



**Australian Government**

# National School Resourcing Board

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Review of the socio-economic status score methodology:  
Final report | June 2018



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Final report | June 2018

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Professor Natalie Brown  
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Professor Ken Smith  
Dr Alison Taylor

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# Acronyms

Acronym	Full term
ABS	Australian Bureau of Statistics
AACS	Australian Association of Christian Schools
CECV	Catholic Education Commission of Victoria
CIRES	Centre for International Research on Education Systems
ERI	Education Resources Index
ISCA	Independent Schools Council of Australia
ISV	Independent Schools Victoria
MADIP	Multi-Agency Data Integration Project
NATSEM	National Centre for Social and Economic Modelling
NCEC	National Catholic Education Commission
PIT	Personal Income Tax
SA1	Statistical Area 1
SA2	Statistical Area 2
SEA	Socio-educational Advantage
SES	Socio-economic Status
SRS	Schooling Resource Standard
TPI	Total Private Income

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Senator the Hon Simon Birmingham  
Minister for Education and Training  
Parliament House  
Canberra ACT 2600

Dear Minister

On 1 November 2017, you announced the establishment of the National School Resourcing Board—a new and independent expert body with members nominated by the Commonwealth, states and territories and the non-government sectors. The role of the Board includes conducting annual and periodic reviews of elements of the Commonwealth funding model under the *Australian Education Act 2013* (the Act).

On 3 November 2017, you initiated the Board’s first such review: that of the socio-economic status (SES) score methodology, which is used to determine the Commonwealth’s per-student base recurrent funding contribution for individual non-government schools. The Board was asked to assess the strengths and limitations of the current SES measure in determining the capacity of a school community to contribute to the recurrent cost of the school; investigate potential alternative measures; make recommendations on the most appropriate measure; propose how frequently any new measure might be updated; and recommend possible implementation timelines.

In undertaking this Review, the Board has placed high priority on enabling all interested parties to share their perspectives and offer alternative options. The Board undertook extensive consultation, receiving 34 substantive responses to its Issues Paper, including a number of detailed proposals, and held consultations with researchers, policy analysts and a broad range of stakeholders across all states and territories. Views have varied and we are grateful to all who have contributed.

Based on its analysis, the Board has concluded that while the current SES score measure was based on the best available data when it was introduced, it does have shortcomings. Because of recent innovative developments in whole-of-government data linkages, a direct measure of parent and guardian income can now be adopted without risk to privacy or additional burdensome reporting for schools and their communities. This is the most accurate, robust and reliable way to measure a school community’s capacity to contribute.

However, in moving to a more direct measure, the Board recommends the Australian Government consult further with the non-government sector and experts. It is important that further modelling and analysis of impacts be undertaken to assess the effects at an individual school level and to assure school communities’ confidence in, and understanding of, the improved approach.

I thank my colleagues on the Board, and in particular our SES review subcommittee comprising Professor Stephen Lamb as Chair, Professor Natalie Brown and Dr Alison Taylor, for their dedication to this important Review and contribution to this final report.

I also thank the members of the Board secretariat and the research team who worked long and hard to assist the Board in its deliberations.

On behalf of the Board, I commend its report to you on the Review of the socio-economic status score methodology. This is the first of a suite of reviews planned to be undertaken by the Board from this year, including a review of the loading that delivers additional funding for students with disability, and a review of approved system authorities' needs-based funding arrangements under subsection 78(5) of the Act.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Michael Chaney', written in a cursive style.

Michael Chaney AO  
Chair, National School Resourcing Board

# Executive summary

Under the Australian Government's new needs-based funding arrangements, the socio-economic status (SES) score of individual schools will be a significant factor in the determination of Australian Government funding to non-government schools.

Concerns have been raised about the accuracy of this measure. The National School Resourcing Board (the Board) was asked to review the methodology used to calculate the SES scores as a measure of the capacity of the school community to contribute to the recurrent costs of the school, and to provide the Australian Government with findings and recommendations relating to:

- the strengths and weaknesses of the current SES measure in determining the capacity to contribute
- possible alternative methodologies or refinements for the calculation of the capacity to contribute or SES measures
- how frequently any new measure might be updated
- timeframes for possible implementation of recommendations.

The full terms of reference are included in Appendix A.

## Australian Government school funding is determined on a needs-basis

The funding of non-government schools in Australia is a shared responsibility between the parents and guardians of students attending those schools, the Australian Government and state and territory governments.

Under the *Australian Education Act 2013* (the Act), Australian Government funding is allocated based on an estimate of how much government funding each school requires to meet the educational needs of its students, as recommended in the *2011 Review of Funding for Schooling—Final Report*.

This estimate is calculated by reference to the Schooling Resource Standard (SRS), which provides a base amount for every primary and secondary student, along with six loadings that provide extra funding for disadvantaged students and schools. It is estimated that the base amount will account for 75.9 per cent of Commonwealth recurrent school funding expenditure in 2018.

For most non-government schools, the base amount is discounted or reduced by the anticipated capacity of the school community to financially contribute towards the school's operating costs. This is called the 'capacity to contribute' assessment and it is based on the SES score of the school.

This Review focuses on the methodology used to determine the SES score.

To assess the strengths and weaknesses of the current SES measure and alternative approaches, it is important to understand the purpose or policy intent of the capacity to contribute assessment.

There is a longstanding expectation in Australia that parents or guardians of children in non-government schools make a financial contribution to the cost of schooling. Coupling this expectation with the allocation of funding based on need, the capacity to contribute element of the school funding model is designed to provide more financial support to non-government schools where parents and guardians have less capacity to contribute.

For the purposes of the review, the Board has defined capacity to contribute as the financial capacity of parents or guardians of students at a school to contribute, as determined by their income and wealth.

## The current SES score methodology has been in operation since 2001

The SES score for an individual school is currently calculated every five years by matching the residential addresses of the school's student population with information collected as part of the Australian Bureau of Statistics (ABS) Census of Population and Housing (Census) data.

This 'area-based' approach takes the income, education and occupation of the residents of small geographical or statistical areas (approximately 400 people) to calculate an SES index for each statistical area. A school score is then calculated based on the weighted average of the indices for those areas in which each individual student resides.

While not a direct measure of financial capacity to contribute, education and occupation were originally included as proxies that correlated well with income and wealth, providing greater stability for school scores.

The SES score methodology was the product of a thorough process of consultation and analysis prior to its introduction in 2001 and was widely supported by most stakeholders as the most appropriate way to measure SES and capacity to contribute given the data available at the time.

The SES score calculation methodology was first applied in the SES funding model for independent schools from 2001, with arrangements to maintain funding for schools that would be entitled to less funding under the SES funding model. In 2004, agreement was reached between the Australian Government and the National Catholic Education Commission that Catholic systemic schools would move to the SES funding model from 2005, but have their funding maintained if the application of the model resulted in a funding reduction<sup>1</sup>. From 2014, with the introduction of the SRS model, the capacity to contribute discount was applied to the per student base funding amounts.

The *2011 Review of Funding for Schooling Schooling—Final Report* found that a more precise measure of the capacity to contribute of a school community based on a direct measure of parental SES would be more accurate, but the data required to implement such a measure were not available at the time. The review recommended that a better measure of capacity of parents and guardians to contribute be developed and trialled.

## Significant consultation has informed the Board's deliberations

In undertaking its Review, the Board consulted widely and invited public submissions.

The Board would like to acknowledge the thoughtful and considered submissions provided. They were invaluable in the deliberations of the Board. In summary:

- The Board received 34 substantive responses to the Issues Paper, including a number of detailed proposals which informed the Board's consideration and analysis. The Board also received 261 submissions which were largely part of a coordinated standard response from individuals or school communities.

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<sup>1</sup> Centre for International Research on Education Systems (2017) Socio-economic Status (SES) score methodology used in recurrent school funding arrangements—Research Paper, Victoria University: Melbourne, pp. i–ii.

- Board members undertook 38 face-to-face consultations in all states and territories with non-government education authorities, school leaders and communities, state and territory government agencies, researchers, policy analysts and other interested parties.

There was a broad range of views expressed.

The vast majority of the independent sector supported continuing with the current SES measure, given the stability in funding arrangements it has provided, and questioned the need for change. They argued that the methodology continues to be fit-for-purpose precisely because of that stability, and because it cannot be manipulated by school or system-level policy decisions.

Other stakeholders identified concerns with the current measure, arguing that the use of area-based Census information appeared to misclassify the capacity to contribute of a number of school communities, and, in particular, to overestimate the capacity to contribute of some families that attend low-fee schools.

While some submissions argued no change was necessary, other submissions proposed alternative options for the Board to consider. These ranged from relatively minor refinements of the current area-based measure, to the use of schools' fees or total private income as a proxy measure of capacity, and/or the move to a more direct measure of financial capacity. Certainly, there was no consensus on the need for change, nor the way forward.

## **New data approaches have made more sophisticated analysis possible**

One of the difficulties faced in assessing and validating concerns that have been raised by some stakeholders to date has been the limited data available. The original SES methodology relied on the most accurate and comprehensive dataset that was available at that time—namely the Census.

However, new data capability within government has only now made it possible to fully analyse these issues, consider direct measure alternatives and better understand the relative merits of these when compared with the existing area-based measure.

The work of the Board was supported by a research team of data analysts from the Department of Education and Training and the Australian Bureau of Statistics (ABS) and a panel of external experts to provide peer review, undertake complementary analysis and inform its work.

Supported by participating government agencies, the ABS completed linkage of the 2011 and 2016 Census data to personal income tax data for the 2011–12 and 2015–16 financial years to student residential addresses using the Multi-Agency Data Integration Project (MADIP). Analysis of these datasets indicate that area-based measures do not always provide the most accurate measure of school-level SES or capacity to contribute, albeit with further work and analysis required.

The data show that capacity to contribute is not evenly distributed within Census statistical areas and that patterns of school selection mean that the current methodology, while accurate in many cases, materially overstates the SES of some schools and understates that of others.

The Board found that the use of area-based data under the current method misclassifies some schools, which impacts on the level of funding entitlement for those individual schools.

The Board commissioned significant analysis to further examine issues raised about the current methodology and potential alternative approaches. This included examination of:

- possible refinements to the current methodology
- potential direct measures and proxies of income and wealth, including personal income tax, health care cards, family tax benefits, school fees and/or total school income from private sources.

The Board's analysis showed that there are a number of possible refinements to the area-based SES measure that would improve current arrangements. However, the inherent issues with any area-based measure cannot be fully overcome with refinement of the current methodology.

Based on extensive analysis of the alternatives, the Board concluded that the current approach is no longer the most accurate measure available and a direct measure of parental income is currently the most fit-for-purpose, transparent, and reliable way to determine a school community's capacity to contribute. This approach has not been possible until now.

The Board's analysis has relied on measures of total household income, which have been sufficient to demonstrate the superiority of a direct measure of income over alternate measures of capacity to contribute. Before a measure is applied for the purposes of determining per-student base funding amounts for individual non-government schools, additional analysis and consultation is required to determine the appropriate settings of that measure.

A direct measure of parental income that does not risk breaches of privacy, and does not require collection of tax file numbers by a school, is only possible because of recent, innovative developments in whole of government data linkages. The tax records accessed through MADIP include addresses, and addresses for parents and guardians of students at a school are collected through the student residential address collection. Linking these two datasets enables the median income of parents and guardians of students at a school to be calculated. Schools will not have access to these data. As this calculation is based on deidentified data and is done (by the department) for a school as a whole, there are layers of privacy protection. This means the data cannot be used to reveal the incomes of parents or guardians of individual students at a school.

Over time, the accuracy of any direct measure of parental income can be refined so that the measure can adapt and evolve along with the needs of schools and students, continuing to provide an appropriate measure for determining capacity to contribute.

## Findings

In considering the results of the analysis undertaken, the Board found that:

1. The SES score methodology was appropriate for the time it was developed and represented a significantly improved approach to determining capacity to contribute.
2. A direct measure of parental income is possible through the use of de-identified data that protects privacy.
3. It has only recently become possible to compare the area-based measure with a measure of the actual school cohort.
4. While SES scores are reasonably well-aligned with direct measures, there are material differences at a school level within both the Catholic and independent school sectors.

5. Confidentialised Census data can be used to create a more targeted area-based measure of the parents and guardians of non-government school students.
6. Education and occupation variables are no longer necessary to provide stability in the measure.
7. Taking family size into account would more accurately reflect the capacity to contribute of an individual family. Any future approach should take family size into account.
8. Flaws with the current area-based measure cannot be completely overcome with refinement.
9. Household wealth cannot currently be included in a measure of capacity to contribute, but could be considered for inclusion in future if suitable and reliable direct data become available.
10. A minimum additional year of data collection and validation will be required in order to enhance stability of a direct income measure.
11. In order to increase the accuracy of a direct income measure, parent and guardian names should also be collected annually.
12. The empirical evidence presented in this report provides a strong rationale for the Australian Government to move towards a direct measure of parent and guardian income.
13. School total private income (including fees) and school wealth should not form part of a capacity to contribute measure. Professor Craven dissented from this finding.

## Recommendations

### Recommendation 1

Adopt the following definitions:

- 'capacity to contribute' is a function of the school community's income and wealth
- 'school community' is the parents and guardians of the students at the school.

### Recommendation 2

The capacity to contribute for a school be determined based on a direct measure of median income of parents and guardians of the students at the school.

### Recommendation 3

Consult further with the non-government sectors and experts on the development of, and transition to, a new direct measure of capacity to contribute for implementation from 2020.

### Recommendation 4

Undertake an annual residential address collection and data-matching with income tax data to enable the calculation of a rolling average for a stable direct measure of median parent and guardian income for a school.

### Recommendation 5

Continue existing arrangements for determining capacity to contribute for 2019, using updated 2016 Census data.

### Recommendation 6

Ensure a transparent and robust appeals system is in place.

# Introduction

## The task

On 1 November 2017, Senator the Hon Simon Birmingham, Minister for Education and Training, announced the establishment and membership of the National School Resourcing Board (the Board) to undertake independent reviews of the operation of the *Australian Education Act 2013* (the Act).

As its first priority, the Minister tasked the Board to review the appropriateness of the current socio-economic status (SES) score methodology and to recommend options for alternative capacity to contribute measures to address stakeholder concerns about the appropriateness of the current methodology.

In line with the terms of reference, the Review has considered:

- the strengths and limitations of the current SES measure in determining the capacity of a school community to contribute to the recurrent costs of the school
- possible alternative methodologies or refinements for calculating the capacity of a school community to contribute, or for calculating the SES score, including the use of more direct measures
- how frequently measures should be updated in the future
- the timeframe for possible implementation (including staged implementation) from the 2019 school year.

## The process

A sub-committee of Board members, chaired by Professor Stephen Lamb, and including Professor Natalie Brown and Dr Alison Taylor, oversaw a program of technical work on behalf of the Board. The sub-committee was supported by a research team of data analysts from the Department of Education and Training and the Australian Bureau of Statistics and a panel of experts.

The Expert Panel was comprised of:

- Mr Andrew Wade, Principal Research Fellow, Centre for International Research on Education Systems (CIRES), Victoria University
- Professor Robert Tanton, Director, National Centre for Social and Economic Modelling (NATSEM), University of Canberra
- Associate Professor Nicholas Biddle, Associate Director, Centre for Social Research and Methods and Director, Policy Experiments Lab, Australian National University
- Ms Julia Neville, Assistant Commissioner, Australian Taxation Office
- Dr Paul Jelfs, General Manager, Australian Bureau of Statistics.

The Board commissioned discrete pieces of research and analysis from the Expert Panel, including the following reports:

- *Stability of incomes for small geographies*, R. Tanton and D. Pell (to be published in July 2018)
- *The potential for including household wealth in a measure of capacity to contribute*, A. Wade (to be published in July 2018)

- *The potential for including school income and wealth in a measure of capacity to contribute*, A. Wade (to be published in July 2018)

The Chair of the Board released an [Issues Paper](#) on 19 December 2017, inviting interested stakeholders to make an online submission to the Review by 20 February 2018. The Board received 34 substantive submissions and 261 submissions that were largely part of a coordinated standard response from individuals of school communities. The Board received submissions from individuals, representative peak bodies from the non-government sector, unions and the Australian Capital Territory Government.

The Board undertook targeted consultations with key stakeholders from each state and territory and met with 38 organisations/individuals, largely identified through the public submissions process. In addition, the Board held technical information sessions and a further face-to-face meeting with representatives from the Independent Schools Council of Australia and the National Catholic Education Commission before it finalised its report.

Further information about the review process is included in Appendices B, C and D.

## Analysis and options considered

The Board's objective was to test the validity of concerns raised about the current SES score methodology and propose and assess a range of alternative approaches. In doing so, it used the underlying principles of fitness-for-purpose, transparency and reliability.

The Board has endeavoured to develop alternative methodologies that:

- address the key concerns raised by stakeholders
- provide a level of funding certainty for schools
- are fiscally responsible
- can be implemented reasonably by both the Government and schools.

The options considered fall broadly into two categories:

- a refinement of the current area-based measure
- a direct measure that uses parental income data (currently, this is measured at the household level), and a variation combining this with a fees/school private income measure.

The Board notes that any approach can be made cost neutral by adjusting the capacity to contribute discount rates that are applied to the base level of per student funding for non-government schools.

The capacity to contribute discount rates are considered a policy matter and thus a decision of the Australian Government. It has not been considered by the Board in its recommendations.

If the Australian Government accepts the recommendation to move to the proposed direct measure, further extensive modelling of funding impacts on individual schools would be needed.

This report describes the current situation and case for change (Chapters 1 to 4), outlines potential options for change (Chapters 5 to 7), and discusses next steps (Chapter 8). The report also includes a number of appendices.

# Chapter 1: Australian Government needs-based funding arrangements

This chapter outlines the context of Australian Government school funding and how the socio-economic status (SES) score is used to calculate school funding entitlements for non-government schools.

## 1.1 Australian Government funding for schooling is based on need

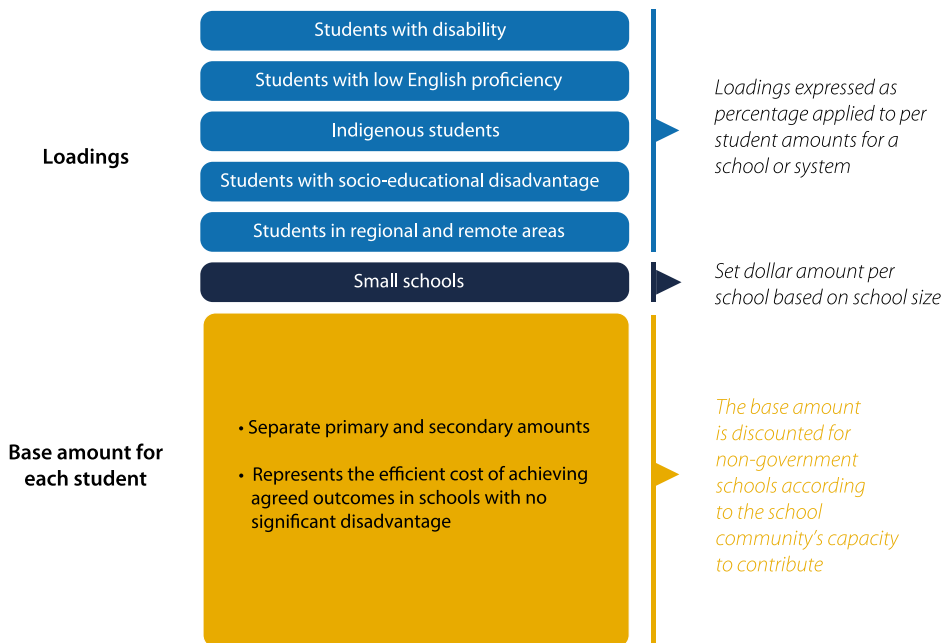
Over the next ten years, the Australian Government will invest \$243.5 billion in recurrent funding in over 6600 government schools and 2800 systemic and independent non-government schools.

