Research brief



29 March 2018

Latest Census data yet again confirms the Turnbull Government's funding model is biased against Catholic schools

Census data for 2016 once again confirms that Minister Birmingham's school funding model is biased against Catholic schools.

The bias arises in the most important metric in the funding model for Catholic and independent schools – school Socio-Economic Status (SES) scores.

As part of the way SES scores are estimated, all families who live in the same statistical neighbourhood (Statistical Area 1, SA1) – an area encompassing about 400 people, or 150 households – are assumed to be exactly the same.

In other words, within the same statistical neighbourhood, all families who attend non-government schools are assumed to have the same capacity to pay school fees – irrespective of the school they attend. Families in Catholic schools are assumed to be identical to families who attend elite independent schools, despite the fact that these families often pay significantly different school fees.

This assumption defies common sense, and recently released data from the 2016 Census yet again confirms it is wrong. The data shows that, within each statistical neighbourhood, the families who attend Catholic schools tend to have lower incomes than the families who attend independent schools. This was also apparent in Census data for 2011.

Census data for 2016 shows that Catholic school families have lower incomes than independent school families in 55% of the SA1s in which both types of families live. Furthermore, the incomes of Catholic school families are more than 10% lower than the incomes of independent school families in 43% of SA1s in which both types of families live.

In capital cities – where most students who attend non-government schools live – the bias is greater.

This information is summarised in Table 1 overleaf. Table 1 includes analysis of the incomes of Catholic school families and independent school families in a number of subregions.

In some subregions within Australia – especially within Sydney – Catholic school families have lower incomes than independent school families in over 60% of SA1s. In these subregions it is very common for Catholic school families to have incomes that are more than 10% lower than independent school families in at least 50% of SA1s.

The data in Table 1 confirms that SES scores disadvantage Catholic schools in many parts of Australia, and especially in capital cities (where most students live).

Table 2 shows the same data from the 2011 Census. The clear bias in school SES scores was also apparent in that data.

Thus, prior to announcing his new school funding model, Minister Birmingham had evidence showing fundamental problems with SES scores but decided to ignore this.

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Table 1: Comparison of family incomes within SA1s, between Catholic school families and independent school families (2016)

Area/subregion	Total SA1s*	Comparison of incomes between Catholic school families and independent school families within SA1s					
		SA1s in which Catholic school families have lower incomes (%)	SA1s in which Catholic school families have higher incomes (%)	SA1s in which incomes of Catholic school families are >10% lower (%)	SA1s in which incomes of Catholic school families are 0-10% lower (%)	SA1s in which incomes of Catholic school families are 0-10% higher (%)	SA1s in which incomes of Catholic school families are >10% higher (%)
Australia	46,155	55%	45%	43%	12%	10%	36%
Capital cities	31,656	56%	44%	44%	13%	10%	34%
Sydney - Inner West	579	72%	28%	61%	11%	7%	21%
Sydney - Eastern Suburbs	559	70%	30%	56%	14%	11%	19%
Darwin	268	68%	32%	50%	18%	10%	22%
Sydney - City & Inner South	450	65%	35%	56%	10%	6%	28%
Melbourne - Inner South	886	63%	37%	50%	14%	9%	27%
Ballarat	354	63%	37%	55%	8%	5%	32%
Brisbane – East	484	63%	37%	45%	18%	13%	25%
Perth – Inner	324	62%	38%	47%	15%	12%	26%
Brisbane Inner City	467	62%	37%	49%	13%	11%	27%
Melbourne – Inner	946	62%	38%	54%	8%	8%	30%
Hobart	467	61%	39%	48%	13%	8%	31%
Sydney - Northern Beaches	547	61%	39%	47%	14%	15%	25%
Bendigo	307	60%	39%	51%	9%	9%	30%
Mornington Peninsula	580	60%	39%	49%	11%	10%	30%
Melbourne - North West	749	60%	40%	48%	12%	9%	31%
Geelong	589	59%	40%	47%	13%	7%	33%
Adelaide - Central and Hills	648	59%	41%	49%	11%	10%	30%
Latrobe – Gippsland	484	59%	41%	51%	8%	7%	33%
Sunshine Coast	703	59%	41%	49%	10%	6%	35%
Sydney - Baulkham Hills & Hawkesbury	511	59%	41%	44%	14%	11%	31%
Perth - North East	538	58%	41%	46%	12%	9%	33%
Perth - North West	1,116	58%	42%	46%	12%	13%	28%
Melbourne - South East	1,518	58%	42%	44%	14%	9%	32%
Gold Coast	1,098	58%	42%	46%	12%	10%	32%
Melbourne – West	1,340	58%	42%	46%	12%	8%	34%
Launceston and North East	277	57%	43%	47%	10%	9%	33%
Melbourne - Inner East	807	57%	43%	43%	15%	12%	31%
Sydney - North Sydney & Hornsby	849	55%	45%	41%	14%	14%	31%

