

SEIFA Indexes - 1996

Age Cohorts	Younger, Mid-age and Older
Surveys	Survey 2
Derived Variable	I_Urban
Definition	Index of Urban Relative Socioeconomic Advantage
Derived Variable	I_Rural
Definition	Index of Rural Relative Socioeconomic Advantage
Derived Variable	I_Disad
Definition	Index of Relative Socioeconomic Disadvantage
Derived Variable	I_EconR
Definition	Index of Economic Resources
Derived Variable	I_EdOcc
Definition	Index of Education & Occupation
Source Items	Address at Survey 2
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Statistical Form	Continuous variables
Endorsed	18 December 2003

Background¹

The following text is a summary of the reference materials only. Some sections are taken directly from these references.

Five indexes for the socioeconomic well being of *geographic areas* have been derived by the Australian Bureau of Statistics (ABS) using principal component analysis of census items. The indexes known as socio-economic indexes for areas (SEIFA) are:

- Urban Relative Socioeconomic Advantage
- Rural Relative Socioeconomic Advantage
- Relative Socioeconomic Disadvantage
- Economic Resources
- Education & Occupation

The first three indexes are general socio-economic indicators which summarise variables related to economic and social characteristics of families and households, as well as the education level and occupation of individuals. The index of economic resources reflects the income and expenditure of families (accounting for family structure) as well as non-income assets. The index of education and occupation is designed to reflect the educational and occupational structure of communities. All indexes are scored so that higher values indicate greater advantage.

Index scores are available for six levels of geographic area:

- Collectors district (CD)

- Statistical local area (SLA)
- Legal local government area (LGA)
- Statistical sub-division (SSD)
- Statistical Division (SD)
- Postal area (POA)

Collector's districts are the smallest of these geographic units for which indexes are available. Because CDs are rather small, index values at this level may be distorted by any unusual characteristics of particular CDs. SEIFA scores are initially calculated at the CD level and then summed for larger geographic areas such as SLAs, weighting for the population size of each CD. Index scores have been standardised to have a mean of 1 000 and a standard deviation of 100 across all CDs in Australia.

Derived Variables^{2,3}

Suburbs from addresses of participants at Survey 2 of the ALSWH were geo-coded to 'localities' (a measure of latitude and longitude) by National Key Centre for Social Applications of Geographic Information Systems (GISCA). 'Localities' are not unique for the smaller geographic areas, such as Collector's Districts. Accordingly, 'localities' were mapped to SLA and SEIFA values for these SLAs were assigned to individual participants.

The ABS warns against the direct comparison of SEIFA scores based on the 1996 Census and indexes from the 1991 Census¹.

Missing Values²

- All SEIFA indexes have missing values for:
 - non-geo-coded records
 - addresses which are 'VIA' another locality
 - localities in the Russell/Fyshwick SLAs (ACT); not calculated by the ABS
 - Norfolk Island localities; not included as part of Australia for statistical purposes by the ABS
- The SEIFA Urban Index of Advantage (I_Urban) has missing values for non-urban localities.
- The SEIFA Rural Index of Advantage (I_Rural) has missing values for non-rural localities.

Tables 1 to 5 show SEIFA scores for women in the Younger, Mid-age and Older cohorts, based on their address at Survey 2. Mean scores and quantiles for the ALSWH are compared with values for the Australian population from the 1996 census.

For all three cohorts, mean values for the five SEIFA indexes were significantly higher than the population. The difference was most marked for the Index of Rural Relative Socioeconomic Advantage.

All score distributions were statistically non-normal, with p-values for Kolmogorov-Smirnov tests of less than 0.01.

References

1. Australian Bureau of Statistics *1996 Census of Population and Housing. Socio-economic Indexes for Areas*. ABS Catalogue Number 2039.0; 1998
2. Edited from *Documentation and Notes: Young & Middle Cohorts Geo-coding November 2002*. Rachel Ambagtsheer for National Centre for Social Applications of Geographic Information Systems
3. Personal communication Debra Snoad, National Centre for Social Applications of Geographic Information Systems

Table 1 Index of Education & Occupation

	Mean (SD)	Quantile					Number Classified
		10%	25%	50%	75%	90%	
1996 Census (SLA level)	992	903	931	966	1 045	1 122	
Younger (N = 9 685)							9 642
Weighted ALSWH	1 014 ^a (84)	923	949	994	1 075	1 139	
Difference between Weighted and Census	22	20	18	28	30	17	
ALSWH - Unweighted	1 001 (80)	920	942	980	1 051	1 120	
Mid-age (N = 12 338)							12 268
Weighted ALSWH	1 011 ^a (81)	925	951	994	1 071	1 134	
Difference between Weighted and Census	19	22	20	28	26	12	
ALSWH - Unweighted	985 (69)	918	940	967	1 013	1 089	
Older (N = 10 421)							10 409
Weighted ALSWH	1 011 ^a (82)	926	949	992	1 071	1 138	
Difference between Weighted and Census	19	23	18	26	26	16	
ALSWH - Unweighted	988 (72)	920	940	968	1 011	1 096	