Under the *Australian Education Act 2013*, Australian Government funding is allocated based on an estimate of how much government funding each school requires to meet the educational needs of its students, as recommended in the *2011 Review of Funding for Schooling—Final Report*.

This estimate is calculated by reference to the Schooling Resource Standard (SRS), which provides a base amount for every primary and secondary student, along with six loadings that provide extra funding for disadvantaged students and schools, as shown in Exhibit 1 below.

The Review focusses on the capacity to contribute measure, which only affects the base amount.

**Exhibit 1. Funding for schooling consists of a base amount for each student and loadings**



Source: Adapted from *Review of Funding for Schooling—Final Report 2011*, p. 154.

The Commonwealth is the majority public funder of non-government schools. Under the funding arrangements that came into effect from 1 January 2018, Commonwealth funding for non-government schools will move from the 2017 average of 76.8 per cent of the SRS for non-government schools to 80 per cent by 2027.

Over the same period, Commonwealth funding for government schools will move from 17 per cent to 20 per cent, reflecting the Commonwealth's role as the minority public funder of this sector.

## 1.2 Funding varies according to a non-government school's SES score

Non-government schools raise additional funding from parents and guardians through fees and other charges. Capacity to contribute towards the operating costs of non-government schools varies significantly depending on the financial circumstances of the parents and guardians of students that attend those schools.

In recognition of this, the base amount provided to non-government schools is discounted according to an assessment of the capacity of the school community to financially contribute to the operation of the school.

On average, it is estimated that the base amount will account for 75.9 per cent of Commonwealth recurrent school funding for non-government schools in 2018, with loadings contributing to the remaining 24.1 per cent.<sup>2</sup>

The 'capacity to contribute' discount is currently based on the SES score of the school. SES scores provide a relative ranking of all non-government schools based on the income, education, and occupation characteristics of the areas in which students at each school reside. This information is used to generate a number representing the SES of one student cohort relative to other cohorts, with 100 being the Australian 'average' SES score.

A 'capacity to contribute' discount of 10 per cent is applied for schools with the lowest SES scores, meaning these schools are entitled to 90 per cent of the base SRS. As SES scores increase, the base SRS amount is discounted further.

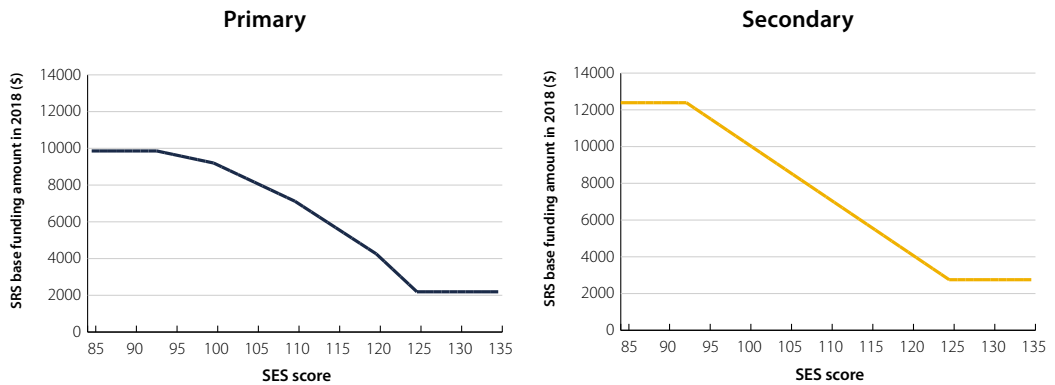
For schools with the highest SES scores, a 'capacity to contribute' discount of 80 per cent is applied. As a result, the Australian Government provides a minimum financial contribution of 20 per cent of the SRS towards the education of all students.

Exhibit 2 shows the discount rates applied for primary and secondary students at schools with different SES scores. In 2018, after a school's SES score is applied, base funding for primary students ranged from \$9,858 per student for schools with an SES score of 93 or below to \$2,191 per student for schools with an SES score of 125 or above. For secondary students, base funding ranged from \$12,388 per student for schools with an SES score of 93 or below to \$2,753 per student for schools with an SES score of 125 or above.

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<sup>2</sup> Based on Department of Education and Training data.

**Exhibit 2. The rate of the base amount discount is determined by the school's SES score**



Source: Based on the *Australian Education Act 2013*

The 'capacity to contribute' discount is not applied to non-government special schools and special assistance schools, non-government majority Aboriginal and Torres Strait Islander schools, and non-government sole-provider schools (i.e. schools in isolated locations where no other government or non-government provider is operating). Furthermore, there is no 'capacity to contribute' discount applied to the loadings as these are targeted at school and student disadvantage.

One of the loadings is for socio-educational disadvantage. It uses a measure of educational disadvantage, based on the education and occupation of parents and guardians, and should not be confused with the SES score measure. While the current methodologies draw on similar data, they measure different concepts for different policy intent. The loadings are not within the scope of this review.

**Box 1. Contribution for every student**

As the majority public funder of non-government schools, the Australian Government is committed to supporting parental choice and diversity in the schooling system.

There has been longstanding bipartisan support by Australian governments, including both Commonwealth and state and territory governments, to contribute funding for every student, regardless of which school they attend.

As recipients of public funding, school operators are required to implement the Australian Curriculum, participate in the national assessment program, and report a range of information to the Government.

In consultations for the Review, none of the major stakeholders from the non-government sector disagreed with the position that a public contribution should be made for every student.

# Chapter 2: Defining and measuring capacity to contribute

This chapter outlines the Board's definition of capacity to contribute, and the set of principles it has adopted to guide the assessment of the current and alternative approaches to measuring capacity to contribute.

## 2.1 The policy intent for the capacity to contribute measure is not well articulated

A significant number of stakeholders raised concerns in their submissions about a lack of clear purpose or policy intent of the capacity to contribute element of the school funding model.

While the concept has been applied in Australian Government funding in various forms for some decades and under different governments, its intention has not been well articulated.

The *Australian Education Act 2013* (the Act) simply specifies the capacity to contribute percentages that are to apply for each possible school socio-economic status (SES) score, and the Australian Education Regulation 2013 sets out the methodology to calculate the SES score. There is no meaningful reference to capacity to contribute in the Explanatory Memorandum for either the original legislation passed in 2013, or the significant package of amendments in 2017.

The Catholic Education Commission of Victoria (CECV) argued that 'the specific objectives of the Government urgently need clarification' (CECV submission, page 2).

The Grattan Institute argued that the Board 'should clarify the policy goal of the capacity to contribute element of the funding formula and make it explicit, given that different stakeholders appear to have different views on what its goals are at present' (Grattan Institute submission, page 1).

In a speech to the Association of School Business Administrators' Annual Conference on 30 October 2017, the Minister for Education and Training, Senator the Hon Simon Birmingham argued that capacity to contribute is 'a measure that enables us to guarantee that the vast majority of our future funding goes towards the empowerment of parental choice, family choice, in school education by helping those who can least afford it to access schools with the lowest fees, as well as recognising that those who can most afford it will attract somewhat lesser levels of federal funding'.

Stakeholders have drawn different conclusions about the policy intent. This has led to different conclusions about the strengths and limitations of the current SES score measure and possible alternatives, particularly assessments related to whether the measure is 'fit-for-purpose'.

The National Catholic Education Commission's (NCEC) submission argued the capacity to contribute measure should support parental choice. It argued the test of whether the SES score measure is 'truly needs-based' includes whether 'SES scores enable low-fee, inclusive non-government schools to exist in all communities' (NCEC submission, page 1).

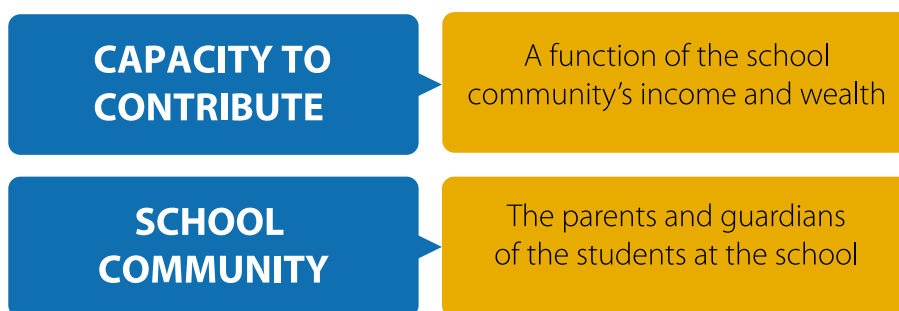
In contrast, the Independent Schools Council of Australia (ISCA) submission considers that SES scores should be ‘used to determine parents’ and communities’ capacity to contribute to the costs of education, not schools’ willingness to charge fees’ (ISCA submission, page 3).

Consistent with the intent of the Act, the Board’s view is that non-government school communities with the same capacity to contribute should attract the same level of government support.

For the purposes of the Review, the Board developed the definitions of capacity to contribute and school community illustrated in Exhibit 3. These are consistent with the *2011 Review of Funding for Schooling—Final Report* recommendation that ‘the assessment of a non-government school’s need for public funding should be based on the anticipated capacity of the parents enrolling their children in the school to contribute financially towards the school’s resource requirements.’<sup>3</sup> The Board recommends the Australian Government adopt these definitions.

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**Exhibit 3. The Board developed definitions of capacity to contribute and school community**



Source: Developed for the Review of the SES score methodology

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**RECOMMENDATION 1**

**Adopt the following definitions:**

- **‘capacity to contribute’ is a function of the school community’s income and wealth**
- **‘school community’ is the parents and guardians of the students at the school.**

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<sup>3</sup> Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., Tannock, P. (2011) *Review of Funding for Schooling—Final Report*, DEEWR, Canberra, p.79.

## 2.2 School community is defined as parents and guardians of students at a school

Parents and guardians have the primary responsibility for selecting a school for their child, and for making a financial contribution towards schooling if the school is in the non-government sector. Parents and guardians must therefore be the central component of a capacity to contribute measure.

While the Board understands that there are instances where extended family contributes to school fees, it is not possible to comprehensively capture and link this information to students at a school.

## 2.3 Parental income and wealth are the most appropriate measures

The key factors affecting a family's capacity to contribute to the costs of a child's education are income and wealth. Income can be used to support consumption of goods and services, including investing in education. Income can also be saved and invested to increase wealth, which can be used to support consumption at a later date.

Wealth is the value of all the assets (e.g. property, bank accounts and shares) owned by a household, less the value of all its liabilities (e.g. mortgages and other loans) at a particular point in time. Where there are two households with identical income, the household with the higher wealth may have a higher capacity to contribute to the costs of schooling.<sup>4</sup>

Issues relating to household income and wealth are explored in Chapter 6.

## 2.4 Family size affects capacity to contribute

Family size affects the capacity of families to contribute financially to their child's education. If two households have equivalent income and wealth but differ in terms of family size, the family with a larger number of dependents would have less capacity to contribute to the costs of their children's education. Conversely, a family with fewer dependents would have a higher capacity to contribute.

The issue of family size does not affect all school communities equally. Australian Bureau of Statistics (ABS) Census data indicates that the average number of dependent children in a family tends to decline as family income increases.<sup>5</sup> Further, for schools associated with certain religious denominations, the families of students tend to be larger than the national average. Significantly larger than average family size has been a key factor in a number of successful SES score appeals. Taking family size into account would more accurately reflect families' capacity to contribute.

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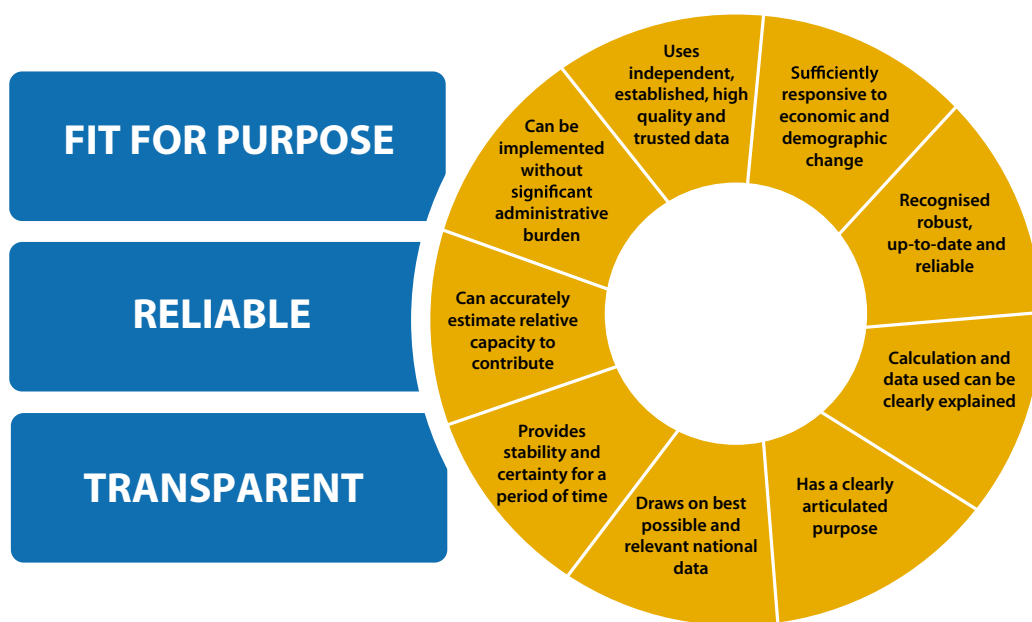
4 Adapted from Australian Bureau of Statistics, '6523.0 - Household Income and Income Distribution, Australia, 2011-12', viewed on 27 June 2018, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6523.0Main+Features62011-12?OpenDocument#factsheet1>.

5 Centre for International Research on Education Systems (2017) *Socio-economic Status (SES) score methodology used in recurrent school funding arrangements—Research Paper*, Victoria University: Melbourne, p. 35.

## 2.5 Measurement involves trade-offs between competing imperatives

The Board developed a set of principles to guide the assessment of the current method and development of alternative approaches. In the Board's view, as outlined in the Issues Paper, the methodology should be fit-for-purpose, transparent and reliable.

**Exhibit 4. Principles for assessing capacity to contribute measures**



Source: Developed for the Review of the SES score methodology

The Issues Paper specifically asked for stakeholders' comments on the Board's guiding principles. A number of submissions provided broad support for these principles, and no stakeholders presented opposition to them.

The Independent Schools Council of Australia supported these principles as 'appropriate to the task at hand'. Christian Schools Australia said they 'provide a sound framework for the assessment of a capacity to contribute measure'.

Being fit-for-purpose and accurate are two key criteria that any measure should meet. For example, if a measure could be clearly explained, implemented without an unreasonable administrative burden, used independent data, and was very stable, but was not sufficiently accurate, it would not be considered fit-for-purpose.

# Chapter 3: The current socio-economic status score

This chapter explains how the socio-economic status (SES) score is currently derived from Australian Bureau of Statistics (ABS) Census of Population and Housing (Census) information. It explores some of the key concerns raised about the current approach.

## 3.1 SES scores are currently calculated using 'area-based' data

School SES scores are currently based on the average of SES scores for areas in which the students at the school reside. As a result, this method is often described as 'area-based'. Area scores are calculated for each Statistical Area 1 (SA1) using the Census data based on four dimensions: education, occupation, household income, and income of families with children.

SA1s have a population of between 200 and 800 people (and an average of around 400). Principal components analysis is used to calculate a score for each of the four dimensions for all SA1s in Australia. As a data production technique, principal components analysis is a statistical procedure which is widely used in constructing composite indicators. This procedure is described in detail in *Socio-economic Status (SES) score methodology used in recurrent school funding arrangements – Research Paper*, Victoria University (2017).

Each of the four dimension scores are standardised to have a mean of 100 and a standard deviation of 15, making SES scores a relative measure. The dimension scores for each SA1 are then combined to create a weighted average SES score for the area. These are calculated based on all households in the area, with the dimensions weighted: 1/3 occupation, 1/3 education, 1/6 household income, 1/6 income of families with children.

Education and occupation dimensions were originally included in the SES calculation to provide a broader spread of school SES scores and a more precise and stable profile of schools.<sup>6</sup> The specific dimensions included, and their relative weightings, was largely a policy decision that was made in consultation with stakeholders.

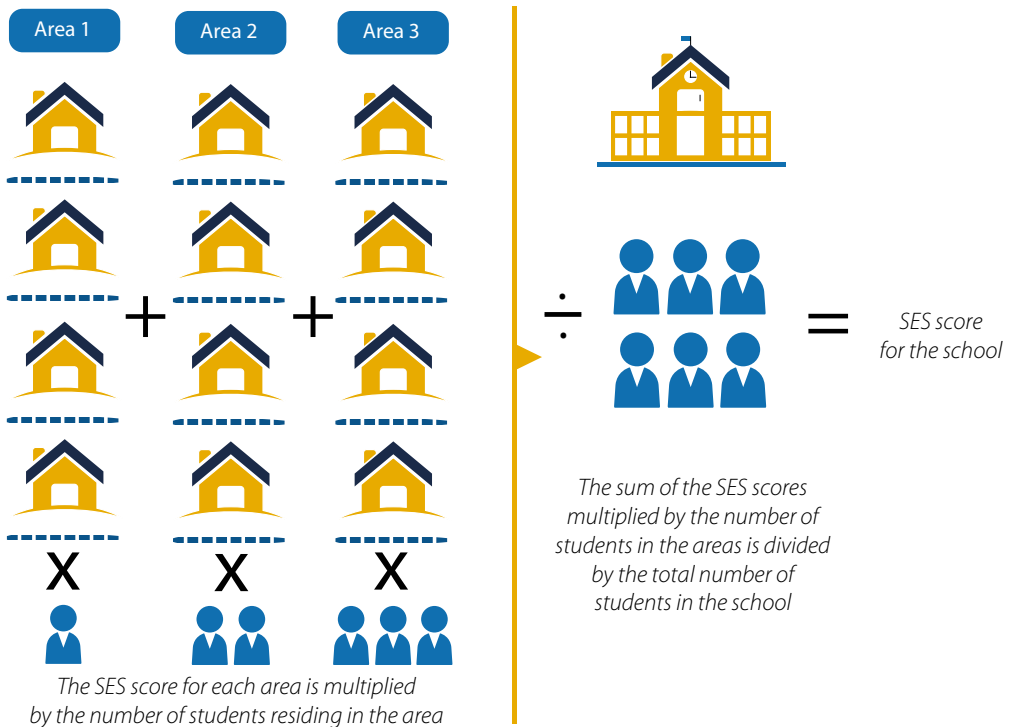
Separately, the Australian Government Department of Education and Training collects the addresses of students in non-government schools through the five-yearly student residential address collection. Using the school residential address data, SA1s in which students of the school reside are identified, as is the number of students in each relevant SA1. The SES score for each area is then multiplied by the number of students in the area. Finally, the sum of the multiplied SA1 scores is divided by the total number of students in the school to produce the SES score (as shown in Exhibit 5), making the school's SES score the enrolment weighted average of the various average SA1 SES scores. Based on 2016 Census data, the mean SES score for all non-government schools in Australia is 100.7 and the standard deviation is 10.7.

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6 Department of Education, Training and Youth Affairs. (1998). *Schools Funding: SES Simulation Project Report*. Canberra: Department of Education, Training and Youth Affairs, p. 16.

**Exhibit 5. The SES score calculation draws on data for all households in the areas in which the students of the school reside**

An SES score is calculated for each area in which a student resides based on all households in the area



Source: Adapted from Centre for International Research on Education Systems (2017) *The socio-economic status (SES) score methodology used in recurrent school funding arrangements—research paper*, Victoria, p. 22.

The SES score methodology was innovative when developed in the late 1990s and was considered a significant improvement on previous approaches. It used the lowest available level of Census data and student home addresses which were already collected by schools to more accurately and appropriately target government funding than had previously been possible.

The SES score methodology replaced the Education Resources Index (ERI) approach, which had been in place since 1985. The approach allocated public funding to non-government schools based on the income a school generated through fees, investments, fundraising and donations, compared to a standard level of resources.

Under the ERI approach, the more income a school generated, the lower the level of general recurrent funding the school received. Some schools were found to have changed their accounting arrangements to maximise the amount of Commonwealth funding they received.

