SOCIO-ECONOMIC FACTORS IN THE BASE GRANT MODEL

Proposal to replace the Unemployment Cost Adjustor with a SEIFA based Cost Adjustor

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Contents

Executive Summary

The State Grants Commission's Base Grant Model currently includes an Unemployment Cost Adjustor as a proxy measure for measuring socio-economic factors/demographics of a community and effects on council expenditure.

As part of discussions at its 2018 Hearings and Visits, the Commission heard from councils that socio-economic factors/demographics of a community do impose on councils and this impost is much more broadly felt than the areas that the Commission's Unemployment Cost Adjustor currently applies. The Unemployment Cost Adjustor currently only redistributes expenditure in the Health, Housing and Welfare and Law Order and Public Safety expenditure categories of its Base Grant Models, whereas the effects councils reported as incurring expenditure in response to different socio-economic/demographics of a community included expenditure areas such as community amenities and community halls which are reflected in the Planning and Community Amenities and Recreation and Culture expenditure categories.

During 2018 the Commission researched different socio-economic indicators, and performed correlation analysis on unemployment data and Socio-Economic Indexes For Areas (SEIFA) which is produced by the Australian Bureau of Statistics. The Commission's analysis included investigating how council expenditures in the categories reported as bearing the socio-economic costs correlated with both unemployment data and the Index of Relative Socio-economic Disadvantage (IRSD) SEIFA measure. The Commission chose the SEIFA IRSD measure for its analysis as it was the SEIFA measure which sought to provide a general summary of relative disadvantage, ranking areas on a continuum from most disadvantaged to least disadvantaged.

The Commission's research found that there was not so much correlation with the Health Housing and Welfare and Law Order and Public Safety expenditure categories, and in face saw some correlations that appeared opposite to that which was expected. However, when undertaking detailed analysis at the sub-expenditure categories, the Commission did see correlations in expenditure on Community Amenities and Community Services and Halls with the SEIFA and unemployment results.

While unemployment has been used as a proxy indicator of socio-economic factors to date, and recognising that SEIFA is not a perfect solution, the Commission considers that moving to a SEIFA IRSD based cost adjustor would be an improvement on its current methodology. As such, the Commission is proposing to replace the Commission's Unemployment Cost Adjustor with a SEIFA IRSD indicator.

The Commission has designed a SEIFA IRSD Cost Adjustor (refer Appendix 7) based on a similar methodology to the Victorian Grants Commission. Based on the correlation analysis results, the Commission is also proposing that its SEIFA IRSD Cost Adjustor apply to the Planning and Community Amenities and the Recreation and Culture expenditure categories of council expenditure and not to the Health, Housing and Welfare or Law Order and Public Safety Expenditure Categories. The impacts of such a cost adjustor have been modelled using the 2018-19 Base Grant Model and are provided at Appendix 9. The Commission's existing Unemployment Cost Adjustor and its impacts are detailed in Appendices 1 and 2.

The Commission is seeking feedback from councils on a potential SEIFA informed cost adjustor and its suitability as a replacement to the Commission's existing Unemployment Cost Adjustor.

While the Commission is currently consulting on this proposed methodology change and comments on this proposal are due by 1 February 2019, in line with the Commission's Triennium policy, any changes to the methodology as a result of this review will not be adopted into the Commission's methodology until the end of the 2019-22 Triennium.

Triennium Review Context

The State Grants Commission (the Commission) is an independent statutory body responsible for recommending the distribution of Australian Government and State Government funds to Tasmanian local government authorities. To ensure that the distribution of available funds is as equitable and contemporary as possible, the Commission continually monitors council practices and updates assessment methods and data where appropriate.

To provide some structure to updating the distribution methods of the Australian Government Financial Assistance Grants (FAGs), the Commission operates a triennial review policy whereby major method changes are introduced only every three years, with data updates and minor changes applied every year.

Overview of Triennial Review Period (FAGs)

Distribution	Action
2018-19	Method Changes + Data Updates
2019-20	Data Updates
2020-21	Data Updates
2021-22	Method Changes + Data Updates

As part of the Commission's review process, and in accordance with the Commission's 2019-22 Triennium Work Plan, the Commission is reviewing whether the Unemployment Cost Adjustor it currently uses in its Base Grant Model is appropriately reflecting the effect on expenditure demands of socio-economic factors that councils inform the Commission they have to manage.

The Commission has determined that the review will focus on:

- a review of the current approach used by the Commission for assessing socio-economic factors using unemployment as a proxy;

- researching approaches adopted by other local government grants commissions relating to recognising socio-economic issues;
- investigation of council expenditure correlations with socio-economic measures published by the Australian Bureau of Statistics; and
- if appropriate, include a proposal for an alternative design of a socio-economic cost adjustor to replace the Commission's current Unemployment Cost Adjustor for comment by councils.

1. Background to review of the Unemployment Cost Adjustor

In December 2017 the State Grants Commission (the Commission) released as part of its suite of publications to discuss with councils at the 2018 Hearings and Visits, a Conversation Starter paper titled *Socio-economic Impacts.* The paper asked councils if different demographic groups present challenges for councils, and if so, which groups and in what forms are the challenges manifesting?

At the 2018 Hearings and Visits and in written submissions, councils reported widely that socio-economic factors do impact upon the essential expenditures of councils. The feedback received highlighted that, while the common expenditure impacts would be categorised within the Health, Housing and Welfare expenditure category, expenditure impacts also exist within sub-categories of other council expenditure, such as Planning and Community Amenities; Recreation and Culture; and/or Other expenditure categories.

The feedback indicated that socio-economic factors have a much broader impact on council expenditure than the categories to which the Commission's current Unemployment Cost Adjustor applies, and these are influenced by the characteristics of the local government area's population such as income, education, health, and cultural background.

The following is a list of the key issues raised by councils as demonstrating how the socio-economic characteristics of its population affect service delivery/expenditure priorities:

- an ageing population places greater demand on council services and infrastructure needs, along with the necessity to continue using traditional engagement and communication methods;
- most councils have some involvement in youth programs, support, or the employment of dedicated youth officers;
- a lack of youth transport to further education or for employment is requiring some councils to provide some services to help support its community;
- the provision of support services to assist residents from varying cultural backgrounds;
- the provision of support services to assist residents with disabilities; and

- the need to consider differing service delivery in areas where unemployment and low incomes are prevalent.

In the cities and some coastal areas, councils noted that there is an extreme divide between the wealthy and low income areas, and this also creates challenges for rating and revenue raising. While noting this, the Commission's current review of this issue in this Triennium will only be considering the impacts of socio-economic factors on councils' expenditure requirements.

There was a considerable amount of support expressed at the 2018 Hearings and Visits for the Commission to replace its Unemployment Cost Adjuster with some measure that reflects the broader socio-economic factors that councils face. Of those councils seeking to have a socio-economic indicator included in the Base Grant Model, there was wide, although not total, support for using the Socio-Economic Indexes For Areas (SEIFA) index which is produced by the Australian Bureau of Statistics (ABS) every five years. Some reasons given for supporting the use of a SEIFA informed cost adjustor included that it is available for all local government areas, is an ongoing and periodically available indicator that has extensive rigour underpinning its calculation. It is a widely recognised and understood measure of population demographics, designed to return a statistically comparative measure between different geographic areas.

Previous Commissions have considered the possibility of using SEIFA in the Base Grant Model. However, at that time it was determined that an unemployment measure was a reasonable proxy for measuring socio-economic disadvantage. This approach was taken on the basis that SEIFA, whose results are ordinal (1^{st}, 2^{nd}, 3^{rd}…) rather than cardinal (1, 2, 3,….) in nature, is only available from census data, while unemployment data is obtainable annually. Therefore the Unemployment Cost Adjustor was retained because of its simplicity, and the availability of timely data.

Due to the broadening socio-economic factors impacting on councils, the Commission now considers it appropriate to review this matter again and is seeking councils' views and comments on the proposal to change the Commission's method for assessing expenditure requirements for councils.

The Commission considered the council feedback received during the 2018 Hearings and Visits, and concluded that the following should occur:

a. Further research into SEIFA and a comparison with unemployment data over a long period to better understand the implications of moving to this new index; and
b. Review of other state grants commissions to see what socio-economic cost adjustors are used.

The Commission has decided to undertake this review as part of its 2018-19 Work Program and discuss it with councils as part of the 2019 Hearings and Visits.

A decision to either replace or augment the current Unemployment Cost Adjustor needs to consider not only the potential improvements a SEIFA alternative may capture, but also the reasoning behind the current Unemployment Adjustor's application in terms of capturing demands on local government services.

2. Unemployment Cost Adjustor - current methodology and impact

The Commission currently uses an Unemployment Cost Adjustor in its Base Grant Model methodology (Refer Appendix 1), as a proxy measure to account for socio-economic disadvantage experienced by councils. The Commission's Distribution Methodology states that the Unemployment Cost Adjustor attempts to capture the additional costs that councils incur through having a higher than average proportion of unemployed working-age residents. The Unemployment Cost Adjustor is applied to two non-road expenditure categories, namely:

- Health, Housing and Welfare (HHW); and
- Law, Order and Public Safety (LOPS).

The data currently used for constructing and updating the Unemployment Cost Adjustor is the Department of Education, Employment and Workplace Relations (DEEWR) publication *'Small Area Labour Markets'* for the June quarter each year. The Unemployment Cost Adjustor is based on the average unemployment rate for each council area over the appropriate year with reference to the Tasmanian state average to establish relativities between councils (refer Appendix 1). It uses the number of unemployed as a percentage of the labour force for each municipality.

This information is available on a quarterly basis, but the Commission uses a June to June 12-month average rate as measured at each June Quarter. This enables an alignment of the unemployment levels, with the equivalent financial year's revenue and expenditure results that inform the Base Grant Model.

The Unemployment Cost Adjustor is a narrow measure of individuals' unemployment status by local government area, albeit at a similar point in time[1]. The SEIFA rankings do not align with

[1] The 2016 Census was conducted in August 2016 but the Unemployment Cost Adjustor calculation is derived as an average of two years of unemployment rates as at 30 June. The 2016-17 U CA (an average of 30 June 2016 and 30 June 2017 unemployment rates) was used in the SEIFA: UCA modelling as the better reflective of the population changes also coming out of the 2016 Census and the 2016-17 data year is the data used throughout the SEIFA Project modelling.

the Unemployment Cost Adjustor rankings because they comprise different factors and are constructed differently.

