

Direct Measure of Income (DMI) Methodology

School funding for non-government schools



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Background

In 2020, the Australian Government introduced the direct measure of income (DMI) to determine the capacity of a school community to contribute financially to the operational costs of their school.

The DMI calculates capacity to contribute (CTC) using the median income of the parents and guardians of the students attending the school, making use of income tax data and other information held by the Australian Bureau of Statistics (ABS) through the Person Level Integrated <u>Data Asset</u> (PLIDA – formally known as MADIP). The DMI remains an accurate, reliable and equitable measure, ensuring more funding flows to those schools that need it the most.

The DMI links parent and guardian names and addresses collected through the annual Student Residential Address and Other Information Collection to data from PLIDA. PLIDA is a secure data asset combining information on health, education, government payments, income and taxation, employment, and population demographics (including the Census) over time. The participating agencies are the Australian Bureau of Statistics, Australian Taxation Office (ATO), Department of Education, Department of Health and Aged Care, Department of Social Services, Department of Home Affairs and Services Australia. Each participating agency collects personal information related to its functions or activities and discloses this information to the ABS for the PLIDA as authorised by law.

PLIDA Partner Agency identifiable data Education stored separately from other variables Provide Provide parent Provide PLIDA Partner Schools School Entry PLIDA Data parent data 🐇 and Agencies Linkage Centre Point data sets student data ABS creates integrated. de-identified data Staff within the Department who have access to names and **Firewall** ABS Secure addresses will not have access to Authorised researchers can linked income data and vice versa. Research access de-identified linked data Environment subject to privacy and security (DataLab) controls All outputs are checked by ABS Approved **ABS** clears staff to ensure that it is researchers CTC Team scores for confidential and thus create CTC release identification of a person or scores business is not possible

Diagram 1: Data collection and linkage process

Overview

A school's DMI score for a year is worked out as follows:

- Step 1. Determine the annual income of the parent (s) / guardian (s) of a student at the school for the year
- Step 2. Determine the annual family income for each student
- **Step 3.** Identify the median family income of the school
- Step 4. Translate the school's median family income into a DMI score
- **Step 5.** Calculate the capacity to contribute score to inform funding.

Step 1. Determine the annual income of the parent(s) / guardian(s) of a student at the school for the year

Determining Adjusted Taxable Income

Adjusted Taxable Income (ATI) for an individual is worked out through a secure ABS DataLab using information from tax returns held by the PLIDA (refer to Diagram 1). ATI is calculated in line with definitions used by the ATO for the relevant financial year and these definitions can be found on the ATO's website. To ensure a high coverage rate, annual DMI scores are largely calculated using tax return data submitted within 18 months of the end of the relevant financial year. For example, to calculate a DMI score for 2024, data from the 2021-22 financial year is used, and in 2021-22, the definition of a person's ATI is the sum of the following amounts¹:

- taxable income (excluding any assessable First home super saver released amount)
- adjusted fringe benefits total, which is the sum of
 - o reportable fringe benefits amounts received from employers exempt from fringe benefits tax under section 57A of the Fringe Benefits Tax Assessment Act 1986 multiplied by 0.53, and
 - reportable fringe benefits amounts from employers not exempt from fringe benefits tax under section 57A of the Fringe Benefits Tax Assessment Act 1986
- reportable employer superannuation contributions
- deductible personal superannuation contributions
- certain tax-free government pensions or benefits received by the person
- target foreign income (income and certain other amounts from sources outside Australia not included in your taxable income or received as a fringe benefit)

¹ Definition of ATI subject to change based on the ATO rules.

- <u>net financial investment loss</u> (the amount by which the person's deductions attributable to financial investments exceeded their total financial investment income)
- <u>net rental property loss</u> (the amount by which the person's deductions attributable to rental property exceeded their rental property income)

less

• any child support payments the person provided to another person.

The <u>details of a person's spouse</u> and their income must also be reported in the tax return. Similar to ATI, spouse ATI is also worked out using the ATO's definition for the relevant financial year. Note that this is only used if the individual's tax return is not available.