Stakeholder submissions to the Board did not support a return to this sort of approach. The Victorian Ecumenical System of Schools described the ERI system as ‘manipulative’ and ‘inflexible’.

The Independent Schools Victoria submission to the Board argued that:

*‘...the complexity of the Education Resource Index model... created incentives for schools to change their financial structures, solely in order to maximise their funding outcomes. These perverse incentives resulted in schools with similar levels of need ending up receiving very different funding outcomes, and funding was targeted to a school’s flexibility in altering its financial structure rather than the need of its students.’ (Independent Schools Victoria submission, page 2)*

### **Finding 1**

The SES score methodology was appropriate for the time it was developed and represented a significantly improved approach to determining capacity to contribute.

## **3.2 Not all schools have been funded according to their SES score**

To address the concerns with the ERI model, the SES score method was developed and trialled in the late 1990s as a measure of capacity to contribute. The SES funding model was applied to the independent sector in 2001, and the Catholic sector in 2005. It was used to determine the percentage of the Average Government School Recurrent Costs amounts that a non-government school was entitled to.

However, not all schools were funded according to their SES score. ‘Funding maintained’ arrangements were introduced at the same time as the SES funding model, to preserve the ERI funding entitlements for schools that would have received less if funded by the SES model alone. As at 31 December 2013, 15 per cent of independent schools and 52 per cent of Catholic systemic schools were ‘funding maintained’.<sup>7</sup>

From 2005, the ‘funding guarantee’ scheme was also introduced. Any non-government school with an SES score that increased when updated (and was therefore entitled to less funding) had their funding levels frozen until such time as the funding associated with their new SES score caught up.

In 2014, with the introduction of the Schooling Resource Standard (SRS), SES scores were used to determine the discount applied to a school’s base SRS per student amount. Again, the Government put in place arrangements that meant a non-government school’s funding did not necessarily reflect its individual SES score. In particular, schools belonging to systems could be funded according to a ‘system weighted average’ SES score. Under this approach, all member schools were assigned a single SES score, which meant high SES schools were funded like low SES schools.

The ‘no school loses a dollar’ guarantee also meant that many schools that had been funding maintained were only very slowly transitioning to a funding amount that reflected their actual SES score.

Under reforms announced and legislated in 2017, from 2018 all non-government schools have begun to transition to the amount of funding they are actually entitled to, based on their SES score, within the next six to ten years. This is why the timing of the Review is so important.

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<sup>7</sup> Department of Education and Training data.

A small number of individual schools have also successfully appealed their SES scores on the basis that the SES score did not accurately reflect the school community. Since 2009, 20 schools have requested a review of their SES score, and 11 have been successful in having their score changed. Further information about the SES score review process is outlined in Appendix E.

### 3.3 Views within the sector are split on the current SES method

Submissions from organisations representing independent schools tended to be in favour of continuing the current SES score methodology because they consider it continues to meet the principles upon which it was developed and does not impose an unreasonable administrative burden on schools. For example:

*'ISCA believes that the current SES methodology is fit-for-purpose, transparent and reliable. This is largely due to the area-based approach of the current methodology which provides stability in funding for non-government schools and cannot be manipulated or gamed.' (Independent Schools Council of Australia submission, page 3)*

A number of submissions, particularly from the independent sector, highlight the use of independently collected ABS Census data as a key benefit of the current SES scores.

On the other hand, Catholic school systems have raised concerns with the accuracy of the current method, noting that the SES score is based on the average income, education, and occupation of the areas in which the students reside rather than characteristics of the actual families that attend the school. The Catholic Education Commission of Victoria stated:

*'The main source of inaccuracy comes from the use of SA1 data to classify families. This is the biggest single problem with SES scores. The SES scoring methodology assumes all families within the same SA1 have the same financial means, irrespective of the school they attend.' (Catholic Education Commission of Victoria submission, page 12)*

Catholic School Parents Australia, using an example to illustrate, pointed to the situation whereby under the current approach:

*'a low income family with three children living in a rented house, is deemed to have the same capacity to pay school fees as a high income, single-child family which owns and resides in the house next door.' (Catholic School Parents Australia submission, page 2)*

Catholic representatives argued that their low-fee schools are more likely to attract students from lower SES families within an SA1 and that the methodology has an inherent bias that consistently overstated the capacity to contribute of school communities in the Catholic sector, resulting in lower levels of Australian Government funding.

The National Catholic Education Commission argued that:

*'Reliance solely on an area-based SES score to determine capacity to contribute is, in practice, reliance on an imprecise method for assessing need.' (National Catholic Education Commission submission, page 2)*

# Chapter 4: Testing the validity of the socio-economic status score methodology

This chapter examines the accuracy and validity of the current socio-economic status (SES) score method using directly linked household data.

## 4.1 New approaches are possible with recent advances in data integration

Technical developments in recent years allow robust and reliable linkages between datasets held by different government agencies, along with strict protocols to ensure that the privacy of individuals and households is protected. This provides the tools to better analyse the performance of the current SES score methodology, and also to explore the development of more direct measures of school communities' capacity to contribute rather than using area-based proxies.

Some stakeholder submissions acknowledged the potential for using tax data to create a more accurate measure, but were cautious about its application due to issues around complexity, privacy and potential reporting burden. For example, the Grattan Institutes submission suggests:

*'using tax-return data to estimate income might make SES scores more accurate and timely, but could also make school funding more volatile, as well as raising privacy issues.'* (The Grattan Institute submission, page 2)

Similarly, the Catholic Education Commission of Victoria's submission states:

*'...the use of tax return data (the best measure of family income) may raise privacy issues and add significant administrative costs.'* (Catholic Education Commission of Victoria submission, page 21)

Recent advances in data integration provide opportunities to improve the accuracy and reliability of data used for policy while maintaining privacy and without imposing significant additional reporting burden.

The Multi-Agency Data Integration Project (MADIP) has been developed to provide government agencies and approved researchers access to de-identified data to inform policy. There are many benefits to using data integration, including:

- providing access to rich data directly relevant to policy
- ensuring privacy and confidentiality are maintained by removing personal information, putting strict controls on data access and checking the release of data to ensure it does not disclose any information that would allow an individual to be identified
- minimising administrative burden by maximising the use of data that is already collected.

## Finding 2

A direct measure of parental income is possible through the use of de-identified data that protects privacy.

### Box 2. Multi-Agency Data Integration Project

The Multi-Agency Data Integration Project (MADIP) is a partnership among Australian Government agencies to link existing public data for policy analysis, research, and statistical purposes.

The MADIP securely links existing healthcare, education, government payments, personal income tax, and Census data to enable analysis of socio-economic outcomes and trends to inform policy and program development. MADIP data is being used to help target services (such as healthcare and education) to the people and communities who need them.

The project is currently in an evaluation phase, and will become fully operational as a core component of the Australian Government's Data Integration Partnership for Australia in July 2018.

There are six Commonwealth agencies working together on the MADIP:

- Australian Bureau of Statistics (ABS)
- Australian Taxation Office
- Department of Education and Training
- Department of Health
- Department of Human Services
- Department of Social Services.

The ABS is responsible for combining the data, providing access to data via highly secure systems, and safeguarding privacy in collaboration with its partner agencies. Government and non-government researchers authorised by the MADIP agencies have access to de-identified data for approved projects; no data is released in a manner that can enable an individual to be identified. The MADIP complies with the *Privacy Act 1988*, the *Census and Statistics Act 1905*, and with the legislative responsibilities of each partner agency.

For more information about the MADIP, visit [www.abs.gov.au/madip](http://www.abs.gov.au/madip).

## 4.2 Data integration has made it possible to test concerns by linking tax and Census data

To support the Board's review of the SES score methodology a data integration project was initiated through the MADIP to:

- explore the feasibility of using data directly relevant to the address of a student to measure SES and assess capacity to contribute
- examine alignment between the current area-based SES scores and alternative measures constructed with direct data
- test the validity of concerns raised about the current methodology.

Two datasets were created by linking:

- Department of Education and Training's 2012 and 2017 student residential address collection for non-government schools
- Australian Bureau of Statistics (ABS) 2011 and 2016 Census of Population and Housing (Census)
- the Australian Taxation Office's 2011–12 and 2015–16 personal income tax (PIT) data.

To enable the linkage, the school residential address collection was matched to the ABS's address register. This enabled a match to the Census and income tax records. As shown in Exhibit 6, linkage rates were very good in both datasets. However, linkage rates in the second dataset were higher because of the retention of key linkage variables in the 2016 Census, such as encoded names and Address Register IDs.

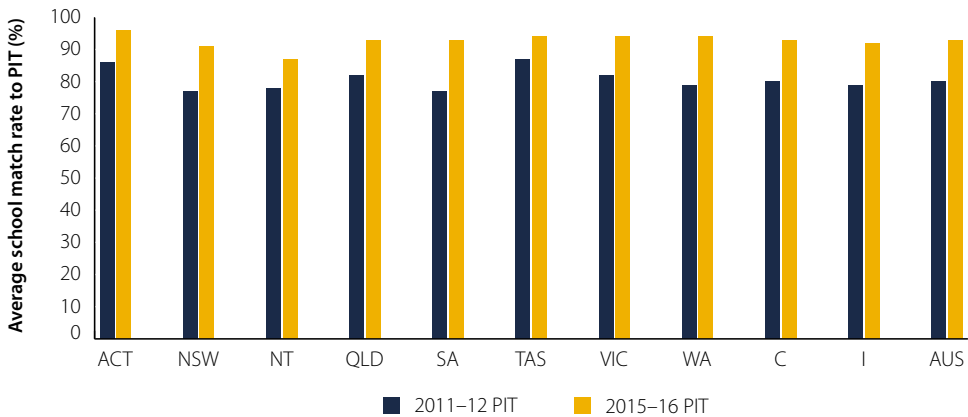
**Exhibit 6. Linkage rates for Census, income tax, and student residential address collection**

Student Residential Address Collection	2012	2017
Number of students	1.23 million	1.29 million
Linkage rate to the ABS address register	94%	98%
Linkage rate to at least one income tax record	82%	94%
Linkage rate to a Census record	74%	95%
Linkage rate to both an income tax record and Census record	72%	93%

Source: Board analysis

As shown in Exhibit 7, on average, high linkage rates were also achieved across all states and territories, providing a solid basis to test the accuracy and validity of the current SES score and explore potential new methods for measuring capacity to contribute.

**Exhibit 7. High linkage rates to income tax records were achieved, particularly in 2015–16**



Source: Board analysis of 2011–12 and 2015–16 income tax data through MADIP

Note: school match rates are based on the percentage of students that are matched to at least one income tax record at the household level. C = Catholic, I = independent

**Finding 3**

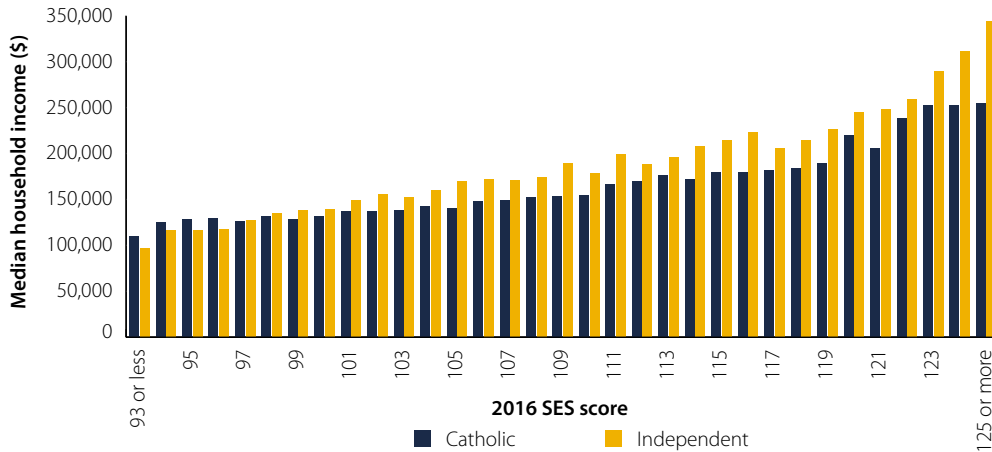
It has only recently become possible to compare the area-based measure with a measure of the actual school cohort.

### 4.3 SES scores are reasonably well-aligned with household income, education and occupation but there are differences between sectors

Overall, analysis using Census and personal income tax data shows that SES scores are reasonably well-aligned with different measures of household income, educational attainment and occupational status, despite not being linked directly to the data for a student’s household.

As shown in Exhibit 8, median household income generally rises as SES scores increase, but there are differences between sectors. For SES scores above 100, students at independent schools, on average, come from higher income households than students at Catholic schools. These differences are statistically significant at most SES score points.

**Exhibit 8. As SES scores increase, so do median household incomes, but there are differences between sectors**

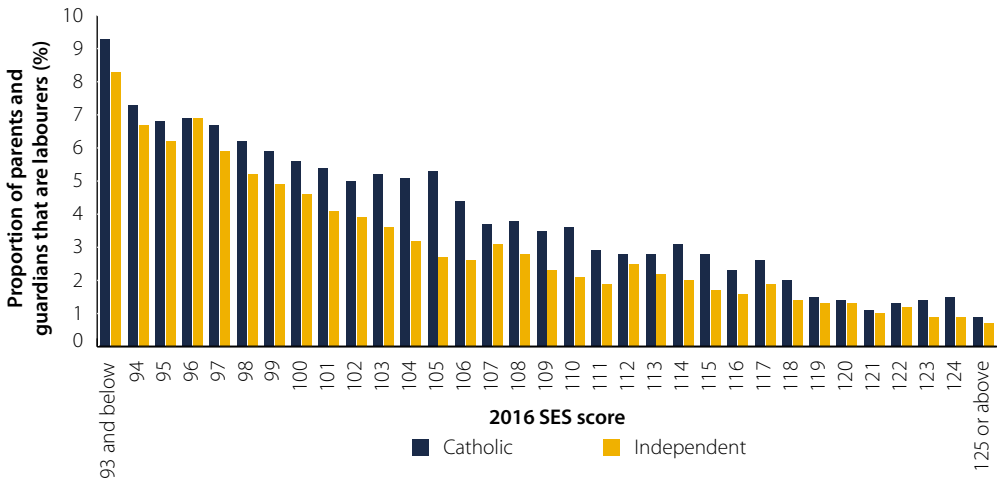


Source: Board analysis of 2015–16 income tax data linked to student residential addresses through MADIP

Occupational status also generally rises as SES scores increase. However, differences between sectors can again be observed. Analysis of the household level Census data indicated that at most SES scores over 100, a larger proportion of parents and guardians of students at independent schools are in higher status occupations, such as managers and professionals, than parents and guardians of students at Catholic schools.

At most SES scores, a larger proportion of parents of Catholic school students are in occupations that are associated with lower SES scores than parents of students at independent schools. This is demonstrated in Exhibit 9, which shows a larger percentage of parents and guardians of students at Catholic schools are labourers.

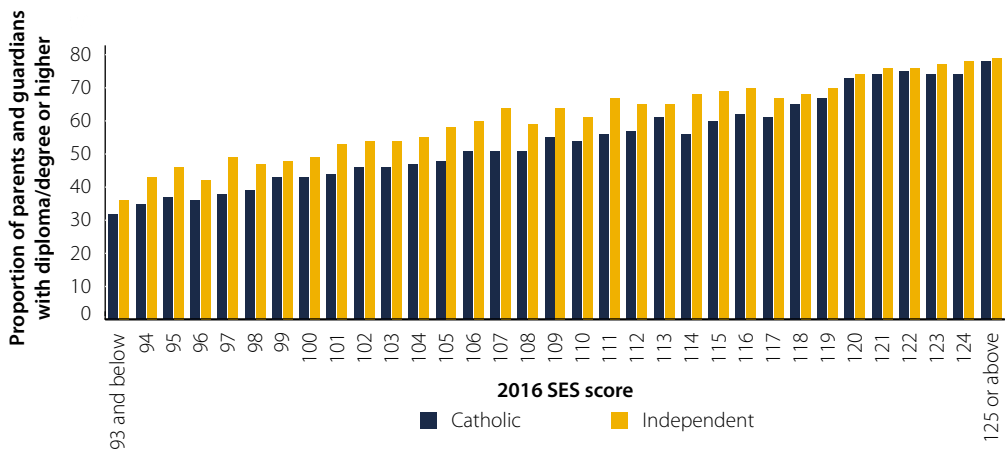
**Exhibit 9. As SES scores increase, the proportion of parents and guardians who are labourers decreases, but there are differences between sectors**



Source: Board analysis of 2016 Census data linked to student residential addresses through MADIP

Similarly, analysis of the household level Census data indicated that at most SES scores a larger proportion of parents and guardians of students at independent schools have higher qualifications (diplomas, degrees or higher) than do parents and guardians of Catholic school students.

**Exhibit 10. As SES scores increase, so does the proportion of parents and guardians with diploma/degree or higher levels of education, but there are differences between sectors**



Source: Board analysis of 2016 Census data linked to student residential addresses through MADIP

These patterns point to students who are different to those living nearby in terms of family income, parental education or parental occupation, but are being treated the same under the current methodology. This leads to a misclassification of SES scores.

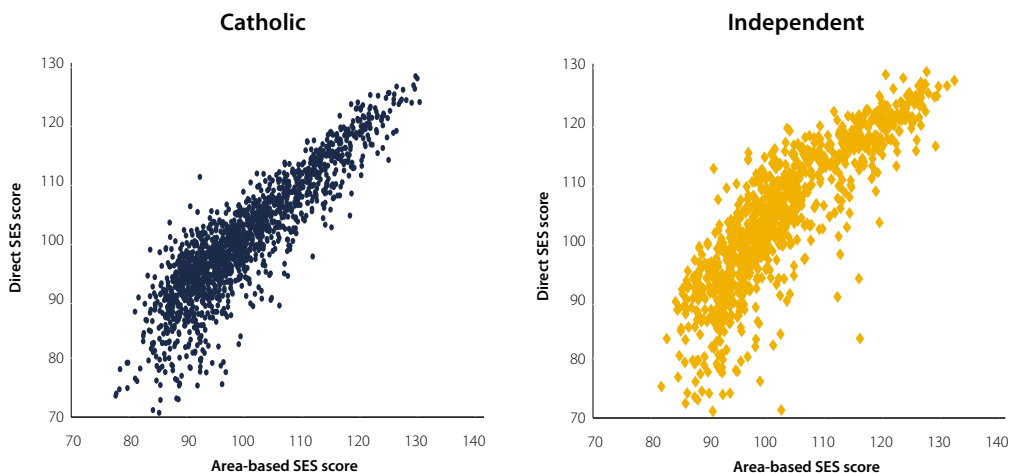
#### 4.4 At each SES score, there can be considerable variability and misclassification within sectors

To further test the validity of the current SES score method, analysis was undertaken to compare the school level SES scores constructed using area-based data with directly linked data. The current methodology was followed to create the direct SES score, except that direct household data of families with children attending each school was used. Again, as shown in Exhibit 11, the school level SES scores based on directly linked Census data are reasonably well-aligned with current area-based scores. Overall, the correlation between the scores is high at 0.87.

However, Exhibit 11 also illustrates two other important observations. Firstly, at each SES score, there is a spread in scores for both sectors, suggesting that the current methodology both overestimates and under-estimates scores in each sector. For example, at the current SES score of 100 (which in 2018 corresponds to \$9,201 of base funding for a primary student and \$10,280 for a secondary student), the direct measure scores vary between 90 (\$9,858 for a primary student and \$12,388 for a secondary student) and 114 (\$5,974 for a primary student and \$6,064 for a secondary student).

Secondly, overall, the direct SES scores for independent schools sit higher than the scores for Catholic schools.