For the Commission's latest model (which determined the 2018-19 Base Grant Allocations), the 2016-17 data year reported expenditure on the Health, Housing & Welfare and Law, Order and Public Safety of $32 266 036. This represented 6.75 per cent of the total non-roads expenditure, or$477 944 607.

Cost adjustors in the Commission's 2016-17 Base Grant Model had a total expenditure redistribution impact of $26 896 050. Within that total, the current Unemployment Cost Adjustor has one of the smallest redistributive impacts ($924 594, 3.44 per cent) (refer Appendix 2) of the eleven cost adjustors the Commission applies in its Base Grant Model.

The Unemployment Cost Adjustor has a similar strength as the current Tourism Cost Adjustor[2] ($1 045 659) and the Population Decline Cost Adjustor ($1 189 996)[3].

[2] The Tourism Cost Adjustor is currently being phased out over two years. The 2018-19 Base Grant Distributions represent Year 1 of the phase out process.

[3] The Commission's other cost adjustors, ranked in increasing expenditure redistributive effort are as follows: Isolation Cost Adjustor ($2 859 759), Dispersion Cost Adjustor ($4 455 130), Absentee Population Cost Adjustor ($5 755 286), Regional Responsibility Cost Adjustor ($5 853 584), Scale (Other) Cost Adjustor ($6 733 695) and Scale (Administration) Cost Adjustor ($13 3841 63).

3. Socio Economic Indexes for Areas (SEIFA) options

The ABS broadly defines relative advantage and disadvantage in Socio Economic Indexes for Areas (SEIFA) in terms of people's access to material and social resources and their ability to participate in society. These are area-based, collective measures, not individual measures.

SEIFA uses Census-collected information on the key dimensions of income, education, employment, occupation and housing, plus some other miscellaneous indicators of advantage or disadvantage to develop indicators of the collective socio-economic characteristics of the people living in an area.

The four SEIFA indexes each focus on a different aspect of socio-economic advantage and disadvantage by summarising a different subset of Census variables:

- the Index of Relative Socio-economic Disadvantage (IRSD) provides a general summary of relative disadvantage - as such it ranks areas on a continuum from the most to the least disadvantaged;
- the Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) provides a general summary of relative advantage and disadvantage - as such it ranks areas on a continuum from most disadvantaged/least advantaged to most advantaged/least disadvantaged;
- the Index of Economic Resources (IER) summarises variables related to the financial aspects of socio-economic advantage and disadvantage (ranking approach as per the IRSAD); and
- the Index of Education and Occupation (IEO) summarises variables related to the educational and occupational aspects of relative socio-economic advantage and disadvantage (ranking approach as per the IRSAD).

The indexes are designed to compare the relative socio-economic characteristics of areas at a given point-in-time. They are not designed for longitudinal or time series analysis as their components change over time.

More detail on the respective indices is provided at Appendix 3.

The index scores themselves are based on an arbitrary numerical scale (ordinal measures) and do not represent a "quantity" of advantage or disadvantage. The ABS recommends using the index rankings or decile measures for analysis, rather than the index scores themselves[4].

In September 2018, the Commission considered which of the different SEIFA indices to use to assess alternatives to the Unemployment Cost Adjustor. The Commission decided that using a SEIFA measure that incorporates data that, at least anecdotally, aligns with the issues councils flagged with the Commission as being impacted by demographic challenges, was the most appropriate.

Accordingly, the Commission has chosen to use the SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) for its analysis. Of the four possible SEIFA indexes, IRSD was determined by the Commission to be the "best fit" with the feedback the Commission received from councils.

This information, together with the review of other states' SEIFA cost adjustors, has also supported considering a broader range of IRSD and correlation analyses that extends beyond the Health Housing and Welfare and the Law Order and Public Safety expenditure categories (which is the extent of the current Unemployment Cost Adjustor).

[4] In considering whether to move away from the current Unemployment Cost Adjustor to a SEIFA based measure, it is important to understand how to interpret the SEIFA measure. For instance, if seeking to use the IRSD to comment on geographical disadvantage of unemployment by area, it is not accurate to say that one council area's unemployed are more disadvantaged on average than another. Rather it could only be said that one council area's unemployed live in an area where the total population is more disadvantaged than the average characteristics of the people who live in another council area where unemployed people also live.

4. Approaches used in other jurisdictions

In considering what approach to take, it is useful to consider if and how other jurisdictions' local government grants commissions allow for socio-economic factors in their respective Base Grant Models.

Following are summaries of how other local government grants commissions use socio-economic adjustors in the expenditure side of their Base Grant Model (or its equivalent). Further detail on the use of socio-economic factors for informing other jurisdictions' models is provided in Appendix 4.

Victoria

The Victorian Local Government Grants Commission (Victorian Commission) uses SEIFA IRSD informed adjustors on both its expenditure and revenue assessments of its Base Grant Model.

The Victorian Commission uses a socio-economic cost adjustor in determining relative expenditure needs through applying a socio-economic disadvantage to its Human Services areas of expenditure, namely Family and Community Services, and Aged and Disabled Services expenditure assessments. It is important to note that the combined scope of these two expenditure categories is broader than the Tasmanian Health, Housing and Welfare expenditure category[5]. The Family and Child Services category also includes Education expenditure which in Tasmania is classified against Other Expenditure. The main cost driver for Family and Community Services is Population, and for Aged and Disabled Services, the population > 60 years and Disabled and Care Allowances. The Victorian Commission sources

[5] Victorian councils have greater responsibilities in these human services expenditure areas than their counterparts in most other states. Based on historical reasons, Victorian local government has assumed service responsibilities in some areas that were delivered by state governments or not-for-profit organisation in other states. However, within the Aged and Disabled Services category, local government expenditure (and associated grant revenue) is now declining rapidly as the National Disability Insurance Scheme comes into effect.

its aged and allowances information from the Department of Social Services (DSS) Payment Demographic Data (Centrelink data).

Western Australia

The Western Australian (WA) Local Government Grants Commission uses the IRSD index to recognise socio-economic disadvantage in its methodology. The WA cost adjustor is applied on the expenditure side, recognising the impact of lower socio-economic ratepayers on the delivery of services that are either subsidised or at no cost to the ratepayer. It is applied to the Recreation and Culture, Community Amenities, Governance, Law, Order and Public Safety and Education, Health and Welfare expenditure categories. This expenditure classification structure broadly corresponds with that used by the Tasmanian Commission.

South Australia

The South Australian Local Government Grants Commission (SA Commission) has been using SEIFA indices in its base grant assessments for many years.

Since 2007-08, the SA Commission has applied a Cost Relativity Index which incorporates the SEIFA IRSAD in its Function 35 – Community Support[6] expenditure assessment. The SA Commission takes the raw score provided by the IRSAD Index, centres it around 1.000 and then increases or decreases the Unit of Measure for that function by the centred index. As South Australia's Unit of Measure for the Function 35 – Community Support category is the current population, this acts as a population weighting..

Queensland

The Queensland Local Government Grants Commission (Queensland Commission) does not use any socio-economic cost adjustors on the expenditure side of its Base Grant Model. The Queensland Commission, however, considers that a local government's capacity to levy rates is affected by a range of socio-economic factors within the council area and uses the IRSAD, IER and IEO SEIFA measures to adjust a council's assessed rate income.

New South Wales

New South Wales does not currently use SEIFA to inform any socio-economic adjustors on either the revenue or expenditure side of its Base Grant assessment model.

NSW is currently reviewing its methodology and among other data sources will be looking closer at SEIFA as a possible alternative for NSW's revenue allowance or possible inclusion as an expenditure allowance.

[6] The Function 35 Community Support expenditure category is similar to Tasmania's Other Expenditure category. Tasmania does not apply any cost adjustors to its Other Expenditure category.

Northern Territory

The Northern Territory Local Government Grants Commission does not use SEIFA in its Base Grant Model.

5. Analysis approach - SEIFA IRSD versus Unemployment Data

As part of its investigation into an alternative cost adjustor, the Commission decided it needed to undertake analysis of how council actual expenditure patterns correlate with both the Unemployment Cost Adjustor and the SEIFA IRSD index. The current rankings of the Unemployment Cost Adjustor and the SEIFA scores are detailed in Appendix 5.

To complete the analysis, the Commission used a range of Base Model expenditure aggregates based on the 2016-17 Consolidated Data Collection functional expenditure and undertook a time comparative analysis of the SEIFA IRSD against the Unemployment Cost Adjustor. The functional expenditure categories and their alignment with the ABS expenditure categories is provided at Appendix 6.

In some past analyses, the Commission has used regression analysis to formulate a mathematical relationship between a data set and expenditure. Treasury experts advised the Commission that the ordinal structure of SEIFA indexes rules out the use of a regression analysis approach and recommended the Commission use a correlation analysis approach as an alternative. Correlation is a statistical measure that indicates the extent to which two or more variables fluctuate together. It ranges from 0 (no correlation) to 100 (perfectly correlated). A positive correlation indicates the extent to which those variables increase or decrease in parallel. A negative correlation indicates the extent to which one variable increases as the other decreases. A strong correlation would indicate that the two variables moved together but would not necessarily establish causation.

A negative (or inverse) correlation relationship between the IRSD factor and council expenditure per capita would be consistent with council expenditure increasing as the IRSD socio-economic index measure declined (that is, lower IRSD index values are associated with council areas of greater socio-economic disadvantage).

In contrast, a positive relationship between unemployment and council expenditure per capita would be consistent with council expenditure increasing as socio-economic status declines

(that is, rising unemployment levels, and the associated cost adjustor, would be expected to be associated with areas of greater socio-economic disadvantage).

The Commission uses in its Base Grant Model the seven expenditure categories shown in the left hand column of Appendix 5.

Theoretically, greater disaggregation of expenditure compared to the Commission's standard seven non-road expenditure categories would enable closer scrutiny and ideally show better correlation results with socio-economic disadvantage statistics. However, the Commission concedes that there are practical limits to ultimately adopting further disaggregation in its Base Grant Model of its existing SGC expenditure categories.

The Commission recognises that the quality and consistency of classification and reporting of expenditures by councils/actual council expenditure data records/systems may be such that it actually impedes accurate empirical evaluation of correlations between socio-economic disadvantage and council expenditure, and this risk may actually increase if analysis is solely based on low level details.