^a Significantly different from census value, p<0.0001

Table 2 Index of Economic Resources

	Mean (SD)	Quantile					Number Classified
		10%	25%	50%	75%	90%	
1996 Census (SLA level)	992	917	943	980	1 035	1 094	
Younger (N = 9 685)							9 642
Weighted ALSWH	1 015 ^a (67)	943	965	1 002	1 053	1 115	
Difference between Weighted and Census	23	26	22	22	18	21	
ALSWH - Unweighted	1 003 (64)	940	957	989	1 039	1 097	
Mid-age (N = 12 338)							12 268
Weighted ALSWH	1 021 ^a (71)	944	967	1 006	1 065	1 124	
Difference between Weighted and Census	29	27	24	26	30	30	
ALSWH - Unweighted	992 (63)	933	948	976	1 022	1 082	
Older (N = 10 421)							10 409
Weighted ALSWH	1 012 ^a (69)	940	961	1 000	1 051	1 120	
Difference between Weighted and Census	20	23	18	20	16	26	
ALSWH - Unweighted	991 (62)	933	947	974	1 018	1 075	

^a Significantly different from census value, p<0.0001

Table 3 Index of Relative Socioeconomic Disadvantage

	Mean (SD)	Quantile					Number Classified
		10%	25%	50%	75%	90%	
1996 Census (SLA level)	1 000	924	957	994	1 045	1 093	
Younger (N = 9 685)							9 642
Weighted ALSWH	1 012 ^a (64)	938	966	1 002	1 061	1 098	
Difference between Weighted and Census	12	14	9	8	16	5	
ALSWH - Unweighted	1 004 (61)	935	961	991	1 046	1 089	
Mid-age (N = 12 338)							12 268
Weighted ALSWH	1 015 ^a (65)	939	967	1 004	1 064	1 111	
Difference between Weighted and Census	15	15	10	10	19	18	
ALSWH - Unweighted	995 (57)	935	957	984	1 026	1 078	
Older (N = 10 421)							10 409
Weighted ALSWH	1 009 ^a (66)	934	964	994	1 061	1 096	
Difference between Weighted and Census	9	10	7	0	16	3	
ALSWH - Unweighted	994 (58)	932	955	982	1 023	1 077	

^a Significantly different from census value, p<0.0001

Table 4 Index of Urban Relative Socioeconomic Advantage

	Mean (SD)	Quantile					Number Classified
		10%	25%	50%	75%	90%	
1996 Census (SLA level)	995	921	944	971	1 036	1 108	
Younger (N = 9 685)							9 280
Weighted ALSWH	1 005 ^a (76)	928	951	979	1 050	1 128	
Difference between Weighted and Census	10	7	7	8	14	20	
ALSWH - Unweighted	994 (70)	928	949	970	1 027	1 092	
Mid-age (N = 12 338)							
Weighted ALSWH	1 008 ^a (80)	929	952	981	1 056	1 129	
Difference between Weighted and Census	13	8	8	10	20	21	
ALSWH - Unweighted	983 (65)	928	945	963	997	1 077	
Older (N = 10 421)							9 913
Weighted ALSWH	1 007 ^a (78)	934	955	978	1 055	1 129	
Difference between Weighted and Census	12	13	11	7	19	21	
ALSWH - Unweighted	987 (66)	933	950	966	1 004	1 080	

^a Significantly different from census value, p<0.0001

Table 5 Index of Rural Relative Socioeconomic Advantage

	Mean (SD)	Quantile					Number Classified
		10%	25%	50%	75%	90%	
1996 Census (SLA level)	1 011	911	941	995	1 066	1 129	
Younger (N = 9 685)							5 848
Weighted ALSWH	1 075 ^a (85)	957	1 016	1 077	1 123	1 191	
Difference between Weighted and Census	64	46	75	82	57	62	
ALSWH - Unweighted	1 061 (86)	951	998	1 062	1 108	1 162	
Mid-age (N = 12 338)							8 822
Weighted ALSWH	1 079 ^a (80)	961	1 018	1 080	1 129	1 193	
Difference between Weighted and Census	68	50	77	85	63	64	
ALSWH - Unweighted	1 047 (81)	945	989	1 048	1 092	1 155	
Older (N = 10 421)							7 144
Weighted ALSWH	1 075 ^a (80)	956	1 016	1 078	1 123	1 172	
Difference between Weighted and Census	64	45	75	83	57	43	
ALSWH - Unweighted	1 050 (80)	947	993	1 051	1 092	1 153	

^a Significantly different from census value, p<0.0001