**Exhibit 11. SES scores based on direct data are reasonably well-aligned with area-based SES scores but there are differences between and within both sectors**



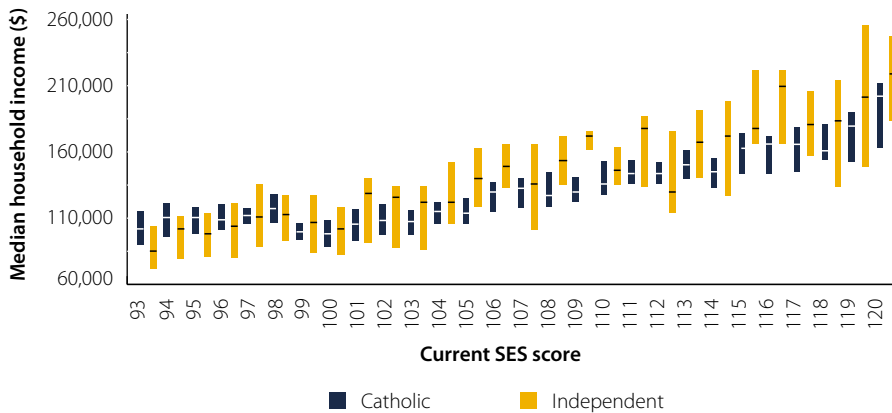
Source: Board analysis of 2016 Census data linked to student residential addresses through MADIP

#### Finding 4

While SES scores are reasonably well-aligned with direct measures, there are material differences at a school level within both the Catholic and independent school sectors.

There is also significant variability at each SES score when the current scores are compared with SES scores calculated using median household incomes derived from direct measures of income data. For example, Exhibit 12 shows the interquartile range of the median household income of schools by SES score and sector. The results illustrate two important observations. Firstly, at each SES score there is greater variability in household income between independent schools than Catholic schools. The spread of scores for independent schools suggest that the current SES scores are not a particularly accurate measure of the level of household income of students at the schools. It also suggests that the current methodology both over- and under-estimates scores in independent schools. Secondly, at each SES score, the median household income (denoted by the darker centre line) is lower for Catholic schools than independent schools at every SES score above 100, except 112.

**Exhibit 12. Median household incomes are more variable between independent schools**



Source: Board analysis of 2015–16 income tax data linked to student residential addresses through MADIP

## 4.5 The current area-based SES score measure has some strengths, but it has serious limitations that have a material impact on school funding

This chapter has shown that the current measure is inaccurate insofar as students who are different to those living nearby in terms of family income, parental education or parental occupation, are assumed to be the same under the current methodology. School SES scores calculated using the current method are reasonably well-aligned with income, education and occupation levels for households with children at schools. When using data only for households with children at a school (rather than for the entire area in which students reside), however, this chapter has also shown that the current area-based SES measure both over- and under-estimates school scores in each sector. Further, this chapter has shown that SES scores calculated using data only for households with children at a school (direct scores) are more likely to result in higher (than current) scores in the independent sector than in the Catholic sector.

The current method has been used for a long time. When introduced, it used the best, independent and trusted data available. Using Census data, however, means that scores can only be updated as regularly as the Census (every five years) and so the method is more stable than responsive to changes in school communities. In addition, the numerous steps involved in the calculation of scores for schools and the inclusion of education and occupation dimensions make the method difficult to explain.

The table below provides a summary of the Board’s analysis of the strengths and limitations of the current area-based SES score methodology.

**Exhibit 13. Assessment of the strengths and limitations of the current area-based SES score measure**

Approach	Representation of relative capacity to contribute	Other considerations (transparency, administrative burden, etc.)
Current area-based SES score measure	<b>STRENGTHS</b>	
	Provided a reasonable representation of income/capacity to contribute based on data available at the time this approach was established.	Uses independent and trusted data (ABS Census).  Manageable administration burden for schools.  Provides stability and certainty.
	<b>LIMITATIONS</b>	
	Is inaccurate because it assumes that the SES of all households in a given area is a good representation of the actual SES of parents and guardians with students in non-government schools.  School funding is influenced by the SES of households that do not have students at the school.  Does not measure wealth.	Not responsive to change in a school community.  Does not draw on best possible data.  Multiple steps in the calculation make it difficult to explain.  Uses variables (education and occupation) that are not relevant to the Board’s definition of capacity to contribute.  Based on Census data, is only updated five yearly and is therefore not responsive to change in a school community.

Based on Board analysis against nine design principles described in Chapter 2

# Chapter 5: Options to refine the current area-based approach

This chapter describes the options that the Board has considered to refine the current area-based approach using a more targeted population within Statistical Area 1s (SA1) and household income adjusted for family size.

It provides a rationale for consideration, measures explored, issues and limitations and potential impacts and concludes that the flaws with area-based measures cannot be overcome by refining the measure.

## 5.1 Refining the dimensions and using a more targeted population addresses some issues

The previous chapter showed that there are issues with the current socio-economic status (SES) score methodology's accuracy. These have an impact on both major non-government school sectors, but in different ways. In response, research was undertaken to test whether a more targeted Australian Bureau of Statistics (ABS) Census of Population and Housing (Census) dataset could be used by analysing data on non-government school parents and guardians only in an SA1, rather than all households in the area.

The Board also explored whether the variables included in a refined measure could be made more relevant to the Board's definition of capacity to contribute.

A number of submissions supported refining the current approach.

*'While there is a significant body of work underpinning the current SES methodology, it was developed 20 years ago. ISCA acknowledges that this Review presents an opportunity to undertake a revalidation of the current settings of the SES methodology to see if the measure can be further refined to produce even more accurate SES scores for non-government schools.' (Independent Schools Council of Australia submission, page 1)*

*'Though direct measures are preferable, improvements to the area SES index may be possible, to better reflect its purpose as a measure of capacity to contribute.' (National Catholic Education Commission submission, page 5)*

## 5.2 The accuracy of the measure can be improved by using confidentialised Census data about families that send their children to a non-government school

One issue that has inhibited the development of a more precise measure in the past has been the availability and reliability of small area data.

Again, advances in access to detailed data provide new opportunities to make a more precise measure of capacity to contribute. To explore the use of lower level Census data, the research team was granted access to Confidentialised Unit Record File data in the ABS DataLab, which is a secure environment for researchers from Commonwealth and state/territory government agencies and other Australian organisations, such as universities.

Using confidentialised unit record Census data allows for deeper analysis and potentially more accurate scores in two respects.

Firstly, it allows for a more 'targeted' population to be used in the calculation of school SES scores. That is, rather than basing the calculation on all persons in the area in which a student resides in:

- for Catholic schools, only the characteristics of parents and guardians of students attending Catholic schools in the SA1 where a student resides were used to calculate the school's score
- for independent schools, only the characteristics of parents and guardians of students attending 'other non-government' schools in the SA1 where a student resides were used to calculate the school's score.

Secondly, unlike publicly available small area Census data, the confidentialised data is not impacted by 'perturbation'. According to the ABS, perturbation is a technique that 'makes small adjustments to all counts—including totals—to prevent any identifiable data about individuals being released. These adjustments result in small introduced random errors and can mean that the rows and columns of a table do not sum to the displayed totals.'<sup>8</sup> For most users of Census data, perturbation has very little impact. It can present challenges though, when splitting small area level data into small sub-populations or categories, as is done in the current SES methodology.

#### **Finding 5**

Confidentialised Census data can be used to create a more targeted area-based measure of the parents and guardians of non-government school students.

### **5.3 The relevance of the measure can also be improved by removing the education and occupation variables**

A number of stakeholders questioned the continued relevance of the parental education and occupation dimensions of the SES measure in determining capacity to contribute. While submissions did not explicitly call for the education and occupation dimensions to be removed, a number of submissions proposed reevaluating the weightings or suggested alternative methodologies that did not include these dimensions. The Australian Association of Christian Schools suggested in its submission:

*'In light of the fact that disposable income is the main determinant of a parent's ability to afford fees we recommend changing the proportional weightings to 2/3 of Income and 1/3 for Education and Occupation. Or, if the objective of the SES score methodology is to measure the capacity of non-government school communities to contribute to the operating costs of their schools then Income should be the only measuring mechanism'. (The Australian Association of Christian Schools submission, page 2)*

The Association of Independent Schools in the Australian Capital Territory suggested in its submission that:

*'...greater granulation of income details on census collection and a model with greater weightings on income levels might be useful in determining more realistic SES scores.' (Association of Independent Schools in the Australian Capital Territory submission, page 5)*

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8 Australian Bureau of Statistics, '2900.0 - Census of Population and Housing: Understanding the Census and Census Data, Australia, 2016', viewed on 27 June 2018, <http://www.abs.gov.au/ausstats/abs@nsf/Lookup/by%20Subject/2900.0~2016~Main%20Features~Turning%20your%20information%20into%20Census%20data~3>.

The original rationale for including education and occupation variables was that they provided stability. To test the issue of stability, the Board engaged the National Centre for Social and Economic Modelling (NATSEM) to analyse the variability of income data at the small area level.

NATSEM analysed 10 years of income tax data at the Statistical Area 2 (SA2) level (the smallest level for which personal income tax data is publicly available). The results showed that for most areas, incomes remained relatively stable from year to year. In each time period investigated, almost 90 per cent of SA2s had income changes that were within the 95 per cent range of national income change.

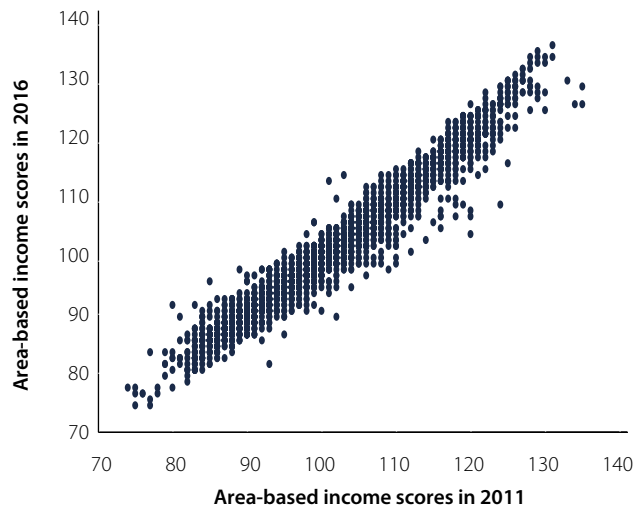
Those areas that experienced higher levels of variability were generally areas:

- with low populations
- experiencing structural change, such as gentrification and urban development
- dependent on specific industries, such as mining or agriculture
- that were exposed to a number of these factors.<sup>9</sup>

As shown in Exhibit 14, analysis of changes in school-level income dimension scores based on the current area-based methodology also show that there was very good alignment between the 2011 Census and 2016 Census, and reasonably high levels of stability.

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**Exhibit 14. Income dimension scores for schools are relatively stable over time**



Source: Board analysis of 2011 and 2016 Census data

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There is also a case for removing education and occupation variables on the basis that the socio-educational advantage (SEA) measure to calculate disadvantage loadings in the Schooling Resource Standard (SRS) also includes education and occupation dimensions.

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<sup>9</sup> Tanton, R. and Pell, D. (unpublished) *Stability of incomes for small geographies*, University of Canberra, Canberra.

When the SES score was first developed it was noted that:

*‘there should not be duplication or over-representation of particular socioeconomic variables, which may be addressed through other programmes. Following these tenets, a formula for a recurrent funding programme would seek to avoid duplicating specific aspects of educational disadvantage which are directly addressed in targeted programmes.’<sup>10</sup>*

Including education and occupation in both the SEA loading and SES score is in effect double-counting, as the two different components of the school funding model are designed to address different funding requirements.<sup>11</sup> This view was also supported by Catholic Education Tasmania in its submission to the Board:

*‘It could be argued that education and occupation data of parents is double counted and impacts funding disproportionately when compared with other measures of disadvantage.’ (Catholic Education Tasmania submission, page 3)*

### **Finding 6**

Education and occupation variables are no longer necessary to provide stability in the measure.

## **5.4 Adjusting income for family size provides a more accurate measure of capacity to contribute**

Many stakeholder submissions also mentioned family size as an issue that impacts capacity to contribute and suggested it be factored into the calculation in the future.

The Independent Schools Council of Australia argued that the appeals process adequately addresses this issue:

*‘In the Independent sector there are several orthodox Jewish schools who have appealed their SES scores in order to take into consideration a range of factors including family size. These schools have successfully had their SES score adjusted since the inception of the SES funding model in 2001. This would indicate that the existing mechanisms which are in place to address issues such as these are adequate for the small number of schools for which it might be relevant. It is ISCA’s view that while this issue could be examined further, the current SES appeal mechanisms have worked to address this specific issue to date.’ (Independent Schools Council of Australia submission, pages 12–13)*

While the appeals process may address the issue, there are other ways that this can be integrated into the measure to avoid the need for appeals. An ‘equivalised’ measure of household income was used in the refined approach explored by the Board. As defined by the ABS:

*‘Equivalised total household income is household income adjusted by the application of an equivalence scale to facilitate comparison of income levels between households of differing size and composition, reflecting that a larger household would normally need more income than a smaller household to achieve the same standard of living.’<sup>12</sup>*

10 Department of Education, Training and Youth Affairs (1998) *SES Simulation Project : validation report: a report on analyses to validate the outcomes of the Socioeconomic Status (SES) Simulation Project*, Canberra p.15

11 Centre for International Research on Education Systems (2017) *Socio-economic Status (SES) score methodology used in recurrent school funding arrangements—Research Paper*, Victoria University: Melbourne, p.30.

12 ABS cat. no. 2901.0 *Census of Population and Housing: Census Dictionary*, 2016

### Finding 7

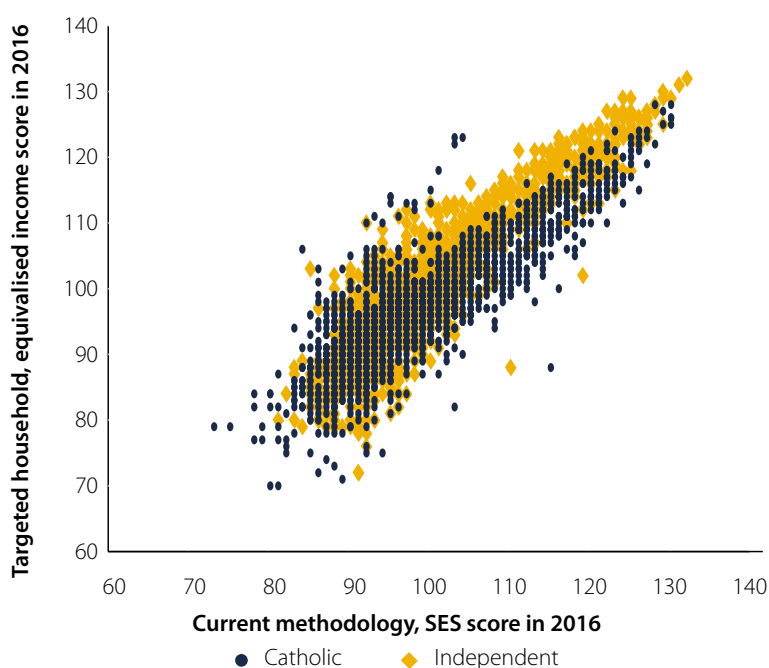
Taking family size into account would more accurately reflect the capacity to contribute of an individual family. Any future approach should take family size into account.

## 5.5 Using a more targeted population and refined variables leads to changes in scores and funding

Consistent with the current SES score methodology, principal components analysis was used to create new scores for schools using the targeted Census data on equivalised total household income. For comparative purposes, the scores for schools were standardised to a mean score of 100 and standard deviation of 11, which is similar to the current distribution of schools (see Section 3.1).

Overall, using targeted Census data (using data from only parents and guardians with children attending Catholic or other non-government schools) and equivalised total household income tends to result in higher scores for independent schools and lower scores for Catholic schools (see Exhibit 15).

**Exhibit 15. Comparison of 2016 SES scores and 2016 targeted household equivalised income scores**



Source: Board analysis of 2016 Census data

As noted in Chapter 1, a school's base funding level is discounted according to its SES score and the capacity to contribute percentage (see Exhibit 2). Currently:

- all schools at or below a score of 93 receive the maximum rate of base funding per student
- all schools at or above a score of 125 receive the minimum rate of base funding per student
- schools with a score between 93 and 125 receive different rates of base funding per student (as SES scores increase, the rate of base funding per student decreases).

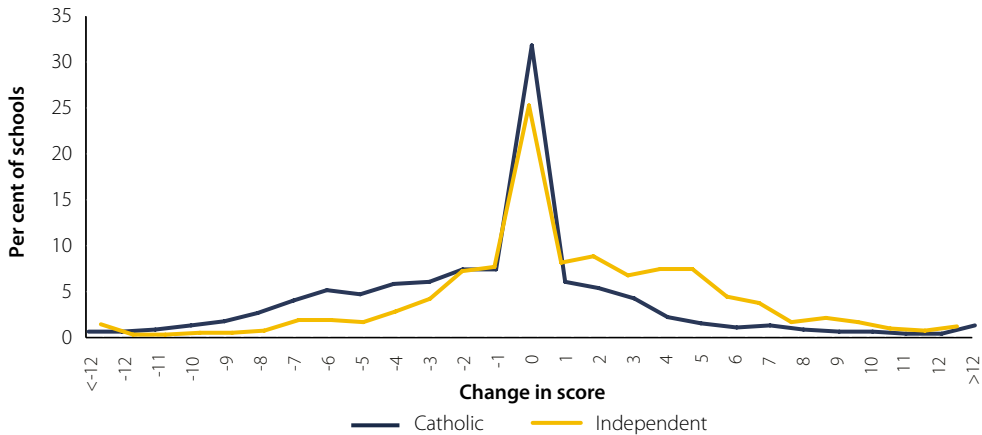
When looking at potential changes in SES scores, it is important to take into account whether a school's funding is likely to be impacted, as a change in SES score will not always result in a change in funding. Assuming the capacity to contribute percentages do not change, scores have been capped at 93 and 125 for calculating changes in score. For example, a school with a current score of 93 that moved to a score of 87 is considered not to have changed score for this analysis, as the change does not impact on funding. Similarly, a school with a current score of 125 that moved to a score of 130 is considered not to have changed score for this analysis. These changes are shown in Exhibit 16.

After capping scores it is estimated that under the refined area-based measure, the majority of non-government schools would have no change or a relatively small change in score.

- Approximately 29 per cent of non-government schools would have no change in score (of which approximately 20 per cent is due to capping)
- Approximately 37 per cent of non-government schools would have a change in score that affects funding of less than or equal to three score points.
- Approximately 15 per cent of non-government schools would have a change in score that affects funding of four to five score points.

Exhibit 16 also shows Catholic schools are more likely to receive a lower capacity to contribute score under a refined area-based SES measure and independent schools are more likely to have their score increase. However, there is still a significant percentage of schools in each sector that display the opposite trend.

**Exhibit 16. Under the refined approach, the majority of non-government schools would have no change or a relatively small change in score**



Source: Board analysis of 2016 Census data

Note: Change in score is based on the comparison between the targeted household equivalised income score and current SES score by sector, with schools that do not change subsidy category given a value of 0

If such a refined approach were adopted, both the Catholic and independent sectors would continue to receive significant funding increases assuming all other variables remain unchanged. Over the next decade, it is estimated that funding per student in both sectors would continue to see strong growth, well above inflation. Compared with the current funding model, in percentage terms there would be a relatively small reduction in funding for the independent sector and a comparable increase for the Catholic sector.

## 5.6 A refined area-based approach still has a number of limitations

Exhibit 17 provides a summary of the Board’s analysis of the strengths and limitations of a refined area-based methodology for calculating school community capacity to contribute. While a refined approach can potentially improve the accuracy and relevance of the measure, there are a number of limitations:

- A refinement of the current area-based measure only partially addresses the issues with accuracy across the sectors, as it would still be grouping parents and guardians of students at different schools together and averaging their characteristics.
- The ABS’s definition of Catholic and other non-government schools (based on religious affiliation only) could lead to misclassification for some schools.<sup>13</sup>
- As it continues to use Census data, it can only be updated every five years. While this provides stability for schools, it is not responsive to change.

13 When completing the Census people tend to report based on what they believe the religious affiliation of their child’s school is. However, for funding purposes Catholic schools that are not part of a system are considered to be independent non-government schools.