Against this background, the Commission agreed that at least for its analysis purposes, a minimum range of non-roads expenditure analysis be undertaken to assess the correlation of expenditure with the SEIFA IRSD measure and the Unemployment statistics as follows:

- individual measures for each of the seven non-roads expenditures;
- comparison across a range of aggregated expenditure groupings including Health, Housing and Welfare, Law, Order and Public Safety groupings and a broader four category grouping of Planning and Community Amenities and Recreation and Culture; and
- an aggregate measure for total non-road expenditure.

6. Correlation Results

To help determine if a SEIFA IRSD informed cost adjustor would be more appropriate than the Unemployment Cost Adjustor, the Commission has undertaken a range of non-roads expenditure analyses to see if either indicator demonstrates any correlation with council expenditure patterns.

The analysis undertaken used the 2016-17 expenditure net of grant funding receipts as reported in the 2016-17 CDC returns and involved the following:

- evaluation of each measure against each of the seven non-roads expenditures;
- closer evaluation of each measure with a range of aggregated expenditure groupings including a Health, Housing and Welfare and Law, Order and Public Safety grouping and a broader four category grouping which included Planning and Community Amenities and a subset of Recreation and Culture functional expenditure, with the functions selected based on where councils were advising the Commission expenditure was being impacted. To inform this step, the Commission used the Functional expenditure reporting provided by councils in the 2016-17 CDC returns; and
- an aggregate measure for total non-road expenditure.

The Commission understands that council expenditures are affected by a range of factors, including available budget, competing priorities, socio-economic need and community demand. For this reason, a very strong relationship is unlikely to be present in the data. These factors may also result in some relationships, which anecdotally would be expected to exist between SEIFA and unemployment statistics, being temporarily absent if the spending priorities for 2016-17 financial year did not reflect the typical spending pattern for that functional area, or if the reporting of expenditure by functions is not accurately recorded across functions in the CDC data provided by councils.

The Commission recognises that the correlation analysis of the type undertaken is heavily reliant on accurate data in order to identify any meaningful patterns. The results will be most meaningful when expenditure is reported correctly at both the functional level and the sub functional level. The Commission understands that sometimes councils may not be able to allocate expenditure by sub-functions. To the extent this occurs, patterns or correlations

that might otherwise be expected, may not be evident in the data used by the Commission and therefore could be affecting the results.

In evaluating the results, the predicted direction of socio-economic correlation with council expenditure should be the opposite for to that for the Unemployment data. Ideally, for the two measures to be reflecting logically consistent results, you would expect to see a negative correlation for SEIFA and a positive correlation for the Unemployment data.

Based on the 2016-17 CDC functional data (which was used to inform the 2018-19 Base Grant Funding allocations), Table 1 below presents the series of correlation outcomes across the range of non-road expenditure categories reported as being areas where socio-economic disadvantage related expenditure occurs.

Table 1 illustrates, while there is a degree of alignment between the Unemployment data and the SEIFA scores, there are also significant variations in relative rankings which shows that the correlation of SEIFA and the unemployment data do not appear as strong or consistent for some expenditure areas as others. The "expected" patterns (negative SEIFA IRSD and positive unemployment) are only demonstrated for the Planning and Community Amenities expenditure area (-5.7% IRSD and +21.6% Unemployment) while the Recreation and Culture and Other expenditure categories show a reverse relationship to the anecdotal information. When evaluated at the total council expenditure level, the expenditure results actually indicate the opposite to the "desired" trend, namely reduced expenditure relationship with poorer socio-economic demographics (+5.4% IRSD and -13.2% Unemployment).

Table 1. Correlation - Aggregated (Net of Other Financial Support) expenditure - 2016 IRSD versus Unemployment Cost Adjustor

Aggregate expenditure categories *2016-17*	*Statewide Expenditure*		*Correlation to per capita exp*	
	$ million	%	IRSD	U/e CA
General administration	$ 132.7	27.8%	-1.4%	-7.5%
Health , housing and welfare (HHW)	$ 24.9	5.2%	-2.3%	-9.9%
Law, order and public safety (LOPS)	$ 7.3	1.5%	-10.0%	-4.6%
Planning and community amenities (P+CA)	$ 55.3	11.6%	-5.7%	21.6%
Waste management and environment	$ 90.5	18.9%	1.3%	1.1%
Recreation and culture (R+C)	$ 121.3	25.4%	10.4%	-3.4%
Other	$ 46.0	9.6%	14.8%	-31.9%
Total non-roads expenditure	$ 477.9	100.0%	5.4%	-13.2%
HHW and LOPS	$ 32.27	6.8%	-3.5%	-9.9%
HHW, LOPS and P+CA	$ 87.53	18.3%	-6.9%	12.9%
HHW, LOPS and R+C	$ 153.54	32.1%	7.0%	-7.8%
HHW, LOPS, P+CA and R+C	$ 208.80	43.7%	2.3%	7.1%

The results of further analysis (that drilled down into selected sub-functional level expenditure) is reflected in Table 2. Table 2 indicates that more meaningful correlations can be seen at the more disaggregated level within the expenditure categories identified by councils.

Correlation analysis at this lower level indicates some statistically more useful results that aren't apparent at a higher expenditure category level. The most significant correlations of SEIFA and unemployment data appear with expenditure on community amenities (a subsection of Planning and Community Amenities expenditure) and community centres and halls (a subsection of Recreation and Culture expenditure). Furthermore, the correlations for those categories which the current Unemployment Cost Adjustor applies (Health, Housing & Welfare and Law, Order and Public Safety) appear converse to the trend expected.

The strongest "appropriate" relationship which would support the anecdotal evidence from councils can be seen in the results for Community Amenities (-32.5% IRSD and +55.8% Unemployment). Community Centres and Halls demonstrates a somewhat weaker result (-10.5% IRSD and +5.7% Unemployment), while Recreation, Parks and Services demonstrates only a very marginal consistent link. What is also evident from this deeper expenditure, SEIFA and unemployment data analysis is that the reverse of the expected relationship is quite strong in some areas such as Welfare (+11.7% IRSD and -13.3% Unemployment) and Sport and Recreation Services Not Elsewhere Classified (+30.3% IRSD and -21.1% Unemployment).

Table 2. Correlation - Disaggregated expenditure - 2016 IRSD versus Unemployment Cost Adjustor including OFS by Deduction impact

Disaggregated expenditures 2016-17	*Statewide Expenditure*		*Correlation to per capita exp*	
Expenditure sub-category	$ million	%	IRSD	U/e CA
Public safety	$ 7.29	0.1%	-10.6%	-5.1%
Aged services	$ 0.42	0.1%	0.4%	5.5%
Community and public health	$ 8.26	1.7%	-5.5%	-4.3%
Housing	$ 1.26	0.3%	-20.7%	-2.6%
Welfare	$ 14.76	3.1%	11.7%	-13.3%
Community and regional development	$ 33.87	7.1%	5.6%	2.0%
Community amenities	$ 21.34	4.5%	-32.5%	55.8%
Sport and physical recreation - venues and facilities	$ 36.05	7.5%	6.7%	-2.8%
Recreation parks and services	$ 47.22	9.9%	-3.1%	3.7%
Sport and recreation services nec	$ 10.85	2.3%	30.3%	-21.1%
Community centres and halls	$ 7.68	1.6%	-10.5%	5.7%
Education	$ 0.23	0.0%	11.5%	-3.7%

For the IRSD, the aggregate expenditure correlation outcomes shown in Table 2, while broadly consistent with an inverse relationship in the council expenditure categories of current assessment focus (Health, Housing and Welfare; Law, Order and Public Safety) and extended to include the Planning and Community Amenities, they are sufficiently small to be of questionable significance. The further disaggregated expenditure analysis reported in Table 2 also indicates that, while the expenditure coverage has been broadened, the direction of correlation outcomes becomes more mixed as expenditure becomes more disaggregated.

For the Unemployment Cost adjustor, with the exception of the correlation outcome for the Planning and Community Amenities category expenditure (also supported by the IRSD correlation outcome), Table 2 aggregate expenditure correlation outcomes are consistently negative. That is, the comparisons are not supportive of a narrative that higher council expenditure is correlated with higher unemployment in any other expenditure categories, when including the two expenditure categories to which the Unemployment Cost Adjustor is currently applied.

Based on the analysis results, a degree of correlation in the Community Amenities and Community Centres and Halls sub-functional expenditure levels with SEIFA and unemployment data is apparent.

In conclusion, it appears that the adoption of a SEIFA IRSD informed cost adjustor would be a preferable measure for socio-economic demographics of a local government area.

However, the lack of, or indeed counter correlations, with Health, Housing and Welfare and Law, Order and Public Safety expenditure categories, supports the Commission reviewing its

application of a new socio-economic cost adjustor to those expenditure categories. In light of these results, the Commission is also considering whether any future socio-economic cost adjustor needs to be applied to the expenditure classifications of Planning and Community Amenities and possibly also Recreation and Culture expenditure.

7. Advantages and disadvantages of adopting a SEIFA style cost adjustor

In considering whether to change the Commission's existing process of recognising socio-economic indicators in the expenditure side of the Base Grant Model from a measure that is informed by unemployment statistics to a new process informed by SEIFA, the Commission recognises that there could be varying impacts in doing so.

Currently the Commission's Unemployment Cost Adjustor is based on Small Area Labour Markets data from the Department of Employment and Workplace Relations. This information is available on a quarterly basis, but the Commission uses a June to June 12-month average rate as measured at each June Quarter. This enables an alignment of the unemployment data, with the equivalent financial year's revenue and expenditure results that inform the Base Grant Model.

Using an annually updated data source enables the Unemployment Cost Adjustor to be more reflective of the current socio-economic characteristics that a council faces with its municipal area. Appendix 5 shows the change in the Unemployment Cost Adjustor rankings for the two most recent Base Grant funding allocations.

However, unemployment data is quite a basic and narrow measure of overall unemployment by local government area. It only measures people wanting to work but does not include those of working age that are not seeking employment, and does not include any measure of underemployment (where people are considered employed but they are not as fully employed as they would like). Similarly, the unemployment data does not include any component of people who are unable to be part of the workforce (for example, due to disability). That is, the unemployment data is not fully representative of the level of unemployment or social disadvantage in an area.

The correlation analysis undertaken by the Commission has revealed that the unemployment data in fact shows an opposite correlation to the expenditure patterns by councils, and therefore appears to be counter intuitive to the expenditures incurred by councils. This suggests that the search for an alternative to using unemployment data for a socio-economic cost adjustor is warranted.

