

The Australian Inequality Index

Technical Notes



**Australian
Inequality
Index**

A Per Capita initiative

percapita
FIGHTING INEQUALITY IN AUSTRALIA

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About the Index and this Document

The *Australian Inequality Index* (All) is a multifaceted measure of inequality offering easy to follow integrated measure and set of sub-indices examining critical dimensions of inequality. It is designed with ease of use, application and dissemination in mind. This document summaries the methodology employed in the construction of the inequality index, and some useful notes to assist with index interpretation.

Exploring the index, sub-indices and their construction

Per Capita's Executive Director (Emma Dawson) and Economic Research Group (including Chief Economist Michael D'Rosario and Research Economist Sam Ibrahim) determined the structure of the index given the critical dearth of integrated measures of inequality across critical dimensions of society. The dearth of data pertaining to several critical dimensions meant that they incorporate a subset of desired indicators (CALD, DISABILITY) and or are flagged for future inclusion based on the data capture process initiative by the government (LGBTQI+). Future iterations of the index will incorporate these critical data series in consultation with members of relevant communities.

The selection of parameters in the Index project underscores their intrinsic relevance to critical dimensions; in particular their relevance to social engagement, labour market participation, economic capability, and resilience. In order to maintain the continuity of data availability, attention was directed towards selecting measures that exhibit a consistent pattern of availability and possess broad accessibility to the general public. This deliberate approach aims to facilitate ease of comprehension, bolster verifiability, and maintain overall continuity throughout the initiative.

Furthermore, it is noteworthy to emphasize that the Australian Inequality Index (All) places primary emphasis on disparities (gaps) rather than absolute levels. While acknowledging the significance of absolute levels in specific contexts, notably poverty, the index predominantly focuses on quantifying gaps or discrepancies. Consequently, level estimates are exclusively employed when incorporating a gap estimate would be illogical or inapt.

It is important to highlight that the pursuit of continuity in data availability is of utmost significance in this study, as it serves as the foundation for the incorporation of additional variables in the forthcoming data initiative. This emphasis on continuity will enable the seamless integration of new data, promoting longitudinal analysis and the exploration of emerging trends in the aforementioned critical dimensions.

Interpreting Index charts, diagrams and values

Weighting of indicators and sub-indices

The sub-indices examine key intersecting dimensions that affect social and economic inequality in Australia using a range of indicators.

Each indicator contributes equally to the relevant sub index, with each sub index in turn contributes equally to the composite Index. The inaugural Australian Inequality Index is the first to provide an integrated measure of inequality over the decade between 2010 and 2021.

Interpreting the Index charts and values

Consistent with other measures of inequality we present inequality as a value between 0 and 100, with 0 denoting perfect equality. At any value in excess of 0 there is inequality between the considered measures; the higher the value, the greater the level of inequality.

Because all values are in ratio terms the value may be interpreted as the distance from equality; for example, if wealth inequality is rated 70, this would indicate that the wealth of the highest income group would need to decrease by 70% for equality to be achieved. All index values are in the same ratio scale.

Understanding points versus percentages

To avoid confusion the index uses points and percentages in the report and online tool subject to context and suitability in each instance. To describe a change in the index from 47 to 54 for example the change may be described as an increase in 7 points, rather than 7 percent to avoid confusion. This shift could also be described as 14.89% (or 7/47 percentage change) but as the index may be interpreted as a percentage itself (see Interpreting the index charts and values above), the use of percentage in this context may cause confusion.

Chart presentation

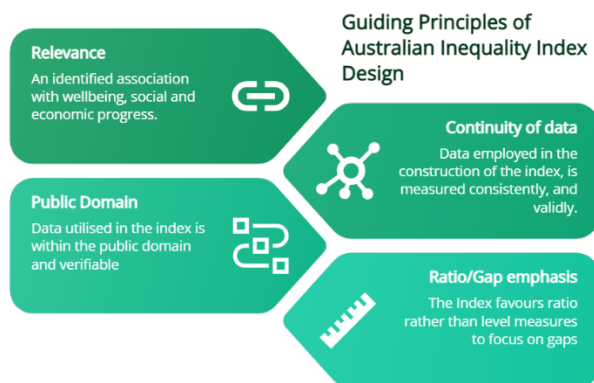
The charts are presented on a common scale. The chart x axis is a common range, while the y axis in each instance differs depending on the variation evident within the indicator. Where the variation is high the y axis range is greater, where the variation is low in the indicator, then the y axis is smaller. For emphasis the variable/indicator scale remains the same for each chart, just the presented range differs. This is to make the change in the variable or indicator/index visible.

Data techniques for Disability and Ethnicity inequality values

Consistent with other indices such as the GII, data truncation was employed and reference rates were used to benchmark inequality. While for example a 0 level of inequality would be desirable for some indicators such as Racial discrimination and disability discrimination, a reference rate is necessary for the indicator to be included, as a 0 denominator value is not mathematically logical. Consequently, the Disability and Ethnicity values employ reference rates as denominator values. The reference rates are a truncated 2010 rate (50% of the 2010 rate) and the UK rate of racial discrimination. The use of these rates enable the construction of a viable ratio to examine trends, noting that the ideal rate of discrimination would be 0, rather than the truncated/threshold rate employed.

Guiding Principles of the Australian Inequality Index

There are four guiding principles governing the construction of the All, parameter relevance, continuity of data availability, public ownership and custodianship of data sources, and an emphasis on gaps, and ratio measures when gap analysis is critical, supplemented by suitable level measures.



Relevance

The selection of parameters emphasises their relevance to critical aspects social engagement, labour market participation, economic capability and resilience.

Continuity of Data availability

Measures were selected that evidence a consistent pattern of availability and that are broadly available to all members of the public to support ease of understanding, verifiability and overall continuity of the initiative.

Ratio rather than Level emphasis

The All critical focus is on differences rather than absolute levels, while absolute levels matter particularly in the context of parameters such as poverty, the index is concerned with gaps or differences. Level estimates are only employed where the inclusion of a gap estimate is illogical.

Index estimation, data continuity and future adjustment

Addressing data continuity issues

For clarity, please note that Per Capita employer linear interpolation and statistical estimation techniques where the data presentation frequency was insufficient for legacy term exploration. This was only necessary for a small number of datapoints. The recently announced ABS reporting initiative will ensure that future iterations are presented in semi-annual (interim) and annual release frequencies. The most notable challenges pertained to data captured as part of the close the gap process that was not available prior to 2015 in several instances. In those specific instances the value within the closest legacy year was employed.

Interpolation and estimation

The index values are not subject to logarithmic adjustment. All variables are in a ratio scale, functionally between 0 and 100. Midpoint estimation was required with some data items. Where Australian data

procured from a particular provider does not align with ABS reporting intervals, linear interpolation is employed, to derive omitted or misaligned values. Where omitted values were endpoint values linear estimation is employed.

Many variables of interest were not available at the time of publication due to the frequency of data capture. A number of these variables will be included in future iterations of the index given the shift from bi-annual data capture to quarterly data capture. The next iteration will include further data pertaining to time use, services access and labour market outcomes.

Future index adjustments

It is envisaged that the index will be extended to incorporate additional measures with the extension of the ABS data capture program and additional investment made in critical welfare and wellbeing focused data. Per Capita has a particular desire to extend the CALD persons focused, Disabled Persons focused and Intergenerational Inequality indices.

Contact Us regarding further questions, comments.

Do you have any further questions, comments and thoughts regarding the Australian Inequality Index Methodology and construction. Please email Michael D’Rosario at m.d’rosario@percapita.org.au.