT TO THE KIMBERLEY LAND COUNCIL**

IA Name	Indigenous Region	Rank in 2006	Rank in 2001	Change in rank position 01-06	National quartile rank in 2006
Balgo	Kununurra	520	515	5	4
Mindibungu	Kununurra	514	494	20	4
Kalumburu	Kununurra	499	506	-7	4
Bayulu	Derby	493	486	7	4
Warmun	Kununurra	485	458	27	4
Bidyadanga	Broome	477	479	-2	4
Looma	Derby	476	445	31	4
Fitzroy River	Derby	473	457	16	4
Halls Creek (S) - North	Kununurra	472	463	9	4
Wyndham-East Kimberley (S) Far-West	Derby	470	500	-30	4
Great Sandy Desert	Kununurra	469	470	-1	4
Halls Creek (S) North-West	Derby	468	488	-20	4
Halls Creek Town	Kununurra	464	459	5	4
Djarindjin/Lombadina	Broome	463	404	59	4
Derby-West Kimberley (S) Bal	Derby	457	439	18	4
Mowanjum	Derby	450	365	85	4
Bardi (One Arm Point)	Broome	447	489	-42	4
Mulan	Kununurra	446	531	-85	4
Oombulgurri	Kununurra	445	426	19	4
Fitzroy Crossing	Derby	442	450	-8	4
Beagle Bay	Broome	435	427	8	4
Broome (S) - Pastoral Areas	Broome	427	462	-35	4
Lake Argyle	Kununurra	424	347	77	4
Yunggora	Derby	421	467	-46	4
Wyndham	Kununurra	417	437	-20	4
Kununurra	Kununurra	411	362	49	4
Wyndham-East Kimberley (S) - Rem	Kununurra	370	452	-82	3
Broome	Broome	248	261	-13	2

Note: minus sign indicates an improvement in rank

Source: Biddle 2009

In 2001, there were 531 IAs across Australia. Table 2 shows the ranking of each IA in the Kimberley in 2006 out of these 531 IAs nationwide and compares this with the equivalent ranking in 2001. As shown, Balgo is the lowest ranked area in the Kimberley in terms of socioeconomic outcomes. Not only that, it is almost the worst performing area in the country according to this index ranking 520th out of 531 in 2006. This was a worse outcome compared to 2001 as Balgo fell 5 places in the overall national ranking from 515th place in 2001.

The striking feature of Table 2 is that all areas of the Kimberley, with the exception of Wyndham-East Kimberley (S) – Rem (which is a default classification after all the main population centres in the East Kimberley are accounted for) and (more significantly) the town of Broome fall within the lowest ranked quartile (4) and are therefore amongst the nation's worst performing areas in terms of the variables used in the index.

Table 3. Change in Indigenous ISO score rank position: IAs in the Kimberley Region, 2001-2006

IA Name	Indigenous Region	Change in rank position 01-06	Rank in 2006	Rank in 2001
Mowanjum	Derby	85	450	365
Lake Argyle	Kununurra	77	424	347

**INDIGENOUS SOCIOECONOMIC STATUS
A REPORT TO THE KIMBERLEY LAND COUNCIL**

Djarindjin/Lombadina	Broome	59	463	404
Kununurra	Kununurra	49	411	362
Looma	Derby	31	476	445
Warmun	Kununurra	27	485	458
Mindibungu	Kununurra	20	514	494
Oombulgurri	Kununurra	19	445	426
Derby-West Kimberley (S) Bal	Derby	18	457	439
Fitzroy River	Derby	16	473	457
Halls Creek (S) - North	Kununurra	9	472	463
Beagle Bay	Broome	8	435	427
Bayulu	Derby	7	493	486
Balgo	Kununurra	5	520	515
Halls Creek Town	Kununurra	5	464	459
Great Sandy Desert	Kununurra	-1	469	470
Bidyadanga	Broome	-2	477	479
Kalumburu	Kununurra	-7	499	506
Fitzroy Crossing	Derby	-8	442	450
Broome	Broome	-13	248	261
Halls Creek (S) North-West	Derby	-20	468	488
Wyndham	Kununurra	-20	417	437
Wyndham-East Kimberley (S) Far-West	Derby	-30	470	500
Broome (S) - Pastoral Areas	Broome	-35	427	462
Bardi (One Arm Point)	Broome	-42	447	489
Yungngora	Derby	-46	421	467
Wyndham-East Kimberley (S) - Rem	Kununurra	-82	370	452
Mulan	Kununurra	-85	446	531

Note: minus sign indicates an improvement in rank
Source: Biddle 2009

Of interest is the trend over time in relative rank position. This is shown in Table 3 which indicates that the socioeconomic outcomes at Mowanjum (rank 450 in 2006) declined the most in relative terms compared to 2001 (rank 365). Interestingly, given its population size, the town of Kununurra also experienced a substantial reduction in its ranking (from 362nd to 411th). At the other extreme, Mulan substantially improved its ranking although since it started so low down the list in 2001 (at 531) this still meant that socioeconomic outcomes at Mulan in terms of the ISO score were still relatively low.