While a SEIFA informed index or statistic, prepared by the ABS and which captures a broader range of socio-economic characteristics of the population of each local government area, is consistent with the anecdotal evidence provided by councils may seem attractive it also presents some practical challenges. These include:

- only being updated every five years, after each Census;
- internal changes to the SEIFA index construction between each Census prevent clear comparisons over time; and
- the SEIFA scores themselves represent a grouping at the LGA level, which doesn't enable specific localities to be identified. The SEIFA score itself represents an average result for the municipal area.

8. Proposal to replace Unemployment Cost Adjustor with an IRSD informed SEIFA Cost Adjustor

The Commission is of the view that disadvantages arising from socio-economic demographics of a population do exist, but that a cost adjustor solely based on unemployment statistics does not fully reflect the situations facing councils. The Commission has formed a preliminary view that designing a cost adjustor that gives a more holistic view of socio-economic disadvantage, and one that is geared more towards Planning and Community Amenities and potentially also Recreation and Culture, will result in more justifiable and meaningful grant allocation outcomes.

Based on this analysis, the Commission has made a preliminary decision to move from an unemployment cost adjustor applying to Health, Housing and Welfare and Law, Order and Public Safety to an IRSD based SEIFA Cost Adjustor applying to the Planning and Community Amenities and Recreation and Culture expenditure categories.

The Commission's proposal is therefore to remove the Unemployment Cost Adjustor from the Base Grant Model and replace it with a SEIFA IRDS informed cost adjustor, applied to the Planning & Community Amenities and Recreation and Culture expenditure categories.

9. Proposed design of a new Cost Adjustor

If accepting the Commission's preliminary decision to change to a SEIFA IRSD informed cost adjustor, then issues regarding how it should be constructed, and how it should be applied, need to be considered and resolved. Questions to be considered include:

- what should the cost adjustor look like? Should it be modelled on a similar approach to that used in another jurisdiction such as Victoria or WA?
- to which expenditure category, or categories, should the cost adjustor be applied? Should it be applied to Health, Housing and Welfare and Law, Order and Public Safety, or should these categories be broadened or changed?
- what redistributive effect should the new cost adjustor be given relative to the other cost adjustors the Commission applies? Should the cost adjustor redistribute a percentage of the category expenditure or be designed such that it achieves a maximum dollar redistribution similar to the current Unemployment Cost Adjustor? and
- at what level of expenditure should the cost adjustor be applied? Should it be applied at the current seven non-road expenditure level or at the sub-function category level and if so which sub-function?

For discussion purposes the Commission has designed a SEIFA IRSD type cost adjustor (Refer Appendix 7), using a similar design as the Victorian Grants Commission cost adjustor. This weights councils based on their SEIFA score and relative populations.

This proposed cost adjustor uses the SEIFA scores from the ABS and weights them by population on a scale of between 1 and 2 - with the council with the least IRSD disadvantage (currently Hobart) being assigned an index of 1, and the council with the most disadvantage (currently George Town) being assigned an index of 2. Councils are then ranked relatively between these two scores, based on their score relative to the minimum and maximum IRSD scores. The index is then converted to a population weighted raw cost adjustor. The Population Weighted Average (PWA) cost adjustor range is set to a value that results in a

redistributive effect approximately similar to that created by the current Unemployment Cost Adjustor.

The use of the 1-2 range enables those councils with the most disadvantaged population to rank higher than those with the least disadvantaged populations.

The 2018-19 Base Grant Model has been used to demonstrate the modelling of an IRSD cost adjustor impact. Further, the expense categories to which the IRSD cost adjustor has been applied has been changed to the Planning & Community Amenities expenditure, and Recreation and Culture expenditure categories. Appendix 8 demonstrates these changes in matrix format. Appendix 9 reflects the modelled redistributive effects of the proposed IRSD Cost Adjustor, and its redistributive effect on each of the new expenditure categories.

The discussion above is premised on acceptance of the decision to adopt a SEIFA type cost adjustor in the Base Grant Model. In addition, the Commission may consider changing or expanding the expenditure categories to which its agreed cost adjustor is applied, and the strength (range factor) that is used for the chosen cost adjustor.

Ultimately the design and parameters of any new cost adjustor will be determined by the Commission following feedback received at the 2019 Hearings and Visits.

10. Questions

The choice of which, if any of these socio-economic status measures, is the 'best" to use for the purposes of the State Grants Commission comes back to some base questions.

Feedback from councils is sought on the following matters:

1. Do you support the Commission having a Cost Adjustor to recognise social disadvantage?
2. If yes to 1, do you support a cost adjustor based on SEIFA?
3. If yes to 2, do you support the Commission's preliminary proposal for using the IRSD? If yes why/if no, why not?
4. If yes to 2, does the SEIFA Cost Adjustor proposed in this paper appear reasonable in design and suitable for implementation?
5. If no to 2, do you support a cost adjustor based on Unemployment?
6. Which expenditure areas do you think your preferred cost adjustor should apply?
7. The Commission's initial model for a SEIFA Cost Adjustor redistributes a similar amount as the Unemployment Cost Adjustor has redistributed in previous years. Do you think this is reasonable? Please also provide some context to any comments provided.
8. Are there any issues related to the accuracy of council expenditure data, the correlation analysis with the Health, Housing and Welfare, and Law, Order and Public Safety or other issues raised in the Commission's analysis which should be considered further?

9. Do councils have concerns about using a socio-economic data source that only gets updated every five years?

Submissions and timeframes

The Commission invites comments and input from councils on the issues raised within this discussion paper. However, council input need not be confined to the issues identified. Councils should feel free to provide comments on other pertinent issues regarding the Commission assessment methodologies.

Submissions should be forwarded to the Commission Executive Officer as follows:

- By post: Executive Officer
  State Grants Commission
  GPO Box 147
  HOBART TAS 7001
- By email: SGC@treasury.tas.gov.au

Submissions close on Friday **1 February 2019**.

Further details regarding the annual assessments and methodology used by the Commission can be found in the *State Grants Commission 2017-18 Annual Report, including 2018-19 Financial Assistance Grant Recommendations*, the *State Grants Commission 2018-19 Financial Assistance Grant Data Tables* and the *State Grants Commission Financial Assistance Grant Distribution Methodology* paper. These documents are available on the Commission website. Go to the Commission webpage (https://www.treasury.tas.gov.au/state-grants-commission) and then click Methodology and Publications.

Any queries should be directed to the Executive Officer on (03) 6166 4274.

2019 Hearings and Visits

The Commission will provide councils with an opportunity to discuss this paper and any other concerns during the 2019 Hearings and Visits program that will begin in February 2019.

Appendices

APPENDIX 1 UNEMPLOYMENT COST ADJUSTOR - as per Base Grant Model 2016-17 Expenditures, 2018-19 Base Grant Distributions

	DATA			Pop Weighted Avg (PWA)		COST ADJUSTOR			
	Population	Unemployment Rate	Unemployment Index	STEP 1	STEP 2	*RAW CA*	*Range Factor*	*Ranged CA*	*Rank*
	2017p								
	a	*b*	*c = b / Avg b*	*d = a x c*	*e = Σd / Σa*	*f = c / e*	RF-> 4.420	*g = (c+RF)/(e+RF)*	
Break O'Day	6 167	11.05%	1.75	10 796		1.729		1.136	2
Brighton	16 872	10.37%	1.64	27 708		1.622		1.116	3
Burnie	19 245	7.34%	1.16	22 367		1.148		1.028	10
Central Coast	21 908	5.04%	0.80	17 503		0.789		0.961	22
Central Highlands	2 139	8.27%	1.31	2 803		1.294		1.055	7
Circular Head	8 145	4.04%	0.64	5 209		0.632		0.931	27
Clarence	55 659	5.06%	0.80	44 606		0.791		0.961	20
Derwent Valley	10 148	8.90%	1.41	14 303		1.392		1.073	5
Devonport	25 317	7.33%	1.16	29 386		1.146		1.027	11
Dorset	6 715	6.46%	1.02	6 872		1.011		1.002	14
Flinders	943	6.52%	1.03	974		1.020		1.004	13
George Town	6 846	11.37%	1.80	12 329		1.778		1.145	1
Glamorgan Spring Bay	4 555	5.09%	0.81	3 675		0.797		0.962	19
Glenorchy	46 790	9.40%	1.49	69 648		1.470		1.088	4
Hobart	52 191	4.06%	0.64	33 594		0.636		0.932	26
Huon Valley	16 919	7.38%	1.17	19 777		1.154		1.029	9
Kentish	6 319	5.55%	0.88	5 554		0.868		0.975	16
King Island	1 614	1.87%	0.30	479		0.293		0.868	29
Kingborough	36 734	3.56%	0.56	20 703		0.557		0.917	28
Latrobe	11 108	4.11%	0.65	7 236		0.643		0.934	25
Launceston	67 004	8.56%	1.36	90 832		1.339		1.063	6
Meander Valley	19 583	4.63%	0.73	14 366		0.724		0.949	24
Northern Midlands	13 128	5.14%	0.81	10 685		0.804		0.963	18
Sorell	14 648	5.90%	0.93	13 687		0.923		0.986	15
Southern Midlands	6 103	5.05%	0.80	4 886		0.791		0.961	21
Tasman	2 389	6.58%	1.04	2 488		1.029		1.005	12
Waratah-Wynyard	13 791	5.20%	0.82	11 366		0.814		0.965	17
West Coast	4 176	8.15%	1.29	5 390		1.275		1.051	8
West Tamar	23 721	4.85%	0.77	18 222		0.759		0.955	23
STATE TOTAL	520 877	AVG = 6.31%		527 445	PWA = 1.013	PWA = 1.000		PWA = 1.000	
						max = 1.778		max = 1.145	
						min = 0.293		min = 0.868	

APPENDIX 2 2018-19 BGM COST ADJUSTOR IMPACTS: UNEMPLOYMENT - The effect of the Unemployment Cost Adjustor on each expenditure category (2016-17 Data)