With these limitations in mind, the Board does not believe that a refined area-based approach will sufficiently address the shortcomings identified in the current SES score measure.

**Finding 8**

Flaws with the current area-based measure cannot be completely overcome with refinement.

**Exhibit 17. Assessment of the strengths and limitations of a refined area-based SES score measure**

Approach	Representation of relative capacity to contribute	Other considerations (transparency, administrative burden, etc.)
<b>Refined area-based approach</b>	<b>STRENGTHS</b>	
	<p>Improves accuracy as it only uses income data for parents and guardians whose children attend non-government schools (not the wider population) to arrive at an area average.</p> <p>Results in a better representation of non-government school parent income than the current measure.</p>	<p>Uses independent and trusted data (ABS Census).</p> <p>Manageable administration burden for schools.</p> <p>Provides stability and certainty.</p>
	<b>LIMITATIONS</b>	
	<p>Like the current methodology, still groups parents and guardians of students at different schools together in the calculation.</p> <p>School funding is influenced by the SES of households that do not have students at the school.</p> <p>Does not measure wealth.</p>	<p>Based on Census data, is only updated five yearly and is therefore not responsive to change in a school community.</p> <p>Does not draw on the best possible data.</p> <p>Multiple steps in the calculation make it difficult to explain.</p> <p>Data used is not publicly available.</p>

Based on Board analysis against nine design principles described in Chapter 2

## Chapter 6: Potential for direct measures

This chapter describes a new direct approach the Board has considered, using household income, and outlines the rationale for its consideration, measures explored, issues and limitations and potential impacts. Such a new approach is supported by the Board.

### 6.1 Direct measures are more accurate but some stakeholders are concerned about the potential complexity, privacy issues and reporting burden

Using the actual circumstances of families accessing non-government schools to measure capacity to contribute is more accurate and reliable than the current practice of identifying the average characteristics of the people and households residing in the same area. The *2011 Review of Funding for Schooling—Final Report* recognised this, stating:

*A more precise measure of the SES of a school would be more accurate and credible. This could take the form of a measure based on smaller areas, such as the mesh blocks which represent the smallest unit of the 2011 census, or alternatively, a direct measure of parental SES. The latter would need to be developed and tested on a school-by-school basis.<sup>14</sup>*

A number of submissions acknowledged the potential for using tax data for creating a more accurate measure but either opposed it or were cautious about its application due to issues around complexity, privacy and potential additional reporting burden. The submission from the Independent Schools Council of Australia noted:

*'While arguments have been made for the use of direct parental data, there is no evidence that direct parental data would be more accurate and there are significant negative impacts including administrative burden, volatility and ability to be manipulated' (Independent Schools Council of Australia submission, page 3).*

Further, the Australian Association of Christian Schools noted in their submission that:

*'AACS is cautious about the proposal that actual family income could readily be used as a more accurate measure of Capacity to Contribute. . . . questions remain regarding: the complexity of the model; administrative burden; privacy protections; complications that might result from the collection of tax file numbers; and public confidence in the model.' (Australian Association of Christian Schools submission, page 2)*

The Board acknowledged the concerns around privacy and administrative burden associated with schools collecting tax file numbers. In addition to these concerns, the *Taxation Administration Act 1953* has limited exemptions to allow for the direct collection of tax file numbers. The Board did not pursue this further.

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<sup>14</sup> Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., Tannock, P. (2011) *Review of Funding for Schooling—Final Report*, DEEWR, Canberra, p. 177.

Subject to future approvals, direct measures are still possible without the collection of tax file numbers, through the data linkage discussed in Chapter 4. There are robust mechanisms in place to protect privacy when linking data. In addition, the volatility associated with income data can be managed. Both of these issues are further discussed in subsequent sections.

A number of submissions from the independent sector also argued that data already collected on the education and occupation of parents and guardians for the calculation of the Index of Community Socio-Educational Advantage should not be used as an alternative data source. This is due to a lack of quality, and transparency, and the potential for manipulation of the data. It is also only a proxy and does not use income, which is the main measure of financial capacity to contribute.

## 6.2 While parental and guardian capacity to contribute is a function of their income and wealth, wealth is difficult to measure

As noted in Chapter 2, the Board believes the focus of a measure of capacity to contribute should be on the income and wealth of the parents and guardians.

The Board has used a total household income measure to explore the potential impact of moving to a direct measure of parent and guardian income. Using a total household income measure is consistent with the income measures used in the current area-based socio-economic status (SES) score measure.

The Board considers total income a better measure for determining capacity to contribute than available alternatives, such as taxable income. While taxable income is slightly lower than total income for most taxpayers due to deductions, these deductions can be very significant for some taxpayers.<sup>15</sup> As noted in a number of the submissions, using taxable income would benefit people who use tax minimisation strategies.

Further, the Board believes the total income measure should take family size into account, meaning an equivalised total household income measure (which takes account of the number of adults and children in a household) would be preferred.

The Board also considered the inclusion of household wealth in either a refined measure or a direct measure of capacity to contribute. The Board engaged the Centre for International Research on Education Systems at Victoria University to investigate the feasibility and potential impact of including measures or proxies for household wealth in a measure of capacity to contribute.<sup>16</sup>

Three household-level SES indexes were constructed using the Australian Bureau of Statistics (ABS) Survey of Income and Housing, 2015–16 and the ABS Census of Population and Housing (Census)—one without wealth, one with self-reported wealth and one with proxies of wealth—to examine whether including wealth measures or proxies impacted on a household’s SES score. The research showed:

- reported wealth, which takes into account financial assets, housing assets and borrowings, did impact the household SES scores

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15 Ey, C. (2015) *How much income tax do we really pay? An analysis of 2011–12 individual income tax data*, Parliamentary Library Research Paper Series, 2014–15, Australian Government: Canberra, p. 7.

16 Wade, A. (to be published in July 2018) *The potential for including household wealth in a measure of capacity to contribute*, Victoria University: Melbourne.

- the proxies for wealth, which included housing tenure type, dwelling structure (number of bedrooms/bathrooms) and number of cars, did not impact the household SES scores.

The Board does not believe household wealth can be included in a measure of capacity to contribute, at this stage, despite these findings for reported household wealth. Reported wealth data is only available for survey respondents, meaning that, currently, there is no population-wide data on reported household wealth, and the proxies for wealth do not have an impact on household SES scores. However, it may be possible for Government to consider household wealth in the future with continued advancements in data availability.

The Catholic Education Commission of Victoria argued in their submission that household wealth is important, but acknowledged that it is difficult to measure:

*'Ideally, the means test of families would be as accurate as possible in measuring the financial means of families to fund the education of each of their children. It should include both family income and family wealth, and take into account family size. However, CECV recognises that there are a number of challenges in implementing the ideal measure.'* (Catholic Education Commission of Victoria submission, pages 20–21)

### **Finding 9**

Household wealth cannot currently be included in a measure of capacity to contribute, but could be considered for inclusion in future if suitable and reliable direct data become available.

The inability to assess household wealth does mean that a direct income-only measure of capacity to contribute for schools with students from wealthy families will potentially understate some school communities' capacity to contribute. The size of this inaccuracy cannot be established reliably.

## **6.3 Direct measures can be updated more frequently**

A number of submissions suggested that Census data, collected every five years, is not updated regularly enough to reflect the pace of change in the circumstances of a school community. Others argued that stability should be prioritised over more regular updates and that the availability of Census data every five years provided a good balance between currency of data and stability.

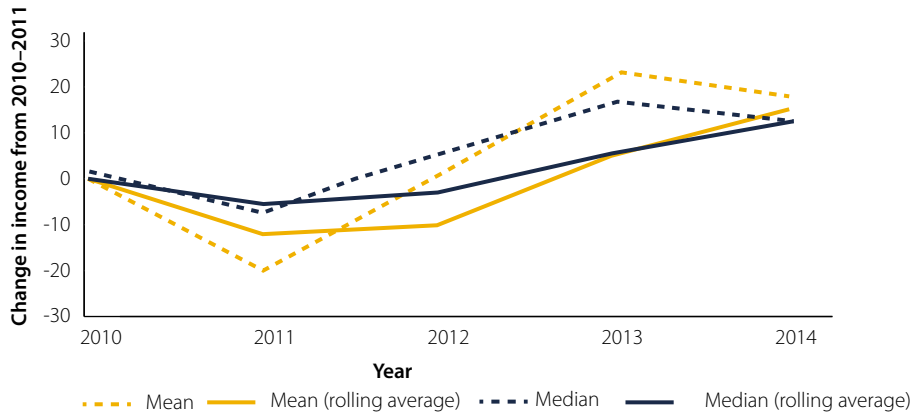
Research undertaken for the Board by the National Centre for Social and Economic Modelling at the University of Canberra showed there are methods for stabilising income data over years, which could make an income measure both responsive and stable.

As shown in Exhibit 18, using income data for the Esperance region (a Statistical Area 2 (SA2)) as an example, median incomes provide more stability than mean household incomes. A rolling average over three or more years (which drops off the oldest data when more recent data is added) further reduces year-on-year variability, while still reflecting changes in income over time.

This can be done because income tax data is collected annually. The stability provided by a rolling average of median income also means that the education and occupation dimensions that are included

in the current area-based SES measure are not needed to provide stability in a direct measure of household income.

**Exhibit 18. A rolling average of median income can provide a stable yet responsive measure**



Source: Tanton, R. and Pell, D. (unpublished) Stability of incomes for small geographies

Note: This exhibit shows change in income from 2010–11 in Esperance Region SA2 as an example

The Board supports the use of a rolling average of median income as it means change is gradually reflected in the measure, which would allow schools time to respond to changed circumstances within their school community.

If a direct measure were to be implemented, three years of income data would be required at a minimum to provide stability. Assuming the student residential address collection takes place in 2018, an additional year of collection and validation in 2019 would provide the required three years of linked income data, meaning a stable direct median income measure could be implemented from 2020.

**Finding 10**

A minimum additional year of data collection and validation will be required in order to enhance stability of a direct income measure.

## 6.4 Using a direct measure of household income will result in changes in scores and funding

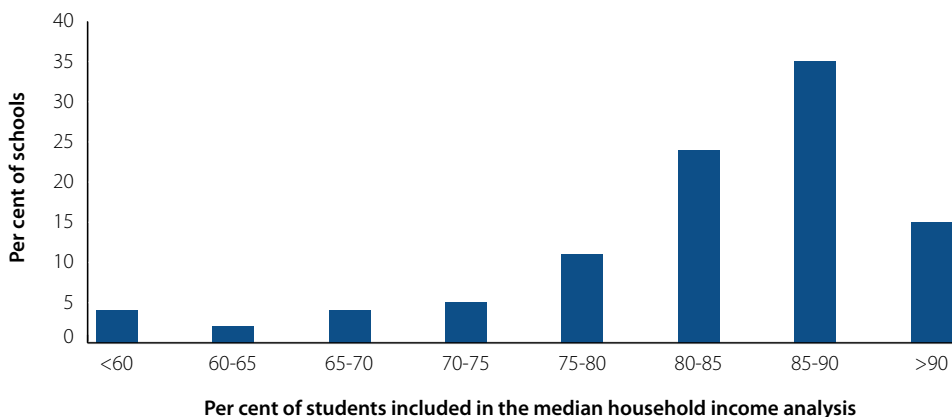
The Board looked at the median total household income of schools to test the potential impact of moving to a direct measure of parental income. As the data linkage is based on student address only, some exclusions had to be applied to calculate the household income if multiple families were associated with an address.<sup>17</sup>

After exclusions were applied, 86 per cent of students were included in the analysis. The majority of schools had more than 80 per cent of students included in their calculation. This is a solid basis for analysing the potential impact on schools (see Exhibit 19). Collection of name information for parents and guardians would further improve the accuracy of the linkage, and should be considered, if a direct measure is implemented in the future. Privacy considerations when supplying parent/guardian names are discussed further in section 8.2. The Board hopes the non-government school sectors will see value in improving the accuracy of the data available.

### Finding 11

In order to increase the accuracy of a direct income measure, parent and guardian names should also be collected annually.

**Exhibit 19. Most schools still have high linkage rates after filtering addresses with multiple families**



Source: Board analysis of 2015–16 income tax data linked to student residential addresses through MADIP

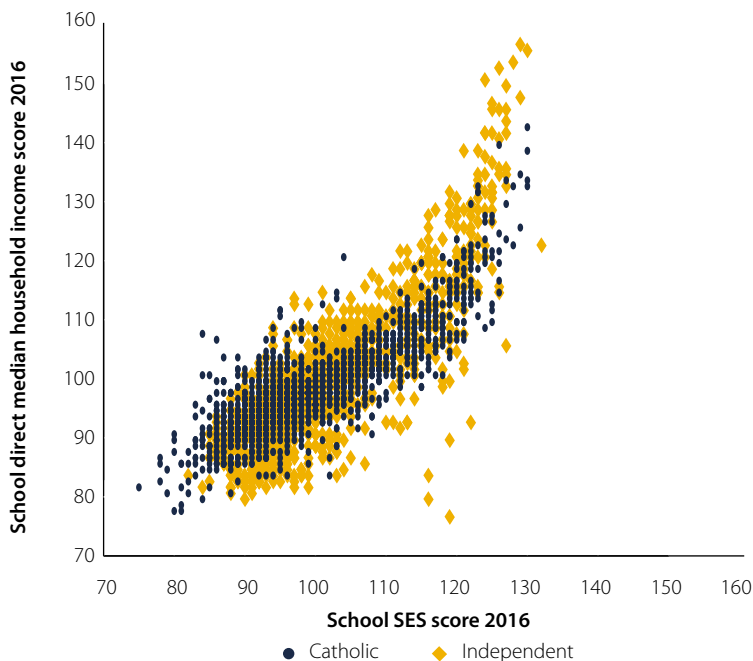
<sup>17</sup> These were largely identified by using family IDs from the 2016 Census data

After median total household income was calculated for each school, values were standardised to a mean score of 100 and a standard deviation of 11 to facilitate comparisons with the current SES score. Consistent with the discussion in section 4.4, there is again a reasonably good alignment between the direct median household income score and the current area-based SES score (see Exhibit 20).

However, as with the comparisons between the area-based SES scores and direct SES scores (Exhibit 11), and the area-based SES scores and targeted household equivalised income scores (Exhibit 15), some similar trends appear. In particular:

- there is substantial variation within both the Catholic and independent sectors at each SES score
- on average, independent school scores tend to increase, while Catholic school scores tend to decrease.

**Exhibit 20. Comparison of 2016 area-based SES scores and 2015–16 direct median household income scores**



Source: Board analysis of 2015–16 income tax data linked to student residential addresses through MADIP

Note: the cluster of five independent schools with a 2016 SES score of around 115-120 and a direct median household income score of 80-90 are schools that have successfully appealed their SES scores. For these schools, the direct median income score is closely aligned with their appeal score.

As noted in Chapter 1, a school’s base funding level is discounted according to its SES score and the capacity to contribute percentage (see Exhibit 2). Currently:

- all schools at or below a score of 93 receive the maximum rate of base funding per student

- all schools at or above a score of 125 receive the minimum rate of base funding per student
- schools with a score between 93 and 125 receive different rates of base funding per student (as SES scores increase, the rate of base funding per student decreases).

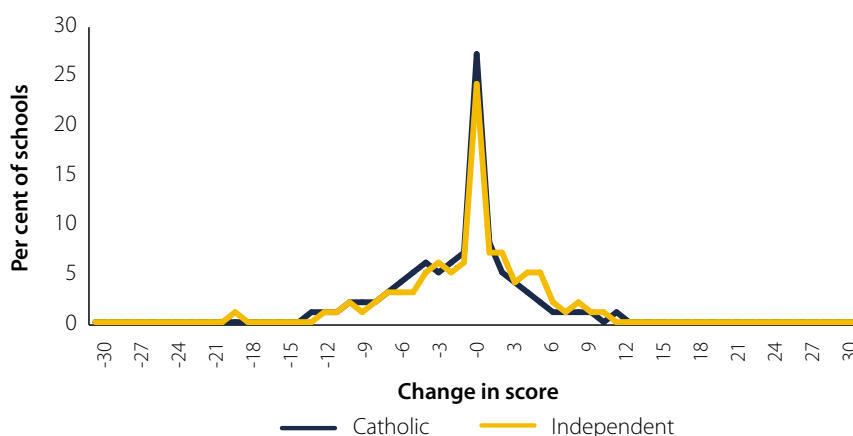
When looking at potential changes in SES scores, it is important to take into account whether a school's funding is likely to be impacted, as a change in SES score will not always result in a change in funding. Assuming the capacity to contribute percentages do not change, scores have been capped at 93 and 125 for calculating changes in score. For example, a school with a current score of 93 that moved to a score of 87 is considered not to have changed score for this analysis, as the change does not impact on funding. Similarly, a school with a current score of 125 that moved to a score of 130 is considered not to have changed score for this analysis. These changes are shown in Exhibit 21.

After capping scores, it is estimated that under the direct household measure, the majority of non-government schools would have no change or a relatively small change in score.

- Approximately 26 per cent of non-government schools would have no change in score (of which approximately 19 per cent is due to capping)
- Approximately 35 per cent of non-government schools would have a change in score that affects funding of less than or equal to three score points.
- Approximately 17 per cent of non-government schools would have a change in score that affects funding of four to five score points.

Exhibit 21 also shows Catholic schools are more likely to receive a lower capacity to contribute score and independent schools are more likely to have an increased score. However, there is still a significant percentage of schools in both sectors that display the opposite trend.

**Exhibit 21. Under a direct approach, the majority of non-government schools would have no change or a relatively small change in score**



Source: Board analysis of 2015–16 income tax data linked to student residential addresses through MADIP

Note: Change in score based on comparison of the median household income score and current SES score by sector, with schools that do not change subsidy category given a value of 0.

Preliminary modelling of the potential financial impact of using a direct household income approach indicates that nationally, both the Catholic and independent sectors would continue to receive significant funding increases, well above inflation, assuming all other variables remain unchanged. Compared with the current funding model, in percentage terms there would be a relatively small reduction in funding for the independent sector and a comparable increase for the Catholic sector. The growth rate in funding would be similar for each sector.

As described in Chapter 8, should this approach be adopted, a range of additional work is required to further develop it. This will impact the overall cost to government and the potential impact on individual schools and systems.

## 6.5 A direct measure of parental income is currently the most fit-for-purpose, transparent, and reliable approach

Based on the Board's view of what a good measure should do, using data that is directly linked to a student's household provides a more accurate and valid way to measure the capacity to contribute of a non-government school community than the current SES score measure. It increases accuracy by reflecting the actual circumstances of families accessing individual schools, thus addressing concerns with the current methodology around using data on all households in the area where a student resides. A direct measure could also provide a balance between stability and responsiveness through a rolling average of data if income data can be linked to addresses annually.

Subject to approval for use in this way, a direct measure would also use independent, established, high-quality and trusted linked data, thus minimising administrative burden and ensuring public confidence. This also negates any need for tax file numbers of parents and guardians to be collected. A direct measure is conceptually much clearer than the current area-based measure, making it easier to explain than the use of proxy measures such as parents' and guardians' education and occupation.

The Board believes this Review has provided sufficient evidence to demonstrate the substantial improvements of a move to a direct measure, with appropriate mechanisms to support stability, ensure privacy is maintained and administrative burden is minimised.

The modelling and analysis commissioned by the Board demonstrates that using linked personal income tax data and student residential address data is the best method for accurately measuring capacity to contribute.

The changes in score that the move to a direct measure of income would involve are the result of significant improvements in the accuracy of the measure, better reflecting the intention for school funding to be needs-based.

### **Finding 12**

The empirical evidence presented in this report provides a strong rationale for the Australian Government to move towards a direct measure of parent and guardian income.

**RECOMMENDATION 2**

**The capacity to contribute for a school be determined based on a direct measure of median income of parents and guardians of the students at the school.**

The table below provides a summary of the Board’s analysis of the strengths and limitations of a direct measure of parental income for calculating school community capacity to contribute.