^{*}Includes SA1s with at least 1 family with a child in each of a Catholic school and an independent school, and valid observations of incomes. Family incomes are equal in some SA1s.

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Table 2: Comparison of family incomes within SA1s, between Catholic school families and independent school families (2011)

Area/subregion	Total SA1s	Comparison of incomes between Catholic school families and independent school families within SA1s					
		SA1s in which Catholic school families have lower incomes (%)	SA1s in which Catholic school families have higher incomes (%)	SA1s in which incomes of Catholic school families are >10% lower (%)	SA1s in which incomes of Catholic school families are 0-10% lower (%)	SA1s in which incomes of Catholic school families are 0-10% higher (%)	SA1s in which incomes of Catholi school families are >10% higher (%)
Australia	45,056	54%	46%	42%	12%	10%	36%
Capital cities	30,438	56%	44%	43%	13%	10%	34%
Sydney - Eastern Suburbs	541	69%	31%	55%	13%	8%	24%
Sydney - Inner West	571	66%	33%	56%	10%	10%	23%
Melbourne - Inner South	889	65%	35%	53%	12%	12%	23%
Melbourne - Inner	950	65%	35%	56%	9%	6%	28%
Bendigo	328	62%	38%	53%	9%	9%	29%
Sydney - Baulkham Hills & Hawkesbury	500	62%	38%	45%	17%	14%	24%
Adelaide - Central and Hills	636	61%	39%	47%	14%	10%	28%
Sydney - City and Inner South	408	61%	39%	54%	7%	7%	32%
Melbourne - West	1,209	60%	39%	49%	12%	8%	31%
Melbourne - Inner East	806	60%	40%	45%	15%	12%	28%
Darwin	226	60%	39%	46%	15%	8%	31%
Ballarat	347	60%	40%	48%	12%	7%	33%
Ipswich	626	60%	40%	47%	13%	9%	31%
Latrobe - Gippsland	521	60%	40%	50%	9%	7%	33%
Brisbane - East	464	59%	41%	45%	14%	13%	28%
Perth - North West	1,019	59%	41%	45%	14%	11%	30%
Perth - Inner	317	59%	41%	45%	14%	13%	28%
Sydney - Sutherland	436	58%	41%	44%	15%	8%	33%
Mandurah	183	58%	42%	46%	12%	12%	30%
Sydney - Northern Beaches	544	58%	42%	41%	17%	13%	29%
Launceston and North East	284	58%	42%	50%	8%	6%	35%
Mornington Peninsula	570	58%	41%	49%	10%	10%	31%
Newcastle and Lake Macquarie	745	58%	42%	47%	11%	9%	32%
Australian Capital Territory	796	58%	42%	40%	18%	12%	30%
Sydney - Ryde	342	58%	42%	44%	14%	13%	30%
Sydney - North Sydney & Hornsby	835	57%	43%	41%	16%	14%	29%
Geelong	562	57%	43%	44%	13%	11%	32%
Southern Highlands and Shoalhaven	327	57%	43%	47%	9%	7%	36%

^{*}Includes SA1s with at least 1 family with a child in each of a Catholic school and an independent school, and valid observations of incomes. Family incomes are equal in some SA1s.

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The areas listed in Table 1 coincide with areas where, as recently reported in *The Australian*, enrolments have declined in Catholic schools. Specifically, there have been notable declines in enrolments in a number of Catholic schools in the Statistical Area 4s of Sydney – Northern Beaches and Sydney – North Sydney and Hornsby¹. These enrolment declines have mostly come about due to increases in school fees, which are in turn linked to the school SES scores received by Catholic schools in these areas. Thus, these Catholic schools are suffering directly as a result of SES scores that are structurally biased against them.