	GENERAL ADMINISTRATION	HEALTH AND HOUSING WELFARE	ORDER PUBLIC LAW AND SAFETY	PLANNING & COMMUNITY AMENITIES	WASTE MANAGEMENT AND ENVIRONMENT	RECREATION AND CULTURE	OTHER	TOTAL EXPENDITURE EFFECT	IMPACT ON APPLICABLE EXPENDITURE CATEGORIES	IMPACT ON NON-ROADS EXPENDITURE	RANK - % IMPACT ON NON-ROADS EXP	2017-18 BGM CA TOTAL EFFECT
Break O'Day	+ 0	+ 40 082	+ 11 819	+ 0	+ 0	+ 0	+ 0	+ 51 900	*+13.6%*	*+0.9%*	*2*	+ 54 279
Brighton	+ 0	+ 93 554	+ 27 586	+ 0	+ 0	+ 0	+ 0	+ 121 140	*+11.6%*	*+0.8%*	*3*	+ 145 885
Burnie	+ 0	+ 25 360	+ 7 478	+ 0	+ 0	+ 0	+ 0	+ 32 838	*+2.8%*	*+0.2%*	*10*	+ 74 852
Central Coast	+ 0	- 41 221	- 12 155	+ 0	+ 0	+ 0	+ 0	- 53 376	*-3.9%*	*-0.3%*	*22*	- 34 990
Central Highlands	+ 0	+ 5 613	+ 1 655	+ 0	+ 0	+ 0	+ 0	+ 7 268	*+5.5%*	*+0.4%*	*7*	+ 8 019
Circular Head	+ 0	- 26 763	- 7 892	+ 0	+ 0	+ 0	+ 0	- 34 654	*-6.9%*	*-0.5%*	*27*	- 36 056
Clarence	+ 0	- 103 517	- 30 524	+ 0	+ 0	+ 0	+ 0	- 134 041	*-3.9%*	*-0.3%*	*20*	- 156 896
Derwent Valley	+ 0	+ 35 465	+ 10 457	+ 0	+ 0	+ 0	+ 0	+ 45 922	*+7.3%*	*+0.5%*	*5*	+ 68 149
Devonport	+ 0	+ 33 017	+ 9 736	+ 0	+ 0	+ 0	+ 0	+ 42 753	*+2.7%*	*+0.2%*	*11*	+ 87 151
Dorset	+ 0	+ 640	+ 189	+ 0	+ 0	+ 0	+ 0	+ 828	*+0.2%*	*+0.0%*	*14*	- 4 621
Flinders	+ 0	+ 167	+ 49	+ 0	+ 0	+ 0	+ 0	+ 216	*+0.4%*	*+0.0%*	*13*	- 518
George Town	+ 0	+ 47 523	+ 14 013	+ 0	+ 0	+ 0	+ 0	+ 61 536	*+14.5%*	*+1.0%*	*1*	+ 58 116
Glamorgan Spring Bay	+ 0	- 8 253	- 2 434	+ 0	+ 0	+ 0	+ 0	- 10 686	*-3.8%*	*-0.3%*	*19*	- 9 747
Glenorchy	+ 0	+ 196 097	+ 57 823	+ 0	+ 0	+ 0	+ 0	+ 253 920	*+8.8%*	*+0.6%*	*4*	+ 256 240
Hobart	+ 0	- 169 568	- 50 000	+ 0	+ 0	+ 0	+ 0	- 219 568	*-6.8%*	*-0.5%*	*26*	- 257 484
Huon Valley	+ 0	+ 23 291	+ 6 868	+ 0	+ 0	+ 0	+ 0	+ 30 159	*+2.9%*	*+0.2%*	*9*	+ 40 160
Kentish	+ 0	- 7 437	- 2 193	+ 0	+ 0	+ 0	+ 0	- 9 629	*-2.5%*	*-0.2%*	*16*	+ 672
King Island	+ 0	- 10 178	- 3 001	+ 0	+ 0	+ 0	+ 0	- 13 179	*-13.2%*	*-0.9%*	*29*	- 13 033
Kingborough	+ 0	- 145 253	- 42 831	+ 0	+ 0	+ 0	+ 0	- 188 084	*-8.3%*	*-0.6%*	*28*	- 220 072
Latrobe	+ 0	- 35 335	- 10 419	+ 0	+ 0	+ 0	+ 0	- 45 755	*-6.6%*	*-0.4%*	*25*	- 43 958
Launceston	+ 0	+ 202 397	+ 59 681	+ 0	+ 0	+ 0	+ 0	+ 262 078	*+6.3%*	*+0.4%*	*6*	+ 220 434
Meander Valley	+ 0	- 48 119	- 14 189	+ 0	+ 0	+ 0	+ 0	- 62 308	*-5.1%*	*-0.3%*	*24*	- 81 859
Northern Midlands	+ 0	- 22 973	- 6 774	+ 0	+ 0	+ 0	+ 0	- 29 747	*-3.7%*	*-0.2%*	*18*	- 42 768
Sorell	+ 0	- 10 089	- 2 975	+ 0	+ 0	+ 0	+ 0	- 13 064	*-1.4%*	*-0.1%*	*15*	- 24 197
Southern Midlands	+ 0	- 11 396	- 3 360	+ 0	+ 0	+ 0	+ 0	- 14 756	*-3.9%*	*-0.3%*	*21*	- 11 993
Tasman	+ 0	+ 609	+ 180	+ 0	+ 0	+ 0	+ 0	+ 789	*+0.5%*	*+0.0%*	*12*	+ 9 645
Waratah-Wynyard	+ 0	- 22 886	- 6 748	+ 0	+ 0	+ 0	+ 0	- 29 634	*-3.5%*	*-0.2%*	*17*	- 13 902
West Coast	+ 0	+ 10 230	+ 3 017	+ 0	+ 0	+ 0	+ 0	+ 13 247	*+5.1%*	*+0.3%*	*8*	+ 23 534
West Tamar	+ 0	- 51 056	- 15 055	+ 0	+ 0	+ 0	+ 0	- 66 111	*-4.5%*	*-0.3%*	*23*	- 95 042
SUM REDISTRIBUTED	*0*	*714 045*	*210 549*	*0*	*0*	*0*	*0*	*924 594*				*1 047 136*
AS PROPN OF CAT EXP	*0.000%*	*2.866%*	*2.866%*	*0.000%*	*0.000%*	*0.000%*	*0.000%*		*2.866%*	*0.142%*		

APPENDIX 3 SEIFA INDICES EXPLAINED

The ABS website states that "the scores are an ordinal measure, so care should be taken when comparing scores. For example, an area with a score of 1000 is not twice as advantaged as an area with a score of 50. For ease of interpretation, we generally recommend using the index rankings and quantiles (e.g. deciles) for analysis, rather than using the index scores."

The following tables summarise the 2016 Census variables used in each of the indices at the SA1 Level (the base unit of statistical area measurement) and the corresponding loadings.

Table 3. IRSD variables and loadings

Variable	Variable loading	Variable description
Inc_low	-0.91	% people with stated annual household equivalised income between $1 and $25 999 (approximately first and second deciles)
Childjobless	-0.83	% families with children under 15 years of age who live with jobless parents
NoNet	-0.79	% occupied private dwellings with no internet connection
NoYr12orHigher	-0.77	% people aged 15 years and over whose highest level of education is Year 11 or lower. Includes Certificate I and II
Unemployed	-0.75	% people (in the labour force) unemployed
Occ_Labour	-0.74	% employed people classified as "labourers"
Low rent	-0.73	% occupied private dwellings paying rent less than $215 per week (excluding $0)
OneParent	-0.67	% one parent family with dependent offspring only
DisabilityU70	-0.67	% people aged under 70 who have low term health condition or disability and need assistance with core activities
SepDivorced	-0.55	% people aged 15 or over who are separated or divorced
OccDrivers	-0.54	% employed people classified as machinery Operators and Drivers
Occ_Service_L	-0.53	% employed people classified as Low Skill Community and Personal Service Workers
NoCar	-0.49	% occupied private dwellings with no car
Overcrowd	-0.46	% occupied private dwellings requiring one or more extra bedrooms (based on Canadian Occupancy Standard)
NoEdu	-0.43	% people aged 15 years and over who have no educational attainment
EnglishPoor	-0.30	% people who do not speak English well

Table 4 below shows the structural variables and associated loadings which produced the SEIFA IRSD outcomes for each of the 2006, 2011 and 2016 Censuses. It is clear from this table that the variables and weightings given to the various components changes over time. This makes it hard to compare SEIFA scores over time, but provides a relative context at a point in time.

APPENDIX 3 SEIFA INDICES EXPLAINED

Table 4. Components informing SEIFA IRSD over past three Census

Variable	2006 variable loading	2011 variable loading	2016 variable loading	Variable description	Comments
Inc_low	-0.76	- 0.90	-0.91	% people with stated annual household equivalised income between $1 and $25 999 (approximately first and second deciles)	2006 Census variable - income $13 000 to $20 799 (second and third deciles); 2011 Census - income $0 to $20 799.
Childjobless	?????	-0.85	-0.83	% families with children under 15 years of age who live with jobless parents	No direct 2006 Census equivalent
NoNet	-0.85	-0.81	-0.79	% occupied private dwellings with no internet connection	
NoYr12orHigher	?????	-0.75	-0.77	% people aged 15 years and over whose highest level of education is Year 11 or lower. Includes Certificate I and II	2006 Census variable - % people aged 15 and over with no post-school qualifications
Unemployed	-0.70	-0.74	-0.75	% people (in the labour force) unemployed	
Occ_Labour	-0.76	-0.75	-0.74	% employed people classified as "labourers"	
Low rent	-0.67	-0.73	-0.73	% occupied private dwellings paying rent less than $215 per week (excluding $0)	2006 Census measure = under $120 per week; 2011 Census = under $166. 2006 Census included public rental measure also.
OneParent	-0.67	-0.71	-0.67	% one parent family with dependent offspring only	
DisabilityU70	-0.61	-0.66	-0.67	% people aged under 70 who have low term health condition or disability and need assistance with core activities	
SepDivorced	-0.51	-0.54	-0.55	% people aged 15 or over who are separated or divorced	
OccDrivers	-0.51	-0.52	-0.54	% employed people classified as Machinery Operators and Drivers	
Occ_Service_L	-0.44	-0.50	-0.53	% employed people classified as Low Skill Community and Personal Service Workers	
NoCar	-0.57	-0.56	-0.49	% occupied private dwellings with no car	
Overcrowd	-0.52	-0.52	-0.46	% occupied private dwellings requiring one or more extra bedrooms (based on Canadian Occupancy Standard)	
NoEdu	?????	-0.44	-0.43	% people aged 15 years and over who have no educational attainment	2006 Census variable = % people aged 15 years and over who did not go to school - loading of -0.44.
EnglishPoor	-0.33	-0.34	-0.30	% people who do not speak English well	
Indigenous	-0.52	-	-	% people who identify themselves as being of Aboriginal or Torres Strait islander origin	No Indigenous variable was included for either the 2011 SEIFA or 2016 SEIFA tables.