**Exhibit 22. Assessment of the strengths and limitations of a direct measure of parental income**

Approach	Representation of relative capacity to contribute	Other considerations (transparency, administrative burden, etc.)
Direct measure of parental income	<b>STRENGTHS</b>	
	Closest possible representation of parental income based on the best available data.  School funding is directly influenced by the income of parents and guardians of students attending the school.	Can be updated regularly to be responsive, and a rolling average can be used to reduce volatility.  Leverages existing datasets.  Uses independent, established, high quality and trusted data.
	<b>LIMITATIONS</b>	
	Does not measure wealth.	Requires additional (annual) student residential address collections, therefore requiring some increase in administration.  Data used is not publicly available.

Based on Board analysis against nine design principles described in Chapter 2

# Chapter 7: Consideration of school resources

This chapter discusses the potential consideration of school wealth and resources, such as fees and total private income, in assessing a school community's capacity to contribute. It sets out the views of a number of stakeholders and a range of issues and limitations.

## 7.1 School wealth cannot be meaningfully compared between schools

While a number of submissions from stakeholders considered that the capacity to contribute measure should take school resources into account, only a small number of submissions suggested that this should include school wealth.

For example, the Australian Education Union in its submission to the Board suggests that:

*'the income and assets of private schools should be derived from the school financial questionnaire data submitted to the Department of Education and Training and, if necessary, annual reports filed with the Australian Charities and Not for-profits Commission.'* (Australian Education Union submission, page 10)

The *2011 Review of Funding for Schooling—Final Report* noted that linking recurrent funding to school assets is problematic.<sup>18</sup> Land and buildings constitute the main assets of most non-government schools, and their value depends largely on the location of the school. This will often reflect historical, rather than current circumstances. In some cases, land on which schools operate is not owned by the school in freehold title. Schools cannot easily access income from land and buildings, and in fact generally need to expend income to maintain them. Cash reserves vary greatly between schools, reflecting different management structures and business decisions.

The *2011 Review of Funding for Schooling—Final Report* also concluded that data on school assets would be difficult to collect and verify.<sup>19</sup> Research undertaken for the Board by the Centre for International Research on Education Systems suggests it would not be possible, at present, to estimate school wealth in terms of net financial assets.<sup>20</sup> This is because there are limitations to the Financial Questionnaire for Non-Government Schools data collected by the Australian Government. For example, balance sheet items (assets and liabilities) are not reported at the school level for around 1,600 schools (approximately half the non-government sector), including the majority of Catholic schools. Additionally, the balance sheet is for the 'parent entity', which may have a wider scope than the school and include related entities such as early childhood or aged care facilities. Linking per-student base funding to the financial questionnaire data would also incentivise schools and system authorities to seek to minimise their reported assets in order to maximise public funding.

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18 Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., Tannock, P. (2011) *Review of Funding for Schooling—Final Report*, DEEWR, Canberra, p. 78.

19 Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., Tannock, P. (2011) *Review of Funding for Schooling—Final Report*, DEEWR, Canberra, p. 78.

20 Wade, A. (to be published in July 2018) *The potential for including school income and wealth in a measure of capacity to contribute*, Victoria University: Melbourne.

Apart from these challenges in measurement, the assets a school possesses may not reliably indicate the parents' or guardians' capacity to contribute to the costs of their children's education. It is often the case that new school capital facilities like swimming pools, drama centres and new classrooms or laboratories are funded by a relatively small proportion of the school community, with a large proportion not doing so. Successful capital fundraising campaigns are often the result of a small number of parents and supporters contributing most of the funds for these facilities. The presence of the facilities bears little relationship to many parents' capacity to contribute to their child's education.

In light of these limitations, none of the Catholic or independent sector stakeholders suggested that school assets be taken into account in the calculation of capacity to contribute to the operational costs of schools.

## 7.2 Some stakeholders have suggested using school income (fee income or total private income) in a capacity to contribute measure

Submissions by some stakeholders, particularly (but not confined to) peak bodies in the Catholic sector, argued that school income should be taken into account when assessing the capacity of a school community to contribute to the school's operating costs. The majority of these submissions focussed on school fees or total private income (i.e. income from fees, charges and parental contributions and other non-government sources) per student.

These stakeholders also typically argued that funding arrangements should, among other things, support parental choice to send their children to low-fee non-government schools as a way to support diversity within individual schools. These stakeholders expressed concern that an area-based assessment of capacity of parents and guardians to contribute would make low-moderate fee schools located in high SES areas financially unviable due to the low level of public funding they would receive.

The National Catholic Education Commission argued in its submission to the Board:

*'High fee expectations associated with high area-average SES scores assume low levels of need in the entire school community. To the extent that schools aim to be accessible to families with SES scores below their area average, the funding model can restrict the ability of non-government systems to deliver 'parental choice and diversity in the schooling system.'* (National Catholic Education Commission submission, page 3)

Similarly, the Catholic Education Commission of Victoria's submission argued:

*'Current arrangements undermine school choice and diversity. They make low-fee, inclusive non-government schools unviable in many communities. They imply that middle income and high income families should not be able to attend low-fee, inclusive non-government schools.'* (Catholic Education Commission of Victoria submission, page 3)

In the consultation process, the National Catholic Education Commission argued for a measure which included school private income and was constructed to provide additional funding to low-fee schools in high SES areas. These schools' low fees would deem their parents and guardians to have a low capacity to contribute. The inclusion of fees, along with a direct parental income measure, would thus result in a reduced base funding discount.

A number of these stakeholders also raised concerns that some schools receive a relatively high base Schooling Resource Standard (SRS) rate, due to a low SES score, despite charging fees that exceed the SRS.

If school resources were to be included, total private income would be preferable to fees because the use of the latter could lead to schools changing the way they classify revenues or levy charges similar to problems identified with the Education Resources Index funding model. School fees are the main source of private income for many non-government schools, on average accounting for 83 per cent of total private income.<sup>21</sup>

In order to consider the approaches proposed by some stakeholders, the Board modelled the effects of incorporating a fee and/or school total private income element in the capacity to contribute measure. This modelling indicated that such an approach would result in a transfer of funds largely from independent schools to schools in the Catholic systems, in particular to low-fee Catholic primary schools in wealthier areas.

For the reasons set out below, the Board does not support this approach.

### **7.3 School fees or total private income should not be included in a measure as they are not a reliable indicator of capacity to contribute**

The *2011 Review of Funding for Schooling—Final Report* found that there were two ways to think about capacity: anticipated capacity and demonstrated capacity.

- Anticipated capacity is the income and wealth parents and a school community have available to contribute towards the cost of schooling through fees and other private assistance.
- Demonstrated capacity is the actual extent to which they do so, which may reflect the extent to which they are asked to contribute by schools or are willing to contribute.<sup>22</sup>

Consistent with the findings of the *2011 Review of Funding for Schooling—Final Report*, the Board's view is that capacity to contribute should continue to assess anticipated capacity of parents and guardians to make a financial contribution rather than the extent to which they do so or have done so in the past.

In particular, the *2011 Review of Funding for Schooling—Final Report* noted that a measure of anticipated capacity:

- provides a fairer, more consistent and transparent basis for funding the different types of non-government schools to which parents can choose to send their children

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<sup>21</sup> Based on 2016 My School data.

<sup>22</sup> Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., Tannock, P. (2011) *Review of Funding for Schooling—Final Report*, DEEWR, Canberra, p. 75.

- provides stronger incentives for private investment by parents and others (whereas linking public funding to the actual private contribution would distort these incentives)
- is simpler and less intrusive for schools and governments to administer than a model based on actual contributions given that different schools finance their recurrent and capital needs in very different ways
- involves a more comprehensive and objective sense of a school's need for public assistance than actual recurrent fees and charges, which are not always an indicator of need as schools operate in different ways, with some relying on other sources of private income, for example, donations and levies, for a mix of capital and recurrent purposes.<sup>23</sup>

In the Board's view, there are clear and obvious reasons why fees or a school's total private income should not be taken into account when assessing a school community's capacity to contribute.

While high fees may, in many cases, be taken to indicate a high capacity to contribute, low fees may have absolutely no connection to parents' and guardians' capacity to contribute. Many well-off parents and guardians in high SES areas choose to send their children to low-fee non-government schools or government schools. The fee level in those schools is not a reliable indicator of the parents' and guardians' capacity to contribute.

Take, as an example, two reasonably wealthy, neighbouring families with identical incomes. Family A chooses to send their child to a school that charges low fees (say, \$2,000 per student per year) while Family B chooses to send their child to a school that charges relatively high fees (say, \$20,000 per student per year). In this example, Family A cannot be said to have a lower capacity to contribute to the costs of their child's education based on the level of fees they are paying. The difference in fees paid (and in school resourcing) is driven by the choices of the individual schools and parents and guardians rather than capacity to contribute.

This point is illustrated in Exhibit 23, which shows the correlation between household income and fees. There is a reasonably strong positive correlation between fees and household income amongst independent schools (the high correlation suggests there is little need to include fees in any measure, as this would essentially double count the capacity of parents and guardians to contribute to the costs of education).

For Catholic schools (and particularly Catholic primary schools), the level of fees is a very poor indicator of household income. That is, fee levels tend to be far lower in schools with higher household incomes in the Catholic sector than for independent schools. For example, as the Exhibit shows, where fees are \$3000 per annum, the median income of parents at a school could be anything between \$50,000 and \$300,000 annually. The fee level simply does not indicate capacity to contribute.

The Board acknowledges that concerns have been raised about schools that charge very high fees and currently receive more than the minimum government contribution.

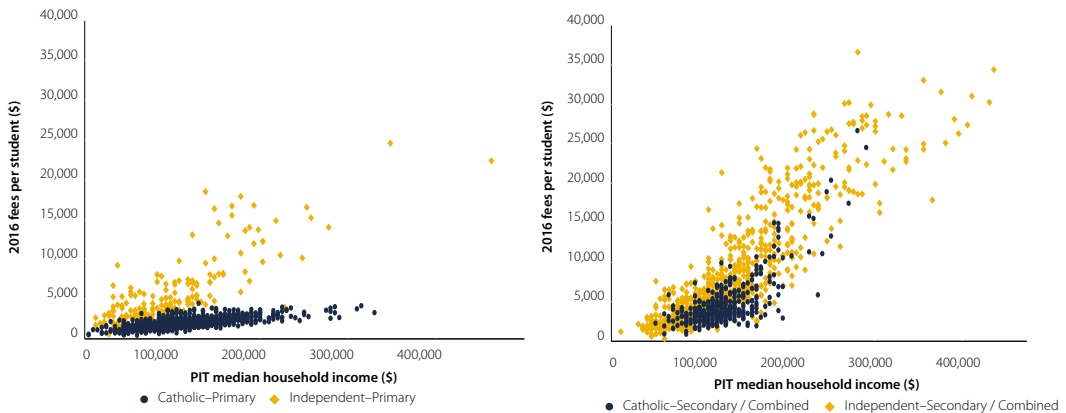
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<sup>23</sup> Gonski, D., Boston, K., Greiner, K., Lawrence, C., Scales, B., Tannock, P. (2011) *Review of Funding for Schooling—Final Report*, DEEWR, Canberra, pp. 78-79.

According to the Board’s analysis, out of 2600 non-government schools nationally that have an SES score, there are 41 schools that had average fees above \$25,000 per student per annum in 2016. Of these 41 schools, 26 received above the minimum public contribution to the per-student base amount. If a direct measure of income were used, with no adjustment for a school’s total private income, it is estimated that only a handful of these schools would continue to be funded above the minimum public contribution.

There may be individual circumstances affecting these schools that are not fully reflected in the current data and the Government may wish to further consider these circumstances in the determination of school funding settings outside the capacity to contribute calculation.

**Exhibit 23. School fees do not reflect median household incomes for schools**



Source: Board analysis of 2016 My School data and 2015-16 income tax data linked through MADIP

The use of fees or a school’s total private income in a direct measure would make little difference to many high-fee schools’ funding levels, because most are already funded at or near the minimum level. A negative effect would be felt by moderate fee (predominantly independent) schools. Low-fee Catholic schools in wealthier areas would receive a benefit. This is over and above the benefit of moving to a direct measure (which would account for families with lower capacity to contribute in high SES areas attending these schools).

This outcome would assist Catholic systems in their efforts to maintain low-fee options in all areas regardless of the financial capacity to contribute of the families they service, a philosophy which they have consistently maintained and promoted (see Box 3).

Such an outcome would, however, not be consistent with the fundamental Commonwealth principle of distributing funds to schools and school systems on a needs basis.

For all these reasons, the Board (with the exception of Professor Craven) does not support the inclusion of fees or a school's total private income. Apart from the obvious flaw in such a measure, an overriding consideration is that it is not necessary. Proxy measures like fees are only useful if more accurate measures are not available. The availability of new direct income measures, discussed in detail in Chapter 6, now renders unnecessary the addition of such proxy measures.

While the terms of reference do not explicitly mention public confidence, the Board agrees that public confidence is important in the distribution of school funding. The Board believes that this can only be gained (and maintained) if there is confidence in the accuracy, transparency and reliability of the measure used. The use of a flawed proxy such as fees, or total private income, would reduce the accuracy of the direct measure, make it less transparent, undermine its fitness for purpose and diminish public confidence in it.

### **Box 3. The issue of low-fee Catholic schools**

Submissions from peak bodies in the Catholic sector have expressed strong views that all Australians should have the option of sending their children to low-fee non-government schools. This includes children from families with higher means. They argue that this would support diversity within schools and would be consistent with a philosophy they term a 'preferential option for the poor'.

Historically, as illustrated in Exhibit 23, fees in Catholic schools, and in particular Catholic primary schools, have been set at lower levels than in independent schools that service similar communities and there has been considerably less variation in fees between Catholic schools in low and high socio-economic status (SES) areas than there has been in independent schools.

This has been possible without significant redistribution between member schools because under previous arrangements, a system could apply a system-weighted average SES score across its member schools for the purposes of calculating Australian Government funding entitlements. This had the effect of averaging the assessment of need across schools.

The 2017 amendments to the *Australian Education Act 2013* (the Act) moved from using system-weighted averaging to a more transparent assessment of individual school needs in the calculation of funding.

Catholic primary schools in higher SES areas will now attract a lower funding entitlement to their system than they would have attracted using a system-weighted average SES score. In contrast, Catholic primary schools in lower SES areas will now attract a higher funding entitlement to their system than they would have attracted using a system-weighted average SES score. This is the case whether the existing (or modified) SES system or a direct income measurement system applies. These stakeholders have argued this would threaten the financial viability of high SES schools unless it were corrected through consideration of school fees or total private income in the determination of the capacity to contribute measure.

While a number of submissions advocated for the reinstatement of the system-weighted average approach to SES scores, the Board was asked to consider the SES methodology as a measure of a school's capacity to contribute. The system-weighted average, however, distorts the measure at an individual school level and was therefore not considered as part of this Review. Reinstatement of system-weighted average scores is something that could be considered by Government.

The Board notes that, in any event, with the use of a direct income measure, if certain schools in moderate to high SES areas attract students from lower-income families, and thus have a lower potential to raise funds through fees and other private income, this would be reflected in the direct measure of household income and result in a higher level of government funding.

It remains the case today that systems receive their Commonwealth funds in a lump sum. Under Section 78 of the Act, approved system authorities can distribute their funds in accordance with their own view of 'need'. As long as such distribution were in accordance with subsection 78(5) of the Act, this would allow them to satisfy their objective of providing a low-fee non-government school option across the community.

### Finding 13

School total private income (including fees) and school wealth should not form part of a capacity to contribute measure. Professor Craven dissented from this finding.

Professor Craven strongly endorses the Board's recommendation that capacity to contribute for a school's community be determined based on a direct measure of median income of parents and guardians of the students at the school. Professor Craven dissents, however, from the Board's view that a measure of a school's total private income or fees should not be included in an improved measure of capacity to contribute. This dissent is based on the belief that inclusion of fees (through consideration of total private income) is necessary to secure a sufficient degree of public confidence in a measure of capacity to contribute. Professor Craven's dissenting view is in Appendix F.

The table below provides a summary of the Board's analysis of the strengths and limitations of including a measure of school resources in a measure of school community capacity to contribute.

#### **Exhibit 24. Assessment of the strengths and limitations of a measure of school resources**

<b>Approach</b>	<b>Representation of relative capacity to contribute</b>	<b>Other considerations (transparency, administrative burden, etc.)</b>
<b>A measure of school resources (total private income)</b>	<b>STRENGTHS</b>	
	Uses existing data collections.	Calculation and data can be clearly explained.
	<b>LIMITATIONS</b>	
	Fees or school total private income do not accurately measure capacity to contribute, particularly in low-fee situations.  School wealth cannot be measured consistently across schools and sectors.	Does not draw on the best available data.  Is unnecessary if a direct income measure is adopted.  Creates disincentives for private investment.  In the past, it has led to schools changing their financial structures to maximise their funding outcomes.

Based on Board analysis against nine design principles described in Chapter 2

# Chapter 8: Next steps

## 8.1 Further consultation and development work are required before a direct measure can be implemented

As discussed in Chapter 6, the Board recommends that the capacity to contribute for a school be determined based on a direct measure of personal income of parents and guardians of the students at the school.

The Board acknowledges that this is significant reform and it is the Board's view that full implementation of a new direct measure could not occur before 2020. This would allow time for further consultation with the sectors and experts about the details of implementation. This is consistent with the approach that was undertaken before the introduction of the socio-economic status (SES) score.

While the Board undertook a public submission and targeted consultation processes to inform its report, it acknowledges that there are a range of policy considerations and implementation issues that will need to be considered and worked through in order to define and implement the measure.

To date, the Board's research and modelling of a direct measure has been underpinned by linked datasets (personal income tax, Australian Bureau of Statistics Census of Population and Housing and student residential addresses) available through the Multi-Agency Data Integration Project (MADIP). Further modelling and analysis will be needed to define and determine precisely how a direct measure will operate in practice and how it will impact individual schools. This is particularly important for independent schools that do not belong to a system, as highlighted in the submission from Independent Schools Queensland:

*'As the current funding policy permits school systems to reallocate Australian Government recurrent grants to their schools, any changes to the methodology will likely impact most directly on non-systemic independent schools. It is imperative therefore that any changes be thoroughly validated - as occurred with the original development of the SES methodology - and that appropriate transitional arrangements are put into place.'* (Independent Schools Queensland submission, page 2)

While the analysis undertaken so far indicates the data linkage rates using MADIP are high (above 80 per cent for most schools), additional work is required to establish appropriate ways to minimise missing data. Where income tax data is not available, for example, this might involve identifying alternative data sources to supplement the income tax data (such as potentially introducing family tax benefit or low-income concession card holders into the dataset). While this information was not available for the Board's analysis, with the approval of the MADIP Board it may be available in the MADIP for future analysis.

The Board's analysis of a direct measure based on personal income tax data has not included family size in its calculations. Additional work through consultations is required to investigate how family size can be incorporated into a direct measure. Adjusting income for family size would provide a more accurate measure of capacity to contribute. Alternatively, the family size issue could continue to be addressed through the appeals process.

The Board has recommended that median income of parents and guardians of the students at the school be used when determining capacity to contribute but other options could be considered. One suggestion was an adjusted funding amount could be calculated for each student based on parental income, and an aggregate of those amounts could then be used to determine a school funding entitlement. This approach could be explored during the next stage of the process, although it may have negative implications for privacy and also for accuracy in the context of the work required to establish appropriate ways to minimise missing data discussed above.