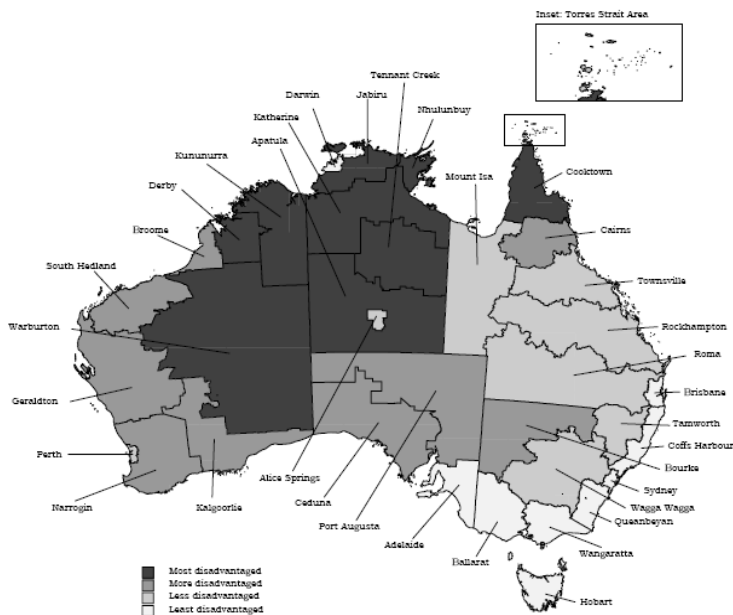
Conclusion: 'Plus ça change.....'

The evidence from 20 years worth of census analysis regarding the relative socioeconomic status of Indigenous people in the Kimberley region compared to that of Indigenous people elsewhere in Australia indicates that outcomes in the Kimberley are amongst the most disadvantaged in the country and have shown no sign of change—if anything, they appear to have worsened over time given the relatively favourable status of parts of the Kimberley reported by Tesfaghiorghis for 1986. Of course, the Kimberley is not alone in this finding of entrenched disadvantage. Indeed, it would appear to share a similar outcome, and persistently so, with adjoining remote areas in the Northern Territory.

This much is apparent from a comparison of Figures 1 and 2 which show the distribution of Indigenous socioeconomic disadvantage indices for 1991 and 2006 respectively by quartile ranking. They reveal a very persistent pattern of

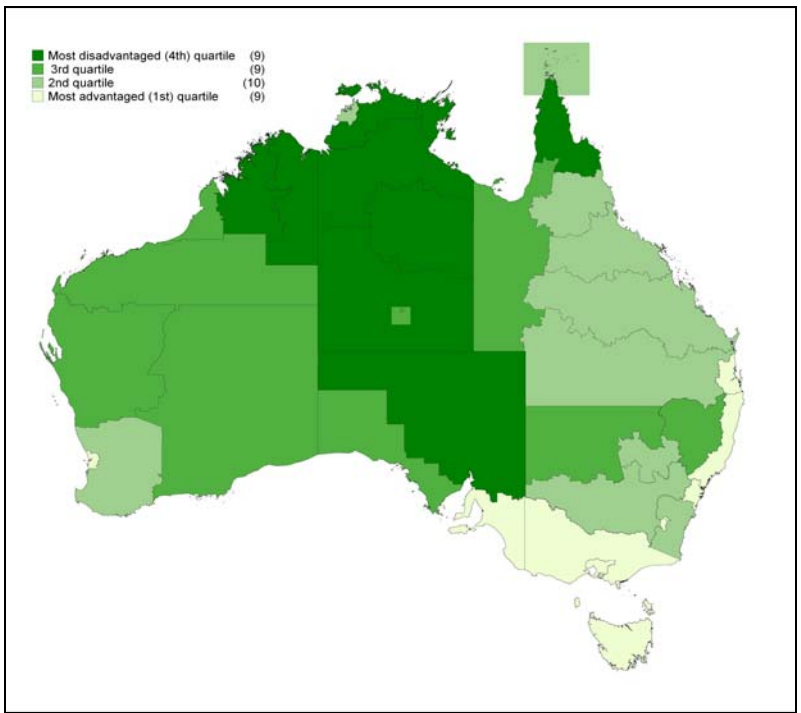
outcomes over this 15 year period with the most disadvantaged regions firmly entrenched in the Derby and Kununurra parts of the Kimberley (and, as we have seen, in the West Kimberley away from the town of Broome) as well as virtually all of the Northern Territory and all of Cape York.

Figure 1. Indigenous socioeconomic disadvantage ranked by quartile, 1991



Source: Gray and Auld 2000

Figure 2. Indigenous socioeconomic outcomes ranked by quartile, 2006



Source: Biddle 2009

References

ABS (Australian Bureau of Statistics) 2000. *Report on experimental Indigenous Socioeconomic disadvantage indexes* Consultant's report for the Commonwealth Grants Commission, Canberra.

Altman J.C., Buchanan G. and Biddle, N. 2006. 'Measuring the 'real' Indigenous economy in remote Australia using NATSISS 2002', *Australian Journal of Labour Economics* 9 (1):17-31.

Altman, J.C., and Liu, J., 1994. 'Socioeconomic status at the ATSI regional level, 1986 and 1991: data for regional planning', *CAEPR Discussion Paper No. 76*, ANU, Canberra.

Biddle, N., 2009. 'Ranking regions: revisiting an index of relative Indigenous socioeconomic outcomes', *CAEPR Working Paper 50*, ANU, Canberra.

Gray, M.C., and Auld, A.J., 2000. 'Towards an index of relative Indigenous socioeconomic disadvantage', *CAEPR Discussion Paper No. 196*, ANU, Canberra.

Taylor, J., 2008. 'Indigenous peoples and indicators of well-being: an Australian perspective on United Nations global frameworks' *Social Indicators Research*, 87:111-26.

Tesfaghiorghis, H., 1991. 'Aboriginal economic status by ATSI Regions: analyses of 1986 Census data', *CAEPR Discussion Paper No. 11*, ANU, Canberra.

Zubrick S.R., Lawrence D.M., Silburn S.R., Blair E., Milroy H., Wilkes T., Eades S., D'Antoine H., Read A., Ishiguchi P., and Doyle S. 2004. *The Western Australian Aboriginal Child Health Survey: The Health of Aboriginal Children and Young People*, Telethon Institute for Child Health Research, Perth.