All but one (EnglishPoor) of the "disadvantage" measures captured in IRSD are also captured in the IRSAD, albeit with different loadings. However, the IRSAD also captures a further ten variables which target its additional focus on "relative advantage".

Table 5. IRSAD variables and loadings

Variable	Variable loading	Variable description
Inc_low	-0.89	% people with stated annual household equivalised income between $1 and $25 999 (approximately first and second deciles)
NoYr12orHigher	-0.85	% people aged 15 years and over whose highest level of education is Year 11 or lower. Includes Certificate I and II
Occ_Labour	-0.79	% employed people classified as "labourers"
NoNet	-0.78	% occupied private dwellings with no internet connection
Childjobless	-0.83	% families with children under 15 years of age who live with jobless parents
DisabilityU70	-0.69	% people aged under 70 who have low term health condition or disability and need assistance with core activities
Unemployed	-0.66	% people (in the labour force) unemployed
OneParent	-0.65	% one parent family with dependent offspring only
Low rent	-0.64	% occupied private dwellings paying rent less than $215 per week (excluding $0)
OccDrivers	-0.62	% employed people classified as machinery Operators and Drivers
SepDivorced	-0.60	% people aged 15 or over who are separated or divorced
Occ_Service_L	-0.54	% employed people classified as Low Skill Community and Personal Service Workers
Certificate	-0.36	% people aged 15 years and over whose highest level of education is a Certificate III or IV qualification
NoEdu	-0.34	% people aged 15 years and over who have no educational attainment
NoCar	-0.33	% occupied private dwellings with no car
Overcrowd	-0.33	% occupied private dwellings requiring one or more extra bedrooms (based on Canadian Occupancy Standard)
Occ_Sales_L	-0.32	% employed people classified as Low Skill Sales
AtUni	0.36	% people aged 15 years and over at university or other tertiary institution
HighBed	0.44	% occupied private dwellings with 4 or more bedrooms
HighRent	0.47	% occupied private dwellings paying more than $470 per week
Occ_Manager	0.47	% employed people classified as Managers
Diploma	0.50	% people aged 15 years and over whose highest level of educational attainment is a diploma qualification
Occ_Prof	0.71	% employed people classified as Professionals
HighMortgage	0.72	% occupied private dwellings paying mortgage greater than $2 800 per month
IncHigh	0.83	% people with stated annual household equivalised income greater than $78 000 (approximately 9th and 10th deciles)

The IRSD and IRSAD measures are generalised measures of relative advantage and/or disadvantage in that they summarise variables from a wider range of socio-economic dimensions. The IER and IEO are more targeted measures aimed at capturing narrower concepts.

The IER summarises variables relating to the financial aspects of relative socio-economic advantage and disadvantage. These include variables that correlate with high or low wealth as well as variables that are indicators of high or low income.

Table 6. IER variables and loadings

Variable	Variable loading	Variable description
Inc_low	-0.77	% people with stated annual household equivalised income between $1 and $25 999 (approximately first and second deciles)
NoCar	-0.73	% occupied private dwellings with no car
Low rent	-0.72	% occupied private dwellings paying rent less than $215 per week (excluding $0)
Lone	-0.66	% occupied private dwellings who are lone person occupied private dwellings
OneParent	-0.63	% one parent family with dependent offspring only
Unemployed1	-0.54	% people aged 15 years and over who are unemployed
Overcrowd	-0.51	% occupied private dwellings requiring one or more extra bedrooms (based on Canadian Occupancy Standard)
Group	-0.37	% occupied private dwellings who are group occupied private dwellings
Owning	0.36	% occupied private dwellings owning dwelling without a mortgage
UnIncorp	0.52	% Dwellings with at least one person who is an owner of an unincorporated enterprise
IncHigh	0.55	% people with stated annual household equivalised income greater than $78 000 (approximately 9th and 10th deciles)
Mortgage	0.67	% occupied private dwellings owning dwelling (with a mortgage)
HighMortgage	0.68	% occupied private dwellings paying mortgage greater than $2 800 per month
HighBed	0.74	% occupied private dwellings with 4 or more bedrooms

In contrast, while still capturing both advantage and disadvantage, the IEO index focuses on the skills of people in an area, including both formal qualifications and the skills required to perform different occupations.

Table 7. IEO variables and loadings

Variable	Variable loading	Variable description
NoYr12orHigher	-0.87	% people aged 15 years and over whose highest level of education is Year 11 or lower. Includes Certificate I and II
Occ_Skills5	-0.81	% employed people who work in a Skill Level 5 occupation
Occ_Skills4	-0.77	% employed people who work in a Skill Level 4 occupation
Certificate	-0.55	% people aged 15 years and over whose highest level of education is a Certificate III or IV qualification
Unemployed	-0.55	% people (in the labour force) unemployed
NoEdu	-0.31	% people aged 15 years and over who have no educational attainment
Occ_Skill2	0.35	% employed people who work in a Skill Level 2 occupation
AtUni	0.48	% people aged 15 years and over at university or other tertiary institution
Diploma	0.51	% people aged 15 years and over whose highest level of educational attainment is a diploma qualification
Occ_Skill1	0.89	% employed people who work in a Skill Level 1 occupation

The four indices share certain variables with one or more of the other three. All four include an unemployment measure albeit with different loadings (and a different base in the case of the IER).

Any of the four indices are designed to be used as areas based measures of socioeconomic status. The choice of which is the best suited to the State Grants Commission's purpose requires further discussion and clarification.

Victoria

Both the Victorian Commission's adjustors (both revenue and cost) use the Index of Relative Socio-economic Disadvantage (IRSD) measure. The Victorian Commission considers that of the four SEIFA indices, the SEIFA IRSD reflects the profile of the economic resources of families within the local government areas best. The Census variables summarised by this index reflect the income and expenditure of families, such as income and rent, measures of disadvantage such as low educational attainment and unemployment. Additionally, variables that reflect wealth, such as dwelling size and dwellings without a motor car, are also included. The income variables are specified by family structure, since this affects disposable income.

The Victorian Commission's Socio-economic cost adjustor strives to recognise that residents of areas of relative socio-economic disadvantage will make a greater call on certain council services than will residents of areas of relative socioeconomic advantage.

The Victorian Commission's Index is constructed by spreading the SEIFA values across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the lowest index of Relative Socio-Economic Disadvantage being allocated the maximum value of 2.00 and the council with the highest index of Relative Socio-Economic Disadvantage being allocated the minimum value of 1.00. A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver (population or population greater than 60 years depending on the applicable expenditure category).

The mathematical approach uses the IRSD raw scores (not rankings) for all Victorian councils and produces a socioeconomic cost adjustor value, termed a Cost Adjustor Index (CAI) for each council. A council with a CAI above 1.00 (the state average) will have socioeconomic-driven expenditure needs assessed higher than the state average and the inverse for those with CAIs below 1.00.The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

The construction of the Cost Adjustor is shown through the following example:
Alpine Shire Council

Calculation of Primary Index
Minimum = 894 = Primary Index of 2.00
Maximum = 1,104 = Primary Index of 1.00
Alpine = ((Council - Minimum) / (Maximum - Minimum)) + 1.00
= ((989 - 1,104) / (894 - 1,104)) + 1.00
= 1.546

Calculation of Weighted Population Index (WPI)
Alpine = Primary Index x Population
= 1.546 x 13,262
= 20,508
State Total = Total of all councils' WPI
= 7,977,434

Calculation of State Average Primary Index
State Average = State Total WPI / Total Population

= 7,977,434 / 5,545,838
= 1.438

Calculation of Cost Adjustment Index
Alpine = Primary Index / State Average Primary Index
= 1.546 / 1.438
= 1.075

The Victorian Commission's assessment methodology also applies a socio-economic revenue adjustor within its Family and Community Services revenue assessment (where assessing a council's capacity to raise revenues by way of user fees) and charges for its Family and Community Services Function (household income is used as the revenue adjustor for Aged and Disables Services). It is also derived as the outcome of an arithmetic process, with the revenue adjustor method being an inverse of the cost adjustor calculation method. The revenue adjustor is designed to recognise that residents of areas of relative socio-economic disadvantage will have less capacity to pay fees and charges than will residents of areas of relative socio-economic advantage.

Both adjustors are based on a single Census year then replaced when the new five-yearly SEIFA indices become available.

Western Australia

Based on the ABS SEIFA guidance papers, the Western Australian Local Government Grants Commission's (WA Commission) cost adjustor does not use the raw SEIFA scores directly in its cost adjustor calculation. Only those local governments with a below the (national) average IRSD score of 1000 receive a disability assessment. The WA Commission ranks all local governments with an IRSD score less than 1000 from 1-77 (being the number of councils in WA) with 1 being the least disadvantaged through to 77 being the most disadvantaged. A multiple factor is then applied to help differentiate between councils.

Following is a sample calculation for how the WA Commission's cost adjustor is calculated:

SOCIO ECONOMIC COST ADJUSTOR

Manjimup has a SEIFA Score of 957.76.

The staff rank all the local governments with a SEIFA score under 1000. They are ranked from 1 to 77 with a ranking of 1 being the closest to 1000 and having the lowest disadvantage of those affected and a ranking of 77 being the furtherest from a SEIFA score of 1000.

Manjimup's rank is 46.

STEP 1 - ASCERTAIN THE RELATIVE SHARE

Manjimup SEIFA Rank	46	Manjimup Population	9,378
State Total SEIFA Ranks	3003	State Total Applicable Population	588,085
Manjimup Share	0.0153	Manjimup Share	1.595%

Manjimup SEIFA Share	0.0153
Multiplied by the number of LGs SEIFA applies to	77
	1.1795
Multiplied by itself	1.1795 x 1.1795
Equals the Exponential Score	1.3910
Total of State Exponential Scores	102.0085
Share of Exponential SEIFA Ranks	1.36%

The calculation to the left was to ensure those local governments with a lower SEIFA score received a proportionaltely greater share of the funding, as using the ranking alone did not differentiate enough between the local govenrment ranked 20 and one ranked 40.