How the measure will be applied to the schools funding model also requires further consideration. Some stakeholder submissions suggested changes to the capacity to contribute discount rates, and the maximum and minimum public contribution. The Catholic Education Commission of Victoria stated:

*'CECV supports retention of the existing, maximum level of base funding (90%) in determining their capacity to contribute in a non-government school (excluding schools that are fully funded). This would mean that (most) non-government schools are not funded to the same level as government schools.*

*However, the minimum funding rate (currently 20% of base funding) might be reconsidered. The rate of 20% was only recommended by the Gonski Review panel to ensure 'no school would lose a dollar' at the onset of the SRS model. This could be reduced if necessary. Catholic education does not consider this rate should be zero. One reason is that Government requirements for schools to participate in national testing and data collections (e.g. NAPLAN and the ACARA MySchool data collections) impose compliance costs on schools – so they should be compensated for this.' (Catholic Education Commission of Victoria submission, page 21)*

As noted in the Introduction, the Board focussed on the accuracy, reliability and fitness-for-purpose of the measure and the Board believes the levels of funding schools attract is essentially a policy decision. In applying a new measure, further modelling and analysis will be needed to determine whether the primary and secondary capacity to contribute percentages require any adjustments. Transition to a direct measure will also require further consideration and modelling.

The current SES score methodology is a relative measure of SES. The alternative approaches explored in this report have also been constructed as relative measures. This means that the scores have been standardised to have a mean of 100 and a standard deviation of 11 so the distribution of scores is similar regardless of the actual scores calculated at an individual school level. This is important for the interaction with the current capacity to contribute percentages, which have been set to operate with a relative measure. The use of a relative measure provides stability over time and a measure of relative need of schools.

An alternative approach would be to move from a relative measure to an absolute measure. This would likely require revised settings of the capacity to contribute percentages based on the absolute direct income. An absolute measure could have the advantage of avoiding changes in funding to schools or sectors that result from changes elsewhere in the economy, but also risks volatility in annual government funding. The Board has not considered this alternative approach, but the Government may wish to undertake further work to determine its relative strengths and weaknesses.

### **RECOMMENDATION 3**

**Consult further with the non-government sectors and experts on the development of, and transition to, a new direct measure of capacity to contribute for implementation from 2020.**

## **8.2 Additional data collection is also needed to enhance stability and accuracy**

Based on the findings from the National Centre for Social and Economic Modelling research on small area income data, it is optimal to have three years of data applied as a rolling average to enhance the stability of income data. To implement this, annual collections of student residential address data would be required under a direct measure.

The Board acknowledges that this would result in an increased administrative burden for schools compared to the current arrangements, where school residential address collection only takes place every five years to align with the Census. However, the Board understands the information is already being collected by schools for enrolment purposes. The Board believes the benefits to the accuracy of the capacity to contribute measure will far outweigh any additional administrative burden imposed.

Collecting the names of parents and guardians, in addition to addresses, would improve the accuracy of the data linkage. Again, the Board recognises that a number of stakeholders may have concerns about privacy. However, the Board is confident that the Australian Bureau of Statistics (ABS) and MADIP protocols mitigate the risk of identifiable data being disclosed (see Box 4), and, as standard practice, a privacy impact assessment will be undertaken. Consideration should also be given to the Department of Education and Training collecting multiple names and addresses in relation to each student, where applicable, to capture all relevant parental and guardian incomes. Implementing a new measure in 2020 would provide sufficient time for further datasets to be collected and integrated.

### **RECOMMENDATION 4**

**Undertake an annual student residential address collection and data-matching with income tax data to enable the calculation of a rolling average for a stable direct measure of median parent and guardian income for a school.**

#### **Box 4. The Australian Bureau of Statistics and protection of personal information**

Protection of personal information is of paramount importance to the Australian Bureau of Statistics (ABS). The ABS, as an Accredited Integrating Authority, is committed to upholding the secrecy, privacy, confidentiality and security of the personal information it collects. In addition to legislation that safeguards everyone's personal information (the *Census and Statistics Act 1905* and the *Privacy Act 1988*), the ABS also ensures that internal practices, methodologies and the technology protecting the information are robust and consistent with Privacy by Design principles.

The security measures in place have been independently tested and reviewed to ensure that personal information is secure. The independent assessment of ABS's compliance with statutory privacy principles as well as wider privacy concerns and principles also found that 'ABS security measures meet the highest standards.'<sup>23</sup>

When undertaking data integration activities, the ABS applies the Separation Principle to store identifiable personal information separately from other information, and to restrict project members' access to information according to what is necessary for their function or role. A person working on a project can only hold one role at a time. This means that personal information and analytical information cannot be accessed at the same time, and no person can ever see all of your information together at any point in the process.

After data collection and processing of Census data, the ABS removes names and addresses from other personal and household information. Names and addresses are stored securely and separate from one another. Names from the 2016 Census are irreversibly encoded in a way which ensures the person cannot be identified. The encoded value and name information are stored separately from other demographic and analytical information collected in the Census. Further, as described above, access to information is managed according to roles, which prevent any person accessing a name at the same time as other information about that person collected in the Census.

Implementing the Functional Separation principle and using encoded Census name information in data integration projects ensures that an individual's identity remains protected during linking and analysis, whilst facilitating the combining of existing datasets to create richer and more valuable statistics. Identifiable information is never released by the ABS. The ABS will not disclose information in a way that will enable a person to be identified unless authorised by law. It is an offence for any past or present ABS officer to divulge, either directly or indirectly, any information collected under the *Census and Statistics Act 1905* unless authorised by law. Penalties could include up to two years imprisonment and/or fines for each offence.

For more information about data integration and how the secrecy of your personal information is protected, visit [www.abs.gov.au/dataintegration](http://www.abs.gov.au/dataintegration).

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24 Pacific Privacy Consulting, cited in Australian Bureau of Statistics, 'Data Integration - FAQ', viewed on 27 June 2018, <http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Statistical+Data+Integration+-+FAQ#End>

In summary, the situation when parent and guardian names are supplied would be no different to the current situation where the only people able to view a complete income tax record (income and address) would be employees within the Australian Taxation Office (ATO). The ATO's privacy policy provides a framework for the collection, storage, access to, use and disclosure of personal information in accordance with the *Privacy Act 1988* and taxpayer confidentiality provisions in taxation law. The ATO takes steps to protect the personal information it holds against loss, unauthorised access, use, modification or disclosure and other misuse. It has an extensive range of physical and technological controls to ensure that only staff who need access to personal information are able to access it.

### 8.3 An interim arrangement will be required

As a stable direct measure cannot be implemented before 2020, the Board recommends that current arrangements be extended for 2019 to provide funding certainty to the non-government school sector during the consultation period.

The Board notes that SES scores were not updated in 2018. Consistent with usual practice, the Board recommends updating SES scores for 2019 using 2016 ABS Census data and 2017 school residential address data.

#### **RECOMMENDATION 5**

**Continue existing arrangements for determining capacity to contribute for 2019, using updated 2016 Census data.**

### 8.4 The appeals process will need to be updated to reflect the new measure

The submission and consultation process highlighted that a robust appeals mechanism is important, regardless of the measure adopted. Christian Schools Australia argued in their submission to the Board that:

*'... a clearly articulated and sufficiently flexible appeals mechanism must be established alongside any model.' (Christian Schools Australia submission, page 2)*

Further, the National Catholic Education Commission's submission stated:

*'... NCEC recognises that the usefulness of capacity to contribute indicators can be measured by the extent to which appeals are required. However, it is difficult for any methodology, no matter how robust, to accommodate every school context. Some schools have atypical populations, which is why an appeal process is needed in the legislation.' (National Catholic Education Commission submission, page 7)*

The use of parent and guardian income in a direct measure is likely to change the grounds and basis of an appeal from the current process. The need for schools to appeal their scores would be reduced given the direct measure is a more accurate measure.

However, as no measure is perfect, there may still be instances where a capacity to contribute score under a direct measure does not accurately reflect the school's circumstances. It is the Board's view that, should the Government accept and agree to move to a direct measure, a robust appeals mechanism be developed.

### **RECOMMENDATION 6**

**Ensure a transparent and robust appeals system is in place.**

# Summary of the Board’s analysis of alternative approaches

Approach	Representation of relative capacity to contribute	Other considerations (transparency, administrative burden, etc.)
<b>Current area-based SES measure</b>	<b>STRENGTHS</b>	
	<p>Provided a reasonable representation of income/capacity to contribute based on data available at the time this approach was established.</p>	<p>Uses independent and trusted data (ABS Census).</p> <p>Manageable administration burden for schools.</p> <p>Provides stability and certainty.</p>
<b>Refined area-based approach</b>	<b>LIMITATIONS</b>	
	<p>Is inaccurate because it assumes that the SES of all households in a given area is a good representation of the actual SES of parents and guardians with students in non-government schools.</p> <p>School funding is influenced by the SES of households that do not have students at the school.</p> <p>Does not measure wealth.</p>	<p>Not responsive to change in a school community.</p> <p>Does not draw on best possible data.</p> <p>Multiple steps in the calculation make it difficult to explain.</p> <p>Uses variables (education and occupation) that are not relevant to the Board’s definition of capacity to contribute.</p> <p>Based on Census data, is only updated five yearly and is therefore not responsive to change in a school community.</p>
<b>Refined area-based approach</b>	<b>STRENGTHS</b>	
	<p>Improves accuracy as it only uses income data for parents and guardians whose children attend non-government schools (not the wider population) to arrive at an area average.</p> <p>Results in a better representation of non-government school parent income than the current measure.</p>	<p>Uses independent and trusted data (ABS Census).</p> <p>Manageable administration burden for schools.</p> <p>Provides stability and certainty.</p>
<b>Refined area-based approach</b>	<b>LIMITATIONS</b>	
	<p>Like the current methodology, still groups parents and guardians of students at different schools together in the calculation.</p> <p>School funding is influenced by the SES of households that do not have students at the school.</p> <p>Does not measure wealth.</p>	<p>Based on Census data, is only updated five yearly and is therefore not responsive to change in a school community.</p> <p>Does not draw on the best possible data.</p> <p>Multiple steps in the calculation make it difficult to explain.</p> <p>Data used is not publicly available.</p>

Approach	Representation of relative capacity to contribute	Other considerations (transparency, administrative burden, etc.)
<b>Direct measure of parental income</b>	<b>STRENGTHS</b>	
	<p>Closest possible representation of parental income based on the best available data.</p> <p>School funding is directly influenced by the income of parents and guardians of students attending the school.</p>	<p>Can be updated regularly to be responsive, and a rolling average can be used to reduce volatility.</p> <p>Leverages existing datasets.</p> <p>Uses independent, established, high quality and trusted data.</p>
	<b>LIMITATIONS</b>	
	<p>Does not measure wealth.</p>	<p>Requires additional (annual) student residential address collections, therefore requiring some increase in administration.</p> <p>Data used is not publicly available.</p>
<b>A measure of school resources (total private income)</b>	<b>STRENGTHS</b>	
	<p>Uses existing data collections.</p>	<p>Calculation and data can be clearly explained.</p>
	<b>LIMITATIONS</b>	
	<p>Fees or school total private income do not accurately measure capacity to contribute, particularly in low-fee situations.</p> <p>School wealth cannot be measured consistently across schools and sectors.</p>	<p>Does not draw on the best available data.</p> <p>Is unnecessary if a direct income measure is adopted.</p> <p>Creates disincentives for private investment.</p> <p>In the past, it has led to schools changing their financial structures to maximise their funding outcomes.</p>

Based on Board analysis against nine design principles described in Chapter 2.

# Appendix A—Terms of reference

The Australian Government through its *Quality Schools* reforms is committed to Commonwealth schools funding that is needs-based, transparent and equitable so students with the same need in the same sector will attract the same level of support from the Commonwealth.

As the majority funder of non-government schools, the Government is committed to supporting parental choice and diversity in the schooling system. This means supporting the full breadth of the non-government sector through needs-based funding arrangements.

The socio-economic status (SES) score methodology is used to determine the Commonwealth's recurrent funding contribution for individual non-government schools and has been in-place since 2001, with some improvements made for the 2012 recalculation. The SES score methodology and application to determine capacity to contribute are specified in the *Australian Education Act 2013* and Australian Education Regulation 2013.

For most non-government schools, the base per student student schooling resource standard amount is reduced by the anticipated capacity of their school community to financially contribute towards the school's operating costs. This is called the 'capacity to contribute' assessment and it is based on the SES score of the school.

SES scores provide a relative ranking of all non-government schools based on the income, education and occupation characteristics of the areas in which students at each school reside. This information is used to generate a number representing the socio-economic status of one student cohort relative to other cohorts, with 100 being the Australian 'average' SES score.

The *2011 Review of Funding for Schooling —Final Report* recommended a capacity to contribute measure to take into consideration the capacity of a school community to contribute to recurrent funding for a non-government school, ensuring greater support for those that need it most, while preserving incentives for parents to invest in the education of their children.

The Government will commission the new National School Resourcing Board (the Board) to conduct a review of the SES score methodology to consider the appropriateness of the use of SES scores in assessing the capacity of a non-government school community's ability to contribute to the recurrent costs of their school; and to make recommendations on alternative measures and/or changes to ensure confidence in the methodology utilised.

This review will not affect the calculation of the socio-educational disadvantage loading or funding entitlements for schools that are defined under the *Australian Education Act 2013* as having zero capacity to contribute. Section 52(6) defines these schools as: government schools; special schools; special assistance schools; majority Aboriginal and Torres Strait Islander schools; and sole provider schools.

## **Scope of the Review**

The review will consider, provide findings and make recommendations relating to:

- The strengths and limitations of the current SES measure in determining the capacity of a school community to contribute to the recurrent costs of the school;
- Possible alternative methodologies or refinements for calculating the capacity of a school community to contribute or for calculating the SES, including the use of more direct measures;
- How frequently measures should be updated into the future; and
- Timeframe for possible implementation of its recommendations for the 2019 school year.

Throughout the review, the Board will consider the collective cost of its recommendations including cost of delivery by governments and the impact on schools and school communities of any change including regulatory burden and privacy issues.

In providing recommendations to Government, the Board should provide at least one budget neutral option.

## **Consultation**

The review will consult widely with stakeholders from the non-government sector and invite submissions from all interested parties.

## **Timing**

The Board is expected to provide its final report to the Australian Government Minister for Education and Training by the end of June 2018.

# Appendix B—Review process

On 3 November 2017, Senator the Hon Simon Birmingham, Minister for Education and Training, announced the terms of reference for a review of the socio-economic status (SES) score methodology. The Review would consider the appropriateness of the use of SES scores in assessing the capacity of a non-government school community's ability to contribute to the recurrent costs of their school and make recommendations on alternative measures and/or changes to ensure confidence in the methodology used.

On 19 December 2017, the Chair of the National School Resourcing Board invited public submissions to inform the Board's consideration of the SES score methodology. Public submissions were invited to be lodged by 20 February 2018. The submission process was open to all interested parties and sought comments on issues and concerns, and potential alternatives or improvements, to the 'capacity to contribute' assessment. An Issues Paper was prepared to inform submissions, available at <https://www.education.gov.au/review-socio-economic-status-ses-score-methodology>.

From 26 February to 2 March 2018, the Board undertook targeted consultations with key stakeholders in each state and territory, identified through the public submissions process (see Appendix D). The Board considered the full range of issues and suggestions put forward by stakeholders through the submissions and consultations, and undertook research to consider various options and potential refinements proposed by stakeholders.

The Board also undertook technical information and briefing sessions with representatives nominated by the National Catholic Education Commission and Independent Schools Council of Australia.

## Board Members

Mr Michael Chaney AO, Chair

Emeritus Professor Denise Bradley AC, Deputy Chair

Professor Natalie Brown

Professor Greg Craven AO

Mr William (Bill) Daniels AM

Professor Stephen Lamb

Professor Ken Smith

Dr Alison Taylor

## Secretariat

A secretariat from the Australian Government Department of Education and Training supported the Board in the conduct of its business and the review process. The secretariat operated independently of the Department and reported directly to the Chair.

### **Secretariat Team**

Ms Quyen Tran, Acting Branch Manager

Dr Peter Nolan, Director

Ms Rebecca Frantz, Assistant Director

Mr Philip Hodgson, Assistant Director

Ms Megan Wallace, Policy Officer

Ms Sharon Houston, Policy Officer

### **Research Sub-committee**

The Board established a research sub-committee Chaired by Professor Stephen Lamb and supported by Professor Natalie Brown and Dr Alison Taylor. The sub-committee was supported by a research team from the Australian Government Department of Education and Training and secondees from the Australian Bureau of Statistics as well as a panel of commissioned experts. The research team operated independently of the Department and reported directly to the sub-committee Chair.

### **Research Team**

Ms Kathleen Aguirre, Acting Director

Mr Liam Smyth, Director

Ms Sarah Breach, Assistant Director

Mr Mark Lang, Assistant Director

Mr Jiantao Pei, Assistant Director

Mr Shaun Nichols, Assistant Director

Ms Sarah Dinsmore, Policy Officer

Mr Dzung Nguyen, Data Analyst

Mr Eric Morris and Mr Sam Bye, Australian Bureau of Statistics

### **Expert Panel**

Mr Andrew Wade, Principal Research Fellow, Centre for International Research on Education Systems (CIRES), Victoria University

Professor Robert Tanton, Director, National Centre for Social and Economic Modelling (NATSEM), University of Canberra

Associate Professor Nicholas Biddle, Associate Director, Centre for Social Research and Methods and Director, Policy Experiments Lab, Australian National University

Ms Julia Neville, Assistant Commissioner, Australian Taxation Office

Dr Paul Jelfs, General Manager, Australian Bureau of Statistics

# Appendix C—Targeted consultation meetings

The Board undertook targeted consultations with key stakeholders, largely identified through the public submission process.

## Targeted consultations

Association of Independent Schools of the Australian Capital Territory

Association of Independent Schools of New South Wales

Association of Independent Schools of South Australia

Association of Independent Schools of Western Australia

Australian Association of Christian Schools

Australian Bureau of Statistics

Australian Capital Territory Education Directorate

Australian Catholic Primary Principals Association

Australian Council of Jewish Schools

Australian Government Department of Education and Training

Australian Parents Council

Australian Taxation Office

Catholic Education Archdiocese of Canberra & Goulburn

Catholic Education Commission of Victoria

Catholic Education Commission Queensland

Catholic Education Northern Territory

Catholic Education South Australia

Catholic Education Western Australia

Catholic School Parents Australia

Catholic Schools New South Wales

Department of Education—Northern Territory

Department of Education—South Australia

Department of Education—New South Wales

Department of Education and Training—Victoria

Farish, Stephen

## Targeted consultations

Grattan Institute

Independent Education Union

Independent Schools Council of Australia

Independent Schools Queensland

Independent Schools Tasmania

Independent Schools Victoria

Islamic Schools Association of Australia

Isolated Children's Parents Association

Lutheran Education Australia

National Catholic Education Commission

Tasmanian Catholic Education Office

Victorian Ecumenical System of Schools

## Appendix D—Public submissions

The Board received 34 substantive responses to the Issues Paper, including a number of detailed proposals which informed the Board’s consideration and analysis. The Board also received 261 submissions which were largely part of a coordinated standard response from individuals of school communities. Authors who specifically requested that their submission remain confidential are not included in this list.

<b>List of substantial public submissions</b>	
Association of Heads of Independent Schools of Australia	Chisholm Group
Association of Independent Schools of New South Wales	Christian Schools Australia
Association of Independent Schools of South Australia	Council of Catholic School Parents
Association of Independent Schools of the Australian Capital Territory	Farish, Stephen
Australian Association of Christian Schools	Grattan Institute
Australian Capital Territory Education Directorate	Independent Education Union
Australian Catholic Primary Principals Association	Independent Schools Council of Australia
Australian Council of Jewish Schools	Independent Schools Queensland
Australian Council of State School Organisations	Independent Schools Victoria
Australian Education Union	Isolated Children’s Parents’ Association
Australian Parents Council	National Catholic Education Commission
Brigidine College, St Ives, New South Wales	Preston, Barbara (Barbara Preston Research)
Broken Bay Catholic School Parents	Queensland Catholic Education Commission
Catholic Education Archdiocese of Canberra & Goulburn	University of New South Wales
Catholic Education Commission of Victoria	Victorian Ecumenical System of Schools
Catholic Education Tasmania	Wycliffe Christian School
Catholic School Parents Australia	

# Appendix E



Australian Government  
Department of Education and Training



## Socio-economic status (SES) score review process

A school's socio-economic status (SES) score is a measure of the capacity of a non-government school community to contribute to the recurrent costs of the school. A school's SES score is translated into a "capacity to contribute percentage", which in turn affects the amount of base per-student funding that the school attracts from the Commonwealth under the *Australian Education Act 2013* (the Act).

