

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 |
| Prepared by | Anne Russell and Jean Ball |
| 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