Consider this step "turbocharging" the score to make it more important.

STEP 2 - CALCULATE THE COST ADJUSTOR ALLOCATION

70% SEIFA	22,587,203	x	1.36%	308,044
30% Population	9,680,230	x	1.59%	154,367
Total Socio Economic Pool	32,267,433		Socio-economic Cost Adjustor	**462,411**

The method adopted is quite involved but the WA Commission believes it to be effective in differentiating between the local governments level of disadvantage. When looking at the SEIFA scores and using the Commissioners' knowledge of Western Australia's local government areas, the Commission believes it delivers allocations that reflect reality.

In the last year, the WA Commission has queried the accuracy of the SEIFA data due to the 5-year intervals between censuses and investigated using another source of data for recognising socio-economic factors. Data, accessible from the Department of Human Services, was examined. The data allowed identification of the number of people within each local government receiving social security benefits (age pension, Newstart, etc.). However, the WA Commission modelling ultimately found this data benefitted minimum grant local governments due to the concentration of population in these areas skewing the formulas. While it could estimate the numbers of people receiving unemployment benefits, senior's pensions and student payments, it failed to recognise a number of factors that SEIFA includes and did not differentiate between the degree of disadvantage. That is, it may show a lot more people collecting benefits in the metropolitan area, but that level of disadvantage could not be seen as lower than an almost entirely indigenous community. As a result, Western Australia did not progress this any further.

The WA Commission is planning to review its socio-economic calculation method to attempt to simplify its calculation and ground it in a simpler mathematical process that requires less "judgement".

The WA Commission does not apply any revenue adjustors to the revenue side of its model.

South Australia

Since the 2004-05 grants, the SA Commission has used the SEIFA IER measure in its revenue assessments to respond to submissions by councils regarding a component of their communities that have a reduced capacity to pay – these are typically described in South Australia as the "asset rich, income poor" type – retirees.

The SA Commission converts the raw SEIFA IER scores into a revenue adjustor index centred around 1.000 - with 1.000 being the average, below 1.000 being a reduced (revenue) capacity to pay and above 1.000 being a higher capacity to pay. The centred index is applied to calculations for residential properties and rural properties[7]. This increases or decreases the total valuations and therefore the capacity to raise revenue for each council depending on its index. South Australia term this Index a Revenue Relativity Index (RRI).

A revenue review by KPMG in 2011-12 recommended South Australia remove its RRI revenue adjustor, but the Commission chose to reject that recommendation.

Queensland

The Queensland Commission's current revenue adjustor methodology uses the IRSD indicator. Queensland is currently changing its revenue assessment methodology and its new methodology will replace the IRSD measure with one based on a combination of the SEIFA IRSAD, IER and IEO measures.

New South Wales

To measure indicative revenue raising capacity the NSW Commission's long standing approach has been to use a comparison of council's average property values compared to the state average property value. Those below the average receive an allowance and those that are above receive a negative allowance (which can be countered by the minimum grant).

[7] South Australia assess five land use types separately.

APPENDIX 5 COMPARISON OF UNEMPLOYMENT COST ADJUSTOR AND SEIFA RELATIVE RANKINGS

Unemployment		Cost adjustor 2017-18 BGM			Cost adjustor 2018-19 BGM					SEIFA indexes 2016 Census			Change
	Population	Unemployment (Jun 15-Jun 16)			Population	Unemployment (Jun 16-Jun 17)				(IRSD ranking order)	IRSD		
council	2016p	Rate	Adjustor	*Rank*	2017p	Rate	Adjustor	*Rank*	*12 mth change in CA ranking*	council	Score	Ranking	difference between Unemployment Ranking v SEIFA Ranking
Break O'Day	6 453	10.97%	1.135	3	6 167	11.05%	1.136	2	1	Break O'Day	893	5	-3
Brighton	16 101	11.29%	1.146	1	16 872	10.37%	1.116	3	-2	Brighton	869	2	1
Burnie	19 779	8.66%	1.061	8	19 245	7.34%	1.028	10	-2	Burnie	915	9	1
Central Coast	22 313	5.98%	0.975	17	21 908	5.04%	0.961	22	-5	Central Coast	952	18	4
Central Highlands	2 301	8.51%	1.056	9	2 139	8.27%	1.055	7	2	Central Highlands	894	6	1
Circular Head	8 187	4.57%	0.929	26	8 145	4.04%	0.931	27	-1	Circular Head	936	14	13
Clarence	55 175	5.34%	0.954	21	55 659	5.06%	0.961	20	1	Clarence	1002	27	-7
Derwent Valley	10 045	10.16%	1.109	4	10 148	8.90%	1.073	5	-1	Derwent Valley	891	4	1
Devonport	25 579	8.47%	1.055	10	25 317	7.33%	1.027	11	-1	Devonport	902	7	4
Dorset	7 078	6.44%	0.989	14	6 715	6.46%	1.002	14	0	Dorset	917	10	4
Flinders	786	6.44%	0.989	15	943	6.52%	1.004	13	2	Flinders	976	24	-11
George Town	6 870	10.99%	1.136	2	6 846	11.37%	1.145	1	1	George Town	857	1	0
Glamorgan Spring Bay	4 528	5.69%	0.965	20	4 555	5.09%	0.962	19	1	Glamorgan Spring Bay	939	16	3
Glenorchy	46 143	9.54%	1.089	5	46 790	9.40%	1.088	4	1	Glenorchy	906	8	-4
Hobart	51 127	4.25%	0.919	27	52 191	4.06%	0.932	26	1	Hobart	1043	29	-3
Huon Valley	16 577	7.98%	1.039	12	16 919	7.38%	1.029	9	3	Huon Valley	967	22	-13
Kentish	6 497	6.82%	1.002	13	6 319	5.55%	0.975	16	-3	Kentish	939	15	1
King Island	1 583	2.65%	0.867	29	1 614	1.87%	0.868	29	0	King Island	988	25	4
Kingborough	36 197	3.73%	0.902	28	36 734	3.56%	0.917	28	0	Kingborough	1038	28	0
Latrobe	11 097	4.79%	0.936	23	11 108	4.11%	0.934	25	-2	Latrobe	965	21	4
Launceston	67 181	8.40%	1.053	11	67 004	8.56%	1.063	6	5	Launceston	940	17	-11
Meander Valley	19 801	4.70%	0.933	25	19 583	4.63%	0.949	24	1	Meander Valley	970	23	1
Northern Midlands	12 758	5.09%	0.946	22	13 128	5.14%	0.963	18	4	Northern Midlands	959	19	-1
Sorell	14 146	5.91%	0.972	18	14 648	5.90%	0.986	15	3	Sorell	962	20	-5
Southern Midlands	6 303	5.81%	0.969	19	6 103	5.05%	0.961	21	-2	Southern Midlands	934	13	8
Tasman	2 404	8.77%	1.065	7	2 389	6.58%	1.005	12	-5	Tasman	925	12	0
Waratah-Wynyard	14 276	6.28%	0.984	16	13 791	5.20%	0.965	17	-1	Waratah-Wynyard	918	11	6
West Coast	4 435	9.42%	1.085	6	4 176	8.15%	1.051	8	-2	West Coast	871	3	5
West Tamar	23 343	4.73%	0.934	24	23 721	4.85%	0.955	23	1	West Tamar	1000	26	-3
STATE TOTAL	**519 063**	**AVG = 6.68%**	**PWA = 1.000**		**520 877**	**AVG = 6.31%**	**PWA = 1.000**						

Note: the 12 month change in population in the Unemployment section of the above table, includes the impact of the population rebasing by the ABS.

APPENDIX 6 EXPENDITURE CATEGORIES

STATE GRANTS COMMISSION EXPENDITURE CATEGORY	CDC/ABS FUNCTION
GENERAL ADMINISTRATION	Legislative, Executive, Financial & Fiscal Affairs
LAW ORDER AND PUBLIC SAFETY	Public Order, Fire and Safety
HEALTH HOUSING & WELFARE	Nursing Homes/Aged care
HEALTH HOUSING & WELFARE	Nursing and convalescent home services
HEALTH HOUSING & WELFARE	Aged Services
HEALTH HOUSING & WELFARE	Community and Public Health
HEALTH HOUSING & WELFARE	Housing
HEALTH HOUSING & WELFARE	Welfare
WASTE MANAGEMENT & ENVIRONMENT	Household Garbage/Solid Waste Management
WASTE MANAGEMENT & ENVIRONMENT	Other Protection of the Environment
WASTE MANAGEMENT & ENVIRONMENT	Protection of biodiversity and habitat
PLANNING & COMMUNITY AMENITIES	Community and Regional Development
PLANNING & COMMUNITY AMENITIES	Community Amenities
RECREATION & CULTURE	Sport and Physical Recreation venues and facilities
RECREATION & CULTURE	Recreation Parks & Reserves
RECREATION & CULTURE	Sport and Physical Recreation services n.e.c.
RECREATION & CULTURE	Libraries
RECREATION & CULTURE	Art Museums
RECREATION & CULTURE	Other Museums and Cultural Heritage
RECREATION & CULTURE	Performing Arts
RECREATION & CULTURE	Cultural or Arts Services n.e.c.
RECREATION & CULTURE	Community Centres and Halls
RECREATION & CULTURE	Recreation, Culture and Religion n.e.c.
ROADS	Road, Bridge and Street Infrastructure
ROADS	Local
ROADS	State
ROADS	Commonwealth
ROADS	Road Plant, Parking and Other Road Transport
OTHER	Water
OTHER	Sewerage
OTHER	Air, Water, Rail Transport and Communications
OTHER	Education
OTHER	Fuel and Energy
OTHER	Agriculture, Forestry, Fishing and Hunting
OTHER	Mining, Manufacturing and Construction
OTHER	Other Economic Affairs
OTHER	Other Purposes

APPENDIX 7 PROPOSED SEIFA IRSD COST ADJUSTOR - (ALL COUNCILS)