There are different capacity to contribute percentages for primary schools and secondary schools. Some non-government schools<sup>1</sup> are taken to have a capacity to contribute percentage of 0 per cent and are not assigned SES scores.

For all other non-government schools, the Department of Education and Training (the department) determines an SES score under section 52 of the Act (as delegate of the Minister for Education and Training).

A school's SES score generally applies from the start of a particular school year, and continues in effect until it is replaced by a subsequent SES score determined by the department under the Act.

The National School Resourcing Board (the Board) is reviewing the SES score methodology currently used to determine funding for non-government schools. The Board is due to report to Government in late June. More information on the Board is available at: <https://www.education.gov.au/national-school-resourcing-board>.

### How is a school's SES score determined?

Subsection 52(4) of the Act requires that the Minister determine a school's SES score in accordance with the Australian Education Regulation 2013 (the Regulation), unless the Minister is satisfied doing so would result in an SES score that does not accurately reflect the general socio-economic circumstances of the persons responsible for students at the school.

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<sup>1</sup> Majority Aboriginal and Torres Strait Islander schools, special schools, special assistance schools, and sole provider schools.



Section 23 of the Regulation sets out the methodology for calculating a school's SES score, by reference to information gathered as part of the Australian Bureau of Statistics (ABS) Census of Population and Housing<sup>2</sup> (Census) about education, family income, household income and occupation, aggregated at the Statistical Area Level 1 (SA1)<sup>3</sup> geographic level.

Since the introduction of SES scores from 2001, there have been gradual refinements to reflect improvements in Census data used.

The Census information for the statistical areas in which the students of the school reside is used to calculate an SES score for the student cohort at a school relative to other schools, with 100 being the Australian 'average' SES score.

In accordance with section 23 of the Regulation and consistent with requests from school representative bodies, the department will generally use student residential data from 2012–2016, and the 2011 ABS Census data, in order to calculate a school's SES score for 2018.

The department can depart from the formula in the Regulation if it is satisfied that the formula produces an SES score for a school that does not accurately reflect the general socio-economic circumstances of the persons responsible for students at the school. The department will only do so on the basis of substantive evidence and analysis of the school's circumstances.

## How does an approved authority seek a review of their school's SES score?

An approved authority for a school can apply to the department to undertake a review of the SES score of the school. It is advisable for an approved authority seeking a review of its school's SES score to first read this fact sheet and contact the SES Helpdesk for guidance about what information it must include in its application for a review.

An application for review must be made by an approved authority in writing, and set out the school that is the subject of the application, the school year the SES score is to start from (which cannot be before the year in which the application is made), and the reasons why the approved authority thinks the school's SES score does not reflect the socio-economic circumstances of the school community.

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2 Note that, for 2018, the 2011 ABS Census will continue to be used for calculating SES scores in first instance.

3 SA1s have been designed as the smallest geographic unit for the release of ABS Census data. There are approximately 55,000 SA1s across Australia and each have an average population of about 400 persons.



An application and supporting documents should be emailed to [SEShelpdesk@education.gov.au](mailto:SEShelpdesk@education.gov.au) or sent to:

Socio-economic Status (SES) Score Reviews  
School Funding Branch  
Australian Government Department of Education and Training  
GPO Box 9880  
LOC: C50MA9  
CANBERRA ACT 2601

## When might a school's SES score not reflect the socio-economic circumstances of the school community?

As noted above, an SES score for a school can only be different from that calculated using the formula in the Regulation, if that formula produces an SES score for the school that does not accurately reflect the general socio-economic circumstances of the school community.

Reasons why this might be the case generally fall into either or both of the following categories:

- the data used to calculate the SES score for the school in accordance with the Regulation does not reflect the current school population, as the school community has significantly different characteristics to the school community represented in data
- the specific socio-economic circumstances of the households who make up the school community are significantly different from the general socio-economic circumstances of the typical households in the same areas in which the school's households reside.

Examples of these facts and circumstances include things like:

- there have been significant changes in the locations from which the school draws its student cohort since its SES score was last determined
- there have been significant changes in the local economy affecting the areas from which the school draws its students – such as the closure of a major industry or the long-term effects of a natural disaster – since its SES score was last determined
- a significantly higher proportion of the households from which the school draws its students have health care cards or other government concession cards than the proportion of households in those same areas



- the households from which the school draws its students are significantly larger (and hence have fewer resources per child) than the typical households in those same areas.

Note, if an approved authority applies for a review of a school's SES score, there is no guarantee that the outcome of that review will lead to a lower SES score. Indeed, it may be the case that a higher SES score will be determined, based on the particular circumstances of the school. The review decision, including any change in SES score, will be applied irrespective of the outcome. Approved authorities should consider this prior to applying.

## How will the department undertake a review?

The department will consider the empirical evidence provided in the application, including comparing the request against reviews undertaken in the past, and may require further information and analysis in order to reach a final decision.

A review may involve any or all of the following steps:

- verifying that the original SES score determination was made correctly in accordance with the Regulation
- examining the reasons for review provided by the approved authority, and considering whether additional information or evidence is required to assess whether the SES score accurately reflects the socio-economic circumstances of the school community
- obtaining expert advice to assist in assessing the information and evidence, such as the ABS
- consideration of the applicability of the latest available statement of addresses for the school to the education, family income, household income and occupation data from the ABS Census
- developing a school community profile that examines evidence of any special circumstances of the school, such as: high levels of families with health care and concession cards, students from large families, unemployment and other socio-economic indicators. This may also involve the undertaking of a parental survey (see below)
- in some limited circumstances, establishing an expert advisory panel to advise on the school's circumstances.



## What is a parental survey?

Broadly, a parental survey is a survey disseminated to the persons responsible for students at the school (e.g. parents, guardians and carers) to develop a school community profile.

The survey follows the format of the most recent ABS Census. It includes questions relating to household income, occupation, education levels and number of children.

Completion of a parental survey is voluntary. However, the department generally requires a minimum response rate of 95 per cent in order to construct an accurate school community profile.

## How is the parental survey undertaken?

If a parental survey is necessary to assess an approved authority's request for review of its school's SES score, the department generally adopts the following process (although some variation may be required, depending on the specific circumstances).

Historically, the parental survey was mailed to parents in hard copy format, however the department will work with the approved authority to determine the most efficient method of contacting parents in the school community. It may be considered more efficient and effective to have the survey undertaken online.

Should a hard copy format be preferred, the department will request a list of the current residential addresses of the persons responsible for the students at the school from the approved authority. The list of addresses will:

- be de-identified, i.e. not containing information such as surnames or birthdates
- contain one postal address for each family. All currently enrolled students must be accounted for, however there may be more than one student associated with a family address
- allocate a numerical reference number to each family address.

Note: The approved authority or school must keep a record of which family was allocated which family reference number, to allow them to follow up with any unreturned surveys.

The department will notify the approved authority when the parental survey is expected to be sent to families so it is able to inform their school community if they wish. When sending the survey to families, the department will include a self addressed, reply paid envelope



with each survey to allow families to return their survey to the department. Surveys are not returned by families to the approved authority.

The department will provide a list to the approved authority of family reference numbers for surveys that have not been returned. This allows the approved authority to follow up with those families without the department identifying them.

## Can an approved authority withdraw its application?

An approved authority can withdraw its application for review of a school's SES score at any time prior to the department determining a new SES score for the school.

## What happens following a review of a school's SES score?

Once the department has completed its review of a school's SES score, it will notify the approved authority of its decision, and the reasons for that decision.

The department will also advise the approved authority of any further review rights available at this stage.

The department will make any necessary updates to the school's payments for the year from which the SES score starts.

## Further information

View the list of all non-government schools' SES scores at:

<https://docs.education.gov.au/documents/socio-economic-status-ses-scores>.

For further information about SES scores, contact the SES Help Desk:

[SEShelpdesk@education.gov.au](mailto:SEShelpdesk@education.gov.au).

## Appendix F—School total private income dissent (Professor Greg Craven)

The object of this outline is to indicate my dissent from the recommendation of the National Schools Resourcing Board (the Board) not to include Total Private Income (TPI) of schools in assessing the capacity of a school community to contribute to the recurrent costs of a school. This decision is expressed in the Board's Report of its Review of the socio-economic status score methodology.

I acknowledge at the outset that the recommendation of the Board for the replacement of what I regard as the clumsy proxy measures of the current Socio-economic Status (SES) methodology with a methodology based on Personal Income Tax (PIT) data represents an enormous improvement in the assessment of the capacity of a school community to contribute towards school costs. I join wholeheartedly with the rest of the Board in strongly supporting this recommendation. Given its detailed elucidation in the report of the Board, I will not further discuss the proposed new measure here.

I believe, however, that this new methodology will remain seriously flawed unless it takes some direct account of school Total Private Income.

In the current debate over school funding, and the capacity of communities to contribute, the terms TPI and fees often are used interchangeably. In fact, TPI is a wider concept than fees, and may – depending upon how it is defined – include other sources of recurrent school income derived from within its community. However, evidence presented to the Board convincingly demonstrated that the overwhelming proportion of TPI for schools was represented by fee income, and I therefore accept that the current discussion centres upon the non-inclusion of fees in the Board's proposed methodology for the calculation of capacity to contribute.

The starting point here inevitably is to consult the Terms of Reference which define the task of the Board. In fact, these terms reflect concerns with a wide range of matters relating to all of substance, process and perception around the SES measure or any proposed replacement thereof. Embedded in the terms of reference, however, are requirements that any replacement of the SES model should be one that enjoys public confidence and comprehension, and which is publicly defensible, all in any event logical policy design requirements of any school funding measure.

These stipulations are perhaps most obviously embodied in the requirement of the very first general paragraph of the Board's Terms of Reference, which expresses the commitment of the Commonwealth to a funding measure that is 'transparent'. The Oxford English Dictionary most relevantly defines 'transparent' in the present context as '(of an organization or its activities) open to public scrutiny.' The Macquarie Dictionary similarly refers to the qualities of 'openness', being 'easily ... understood', and being 'manifest or obvious'. A transparent measure of capacity to contribute, therefore, will be one that the public understands and accepts as appropriate, both in terms of its inclusions and exclusions.

Such requirements are prominently reflected in the Board's own Principles adopted 'to guide the development and assessment of alternative approaches to the SES methodology.' Under the Principle Fit-for-purpose, any proposed measure will be one in which 'the public can have confidence'. Even more strongly, under the principle that a measure be Reliable, it is stipulated that any approach must be 'recognized by the public as robust, up to date and reliable'.

It follows, therefore, both from the Board's Terms of Reference and its own guiding Principles, that any proposed measure must be one that will enjoy public confidence. Necessarily, this will mean that such a measure will include as relevant to the assessment of capacity to contribute those factors which would be crucial to the maintenance of such confidence.

It is clear to me that the amount of a school's TPI, and in particular its fee income, necessarily will be regarded by a large majority of the public as directly relevant to the assessment of the capacity of that school's community to contribute, and that the absence of such a measure as at least part of the assessment of such capacity would be correspondingly corrosive of the public's acceptance of any system as robust or reliable.

This is, indeed, a matter of public record. Public debate around the current school funding methodology prominently has included criticism that it was flawed (inter alia) for its failure adequately to reflect school TPI (e.g. Pallavi Singhal, 'Private schools getting \$6,700 more per student than New South Wales public schools', Sydney Morning Herald, 12 April 2018; Peter Martin, private Schools set to get more than they need under Gonski 2.0, Freedom of Information documents reveal', Sydney Morning Herald, 10 December 2017).

In terms of the Board's own inquiry, the question of TPI (including fees) was identified as an important issue to be assessed by the Board as part of its review, in the Research paper prepared for it by Victoria University, The Socio-economic Status (SES) Score methodology used in recurrent school funding arrangements, where it was dealt with under the heading of 'Consideration of school resources'.

The inclusion of fee data as an element of any proposed measure also was supported in a significant number of submissions received by the Board. The National Catholic Education Commission proposed the inclusion in any measure of capacity to contribute of 'school resources', including fees. In its submission, the Catholic Education Commission of Victoria (CECV) argued for a measure which 'would calculate a funding rate for non-government schools based on their level of private income (which mostly comprises school fees)'. The Australian Association of Christian Schools (AACCS) argued for the insertion of 'the average total private income per student, into the formula for determination of Commonwealth funding assistance to non-government schools'. The Australian Council of State School Organizations (ACSSO) submitted that 'Consideration should be given to the resources and wealth of the individual school or system. Schools in the non-government sector often have access to additional sources of income that are unavailable to the public system that may not necessarily be open to public scrutiny or acquittal'. The Australian Education Union (AEU) argued that '...the SES model should be replaced with a means test that is calculated on two elements: parental income and school income/wealth.'

It thus would be fair to say that there was considerable support among organizations making submissions to the Board, both for recognizing TPI including fee income as a critical issue within its inquiry, and supportive of its inclusion in any reformed funding measure.

Other submissions were intensely opposed to the inclusion of TPI or fees in a measure. Prominently, in its submission, the Independent Schools Council of Australia (ISCA) stated that:

Some argue that the fees charged by schools should be part of the SES methodology on the basis that the fees charged are always reflective of parents' capacity to pay. However, while there is a tendency to conflate parents' capacity to pay with a school's willingness to charge fees, they are not the same.

Similarly, Independent Schools Victoria (ISV) indicated that ‘we would not support any funding model that was based on the actual resources of schools, whether measured by income or wealth.’ Essentially similar views were expressed by all submissions from the Independent sector. Beyond the issue of principle around capacity to pay, these submissions pointed to suggested practical difficulties in capturing school TPI such as evasion measures and difficulties in the definition of relevant private school income.

Overall, it would be fair to say that submissions from the Catholic sector generally, together with submissions of a number of significant bodies with an interest in public education, supported use of School TPI including fees, though in a variety of formulations. Submissions from the Independent sector virtually were uniformly opposed. Most submissions, however, regardless of their direction, recognized positively or negatively that the issue of TPI was a crucial and unavoidable one.

The result is that, although eliciting different views, the question of inclusion of TPI (including school fees) was very much a live issue both within the inquiry and as a matter of general public debate. The proximate question therefore is why it should be supposed that members of the Australian public will not accept as ‘robust’, ‘reliable’, or ‘transparent’ a measure of capacity to contribute that does not include TPI or at least school fee income.

This question usefully may be considered in the context of the application of ‘the pub test’. In my view, it simply passes belief that the average Australian, faced with the fact that the fees for a school were \$30,000, or indeed \$20,000, would not conclude that these figures were to a significant extent reflective of the capacity of that school’s community to contribute to recurrent costs of that school’s education. This is regardless of whether the school happens to be Independent or Catholic. The issue may perhaps be elucidated by analogy. Given that a C-class Mercedes Benz Cabriolet costs \$95,000, would there be any significant group of Australians who would not draw a conclusion from this as to the financial capacity of the owners of such vehicles as a collective?

I understand the argument that a community’s payment of school fees represents ‘willingness to pay’ rather than ‘capacity to pay’. I believe, however, that this argument is not as powerful as may be supposed, and can be advanced in an overly simplistic and binary way. Put simply, no matter how willing one is to pay relatively high school fees, there is a point at which lack of financial capacity will prevent this. Such realities inevitably will affect the composition of a school community and its financial potential, in a manner analogous to the way that the ownership of a particular type of motor vehicle inevitably will be dictated significantly by the financial circumstances of those who otherwise might wish to purchase it.

I also understand the argument that the use of PIT data will so improve the quality of the methodology for assessing capacity to contribute that the use of school TPI (including fee income) becomes irrelevant and superfluous. In making this point, while maintaining my strong support for reliance on PIT data, I do acknowledge that there inevitably will be a need to elucidate as to how exactly this data should be used, and its completeness as a methodology.

However, the overall and highly technical reliability of PIT data is not the only relevant consideration for the Board in the design of any alternative methodology to assess capacity to contribute. As has been stressed above, public confidence will be an indispensable element of any successful measure, and this reality is reflected both in Board's Terms of Reference and its own guiding principles. As I already have indicated, regardless of the technical advantages of PIT data, I do not believe that the public will have confidence in the robustness of any stand-alone measure that does not include a school's TPI, and especially its fee income

This idea that public policy measures and arrangements may require the inclusion of particular elements driven primarily by the need to secure public confidence is not a novel or extraneous one. It is common throughout our wider legal system, for example, in the notion that 'justice must not only be done, but must be seen to be done.' This necessitates the adoption of positions not driven purely by financial considerations, but by the need to secure public confidence. For example, given the quality of our judiciary and justice system, there would be no diminution in the quality of justice if our courts were to sit in private. There certainly would be huge financial savings. But such a measure never could be adopted because it would undermine public confidence in the judicial system.

In an analogous way, therefore, I do not believe that a measure of a school community's capacity to contribute ever will enjoy requisite public confidence unless it includes school TPI, and I therefore believe that any measure – including one properly based on PIT data – should include such an element. It follows that I do not agree with the view of the majority of the Board that TPI should not be included, and believe in this context that the Board has had insufficient regard to mandated requirements of public confidence.

As the Board did not recommend in favour of the use of TPI, the detailed modelling necessary to develop it fully as a cohesive policy option or options did not occur. This means that there would remain a number of questions to be answered concerning details of its potential utilisation. My own view is that none of these questions are beyond resolution, although they were presented as significant problems in a number of submissions before the Board, notably that of ISCA and other bodies associated with the Independent school system,

Thus, by way of example, one issue concerns what items of income, if any, should be included in TPI beyond school fees. This is a standard issue of regulatory design, and no more complex than similar issues in other regulatory contexts. A second would be the potential for schools to evade the operation of a TPI measure by artificially treating items of income as something else. This was a concern in a number of submissions opposed to the use of school TPI, but which I believe to be seriously over-stated: modern methods of detection and assurance have developed exponentially over the last two decades, and could be deployed readily in this context. Moreover, the imposition of appropriate penalties would strongly discourage schools from misreporting income source. Finally, there is the question – assuming TPI were to be deployed in combination with PIT data – as to the relative weighting of each element in any composite measure.

There also is the issue that the use of TPI is most compelling in the case of high and very high fee schools, whose private income in abstract theory (rather than policy) would raise a question as to their need for any public support at all, putting aside questions of settled public policy. The place of TPI arguably becomes less central, though still relevant, as one approaches middle and lower-middle fee schools. Again, however, plausible policy options are open for development. To take the most obvious possibility, use of a progressive measure of TPI could be developed, such that the effect of TPI progressively was increased or tapered, depending upon the amount of TPI available to a school.

All these matters identified, however, one is left with the bald fact that there can be no requisite public confidence in a measure of capacity to contribute which takes no account of the fact that a school derives, for example, TPI including fee income of \$20,000 to or \$30,000 per student. Indeed, such confidence would be hard to maintain as between schools deriving respectively \$10,000 and \$2,000 in TPI.

I would note one other general consideration here. Across a range of submissions, there was discussion of the question of whether some account should be taken of school or school community 'wealth' (as opposed to income) in assessing capacity to contribute. Wealth is a factor difficult to assess in the context of school funding, involving as it does not only questions around the accurate identification of asset bases both of parents and schools, but also issues of available inter-generational wealth. The Board concluded that, at this point, it would not pursue the issue of wealth, apposition with which I agree. I do note, however, that in these circumstances, the total private income of a school, and particularly its fee income, certainly represents the nearest reasonable proxy to a measure for wealth. This is a further reason for its inclusion in any calculation of capacity to contribute.

By way of summary, my strong view is that:

- Total Private Income (including fee income) should be included in any measure of the capacity of a school community to contribute to the recurrent cost of education.
- The recommendation of the Board not to include Total Private Income (including fee income) in its proposed measure means that this measure fails adequately to reflect the requirements of transparency, robustness and public confidence mandated by the Boards Terms of reference and guiding Principles.
- Nevertheless, the methodology proposed by the Board based on private Income Tax data is greatly superior to the current Socio-economic Status measure, and should be strongly supported.

# Appendix G—References

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