Using additional direct income data sources from the PLIDA

Where tax return data for the relevant financial year is missing for a parent or guardian, additional data sources are used to improve the accuracy of the measure by improving the coverage of data and capturing low-income earners and others not included in taxation records.

In using this information, a particular calculation order is used to improve accuracy. For each parent or guardian record, an annual income value is calculated based on the first direct income source available in the PLIDA from the list below:

- i. ATI from tax returns of the relevant financial year
- ii. Where one parent or guardian is linked but the other is not, the linked parent or guardians' reported spouse ATI from their tax returns is used if it was greater than zero, and the other parent or guardian resides at the same address or the same address status is unknown
- iii. Pay as you go (PAYG) gross income from payment summaries, if greater than zero
- iv. ATI Australian Government payment and earning amounts in the Centrelink Administrative Dataset (Data Over Multiple Individual Occurrences)
- v. <u>Pensioner Concession Card</u> or <u>Health Care Card</u> information (excluding foster child and carer allowance). Pensioner Concession Card and Health Care Card holders are assumed to have zero income
- vi. ATI from the previous financial year tax return indexed by the <u>Wage Price Index (WPI)</u> as reported by ABS for the June quarter of the relevant financial year.

Step 2. Calculate the annual family income for each student

The family income for each student is worked out as follows.

Where the school submitted two parents and / or guardians for a student, the annual family
income is worked out by summing the annual income of the two parents and / or guardians.

• Where the school submitted one parent or guardian and they were linked to a tax return, the annual family income is worked out by summing the linked parent or guardian's ATI and their reported spouse ATI (if applicable).

Step 3. Identify the median family income of the school

The median family income of a school is worked out by sorting the annual family income of each student at the school from lowest to highest. After this:

- Where the number of students is odd, the median family income is the annual family income
 of the middle student.
- Where the number of students is even, the median family income is worked out by summing the annual income of the middle pair of students and dividing by two.

Step 4. Translate the school's median family income into a DMI score

Calculate the standard score (DMI score) for a school

The median family income of a school is translated into a DMI score by standardising to a target mean of 103 and a target standard deviation of 13, weighted by number of enrolments.

The data used to work out DMI scores for schools is confidential and can only be accessed by authorised officers in the ABS Secure Research Environment (DataLab). DMI scores are calculated in DataLab using the following formula:

$$DMI_i = \frac{S * (x_i - \bar{x})}{s_x} + M$$

Where

 x_i = median income of school i

 \bar{x} = sample mean

 s_x = sample standard deviation

M= target mean

S = target standard deviation

 DMI_i = DMI score of school i

Calculate the sample mean and sample standard deviation of a year

The sample mean and standard deviation income is calculated using the median incomes of all schools in the *Student Residential Address and Other Information Collection* dataset and is weighted by the number of students submitted for each school. The sample mean and standard deviation is calculated once each year and is then fixed in place. The data used to work out a sample mean and

sample standard deviation of a year is confidential and can only be accessed by authorised officers in the DataLab. The following formula is used to calculate a sample mean and sample deviation:

$$\bar{x} = \frac{\sum_{i=1}^{n} (x_i * w_i)}{\sum_{i=1}^{n} w_i}$$

$$s_{x} = \sqrt{\frac{\sum_{i=1}^{n} w_{i} * (x_{i} - \bar{x})^{2}}{\frac{N-1}{N} \sum_{i=1}^{n} w_{i}}}$$

Where

 \bar{x} = sample mean

 s_x = sample standard deviation

 x_i = median income of school i

 w_i = number of students in school i

n = number of schools

N = number of students

Step 5. Calculate the CTC score

The CTC score that applies to funding for a school using the DMI methodology is the average DMI score for the school for the previous three years. From 2022 and onwards, for small and very small schools, the year-on-year change in CTC scores will be capped at two points.

Where it is not reasonably practically to use the average DMI score for a school a refined area-based (RAB) score is calculated annually. Further information about <u>RAB scores</u> is available on the department's website.

Further Information

Further information about the <u>Australian Government's funding for schools</u> is available on the department's website.