	DATA			Pop Weighted Avg (PWA)		COST ADJUSTOR			
	Population 2017p	SEIFA IRSD Score Rate	SEIFA Index	STEP 1	STEP 2	*RAW CA*	*Range Factor*	*Ranged CA*	*Rank*
	a	*b*	*c = b / Avg b*	*d = a x c*	*e = Σd / Σa*	*f = c / e*	RF-> 19.826	*g = (c+RF)/(e+RF)*	
Break O'Day	6 167	894	1.80	11 107		1.238		1.016	6
Brighton	16 872	871	1.92	32 474		1.323		1.022	3
Burnie	19 245	915	1.69	32 489		1.160		1.011	9
Central Coast	21 908	952	1.49	32 626		1.024		1.002	18
Central Highlands	2 139	891	1.82	3 887		1.249		1.017	4
Circular Head	8 145	940	1.55	12 655		1.068		1.005	17
Clarence	55 659	1002	1.22	67 928		0.839		0.989	27
Derwent Valley	10 148	893	1.81	18 332		1.242		1.017	5
Devonport	25 317	902	1.76	44 509		1.208		1.014	7
Dorset	6 715	918	1.67	11 228		1.149		1.010	11
Flinders	943	967	1.41	1 328		0.968		0.998	22
George Town	6 846	857	2.00	13 692		1.375		1.026	1
Glamorgan Spring Bay	4 555	939	1.56	7 102		1.072		1.005	15
Glenorchy	46 790	906	1.74	81 254		1.194		1.013	8
Hobart	52 191	1043	1.00	52 191		0.687		0.979	29
Huon Valley	16 919	962	1.44	24 287		0.987		0.999	20
Kentish	6 319	939	1.56	9 852		1.072		1.005	15
King Island	1 614	988	1.30	2 091		0.891		0.993	25
Kingborough	36 734	1038	1.03	37 721		0.706		0.980	28
Latrobe	11 108	970	1.39	15 468		0.957		0.997	23
Launceston	67 004	936	1.58	105 549		1.083		1.006	14
Meander Valley	19 583	976	1.36	26 637		0.935		0.996	24
Northern Midlands	13 128	959	1.45	19 057		0.998		1.000	19
Sorell	14 648	965	1.42	20 791		0.976		0.998	21
Southern Midlands	6 103	934	1.59	9 679		1.090		1.006	13
Tasman	2 389	917	1.68	4 007		1.153		1.010	10
Waratah-Wynyard	13 791	925	1.63	22 540		1.123		1.008	12
West Coast	4 176	869	1.94	8 083		1.330		1.023	2
West Tamar	23 721	1000	1.23	29 205		0.846		0.989	26
STATE TOTAL	520 877		1.5523	757 770	PWA = 1.455	PWA = 1.000		PWA = 1.000	
	Min Value:	857	2			max = 1.375		max = 1.026	
	Max Value:	1043	1			min = 0.687		min = 0.979	

APPENDIX 8 COST ADJUSTOR APPLICATION MATRIX

CURRENT UNEMPLOYMENT COST ADJUSTOR MATRIX APPLICATION

	<-- ABSENTEE POPN	<--CLIMATE	<-- DISPERSION	<-- ISOLATION	<-- POPN DECLINE	<-- REGIONAL RESPNSIB	<-- SCALE (ADMIN)	<-- SCALE (OTHER)	<-- TOURISM	<-- U/EMPLOYMENT	<--WORKER INFLUX
Largest CA shift	33.8%	10.1%	20.0%	30.1%	5.4%	34.2%	200.0%	50.0%	9.0%	14.5%	5.9%
STEP 2. ALLOCATE COST ADJUSTORS (X), TO EACH EXPENDITURE CATEGORY (Y)											
GENERAL ADMIN	I			I	I		I				
EDUCATION HH&W					I					I	
LAW ORDER PUB SAFETY			I		I				I	I	
PLANNG & COMM AMENITIES	I	I	I	I	I			I	I		I
WASTE MGT & ENVIRONMT	I	I	I		I			I	I		I
RECREAT & CULTURE	I	I	I	I	I	I		I	I		I
OTHER											

PROPOSED SEIFA COST ADJUSTOR MATRIX APPLICATION

	<-- ABSENTEE POPN	<--CLIMATE	<-- DISPERSION	<-- ISOLATION	<-- POPN DECLINE	<-- REGIONAL RESPNSIB	<-- SCALE (ADMIN)	<-- SCALE (OTHER)	<-- TOURISM	<-- SEIFA	<--WORKER INFLUX
Largest CA shift	33.8%	10.1%	20.0%	30.1%	5.4%	34.2%	200.0%	50.0%	9.0%	2.6%	5.9%
STEP 2. ALLOCATE COST ADJUSTORS (X), TO EACH EXPENDITURE CATEGORY (Y): PROPOSAL for SEIFA Indicator											
GENERAL ADMIN	I			I	I		I				
EDUCATION HH&W					I						
LAW ORDER PUB SAFETY			I		I				I		
PLANNG & COMM AMENITIES	I	I	I	I	I			I	I	I	I
WASTE MGT & ENVIRONMT	I	I	I		I			I	I		I
RECREAT & CULTURE	I	I	I	I	I	I		I	I	I	I
OTHER											

APPENDIX 9 PROPOSED SEIFA IRSD COST ADJUSTOR - (ALL COUNCILS) - The effect of the SEIFA Cost Adjustor on each expenditure category (2016-17 Data)

	GENERAL ADMINISTRATION	HEALTH HOUSING AND WELFARE	LAW ORDER AND PUBLIC SAFETY	PLANNING & COMMUNITY AMENITIES	WASTE MANAGEMENT AND ENVIRONMENT	RECREATION AND CULTURE	OTHER	TOTAL EXPENDITURE EFFECT	IMPACT ON APPLICABLE EXPENDITURE CATEGORIES	IMPACT ON NON-ROADS EXPENDITURE	RANK - % IMPACT ON NON-ROADS EXP
Break O'Day	+ 0	+ 0	+ 0	+ 10 647	+ 0	+ 23 365	+ 0	+ 34 012	+8.9%	+0.6%	6
Brighton	+ 0	+ 0	+ 0	+ 39 530	+ 0	+ 86 749	+ 0	+ 126 279	+12.1%	+0.8%	3
Burnie	+ 0	+ 0	+ 0	+ 22 392	+ 0	+ 49 140	+ 0	+ 71 532	+6.0%	+0.4%	9
Central Coast	+ 0	+ 0	+ 0	+ 3 763	+ 0	+ 8 258	+ 0	+ 12 021	+0.9%	+0.1%	18
Central Highlands	+ 0	+ 0	+ 0	+ 3 865	+ 0	+ 8 481	+ 0	+ 12 346	+9.3%	+0.6%	4
Circular Head	+ 0	+ 0	+ 0	+ 4 019	+ 0	+ 8 819	+ 0	+ 12 838	+2.5%	+0.2%	17
Clarence	+ 0	+ 0	+ 0	- 65 036	+ 0	- 142 722	+ 0	- 207 758	-6.0%	-0.4%	27
Derwent Valley	+ 0	+ 0	+ 0	+ 17 792	+ 0	+ 39 044	+ 0	+ 56 836	+9.0%	+0.6%	5
Devonport	+ 0	+ 0	+ 0	+ 38 279	+ 0	+ 84 003	+ 0	+ 122 283	+7.8%	+0.5%	7
Dorset	+ 0	+ 0	+ 0	+ 7 273	+ 0	+ 15 961	+ 0	+ 23 234	+5.6%	+0.4%	11
Flinders	+ 0	+ 0	+ 0	- 217	+ 0	- 477	+ 0	- 694	-1.2%	-0.1%	22
George Town	+ 0	+ 0	+ 0	+ 18 609	+ 0	+ 40 837	+ 0	+ 59 446	+14.0%	+0.9%	1
Glamorgan Spring Bay	+ 0	+ 0	+ 0	+ 2 370	+ 0	+ 5 200	+ 0	+ 7 570	+2.7%	+0.2%	16
Glenorchy	+ 0	+ 0	+ 0	+ 65 730	+ 0	+ 144 243	+ 0	+ 209 973	+7.2%	+0.5%	8
Hobart	+ 0	+ 0	+ 0	- 118 342	+ 0	- 259 700	+ 0	- 378 041	-11.7%	-0.8%	29
Huon Valley	+ 0	+ 0	+ 0	- 1 629	+ 0	- 3 575	+ 0	- 5 204	-0.5%	-0.0%	20
Kentish	+ 0	+ 0	+ 0	+ 3 287	+ 0	+ 7 214	+ 0	+ 10 501	+2.7%	+0.2%	15
King Island	+ 0	+ 0	+ 0	- 1 280	+ 0	- 2 809	+ 0	- 4 090	-4.1%	-0.3%	25
Kingborough	+ 0	+ 0	+ 0	- 78 370	+ 0	- 171 982	+ 0	- 250 353	-11.0%	-0.7%	28
Latrobe	+ 0	+ 0	+ 0	- 3 452	+ 0	- 7 574	+ 0	- 11 026	-1.6%	-0.1%	23
Launceston	+ 0	+ 0	+ 0	+ 40 245	+ 0	+ 88 317	+ 0	+ 128 562	+3.1%	+0.2%	14
Meander Valley	+ 0	+ 0	+ 0	- 9 234	+ 0	- 20 265	+ 0	- 29 499	-2.4%	-0.2%	24
Northern Midlands	+ 0	+ 0	+ 0	- 208	+ 0	- 457	+ 0	- 666	-0.1%	-0.0%	19
Sorell	+ 0	+ 0	+ 0	- 2 588	+ 0	- 5 680	+ 0	- 8 268	-0.9%	-0.1%	21
Southern Midlands	+ 0	+ 0	+ 0	+ 3 993	+ 0	+ 8 762	+ 0	+ 12 755	+3.4%	+0.2%	13
Tasman	+ 0	+ 0	+ 0	+ 2 652	+ 0	+ 5 819	+ 0	+ 8 471	+5.7%	+0.4%	10
Waratah-Wynyard	+ 0	+ 0	+ 0	+ 12 350	+ 0	+ 27 101	+ 0	+ 39 451	+4.6%	+0.3%	12
West Coast	+ 0	+ 0	+ 0	+ 10 008	+ 0	+ 21 962	+ 0	+ 31 971	+12.4%	+0.8%	2
West Tamar	+ 0	+ 0	+ 0	- 26 446	+ 0	- 58 035	+ 0	- 84 481	-5.7%	-0.4%	26
SUM REDISTRIBUTED	0	0	0	306 803	0	673 276	0	980 079			0
AS PROPN OF CAT EXP	0.000%	0.000%	0.000%	0.555%	0.000%	0.555%	0.000%		3.037%	0.151%	0.000%

Tasmanian Government

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