Figure 1 tests the assumption that all families in non-government schools within SA1s have the same capacity to pay school fees, with data from the 2016 Census, using a more sophisticated analytical approach.

The SES scoring methodology assumes that within SA1s there is no difference in the capacity of families to pay school fees – irrespective of whether they attend a Catholic or independent school.

In this analytical approach, the average incomes of Catholic school families and independent school families are separately compared against the overall average income of all families in non-government schools in their SA1. A test is conducted to see whether family incomes, by school sector, are statistically different from the average incomes of all families in non-government schools.

This analysis shows that the assumption underpinning the SES scoring methodology is false. On average, within SA1s, families with children in Catholic schools have incomes that are 2% below the average of all families with children in non-government schools, while families with children in independent schools have incomes that are 3% higher. These results are highly statistically significant.

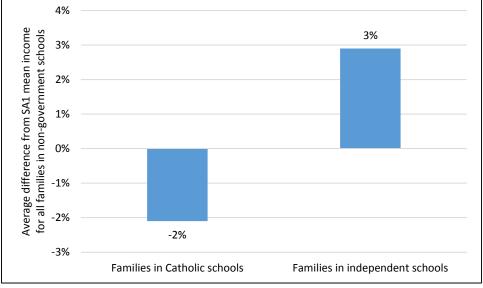


Figure 1: Comparison of average incomes within SA1s, Catholic and independent school families*

The bias against Catholic schools mostly arises in middle-income and upper-income areas. These are typically the areas where low-fee Catholic schools are co-located with high-fee, elite independent schools. In the SES scoring methodology, these areas attract SES scores of 105 and above. Over 40% of all students who attend independent schools live in these areas.

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^{*}This comparison shows how the average incomes of Catholic school families and independent school families compare against the average income of all families in non-government schools, across all SA1s in Australia containing at least one student from each school sector and valid observations of their family incomes. Source: ACIL Allen (unpublished)

¹ These schools are in suburbs such as Wahroonga, Waitara, Asquith, West Pymble, Lindfield, St Ives, Davidson, Manly, Pennant Hills, Freshwater, Northbridge and Chatswood.



Figure 2 refines the comparison above, by focussing exclusively on SA1s where SA1s receive a SES score of 105 and above.

Figure 2: Comparison* of average incomes within SA1s, Catholic and independent school families (restricted to areas with SES scores of 105 and above)

On average, as shown in Figure 2, in SA1s with SES scores of 105 and above:

- Families with children in Catholic schools have incomes that are 5% below the average of all families with children in non-government schools
- Families with children in independent schools have incomes that are 6% above the average of all families with children in non-government schools.

Again, these findings are highly statistically significant.

Overall, the data from the 2016 Census provides yet more evidence that the Turnbull Government's funding model is biased against Catholic schools. It is obvious from this data that SES scores short-change Catholic schools and overfund elite independent schools. In fact, the CECV has previously estimated that SES scores overfund elite independent schools by between \$250m and \$360m per annum. The 2016 Census data further validates these estimates.

Despite the clear bias in SES scores, in 2017, the Turnbull Government made school SES scores even more important in school funding, by removing the option for school systems to receive a system-average SES score (which was supported by the Gonski Review panel).

The ongoing use of a biased measure of school need, that over-funds elite independent schools, makes a mockery of claims by Minister Birmingham that he is ending 'special deals' in school funding. The use of SES scores in school funding continues a massive special deal for elite independent schools that has existed for almost 20 years, and has over funded them by billions in that time. While Minister Birmingham shamelessly and hypocritically attacks the Australia Labor Party for their school funding policies, there really is only one Minister for Special Deals.

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^{*}This comparison shows how the average incomes of Catholic school families and independent school families compare against the average income of all families in non-government schools, across SA1s with a SES score of at least 105 and at least one student from each school sector and valid observations of their family incomes. Source: ACIL Allen (unpublished)



Misleading claims made by independent schools from Census data

This section highlights a number of claims by the independent schools from Census data, and highlights why those claims are misleading.

Misleading ISCA claim

"Catholic systemic and independent schools and school communities have more similarities than differences and over time have moved to serve substantially similar populations..."

"Families that send their children to Catholic and independent schools are increasingly more similar in character, not less...The 2016 ABS Census data shows that each sector is primarily comprised of Medium-income families (\$52,000 to \$155,999). The independent and Catholic sectors have the same proportion of Low-income families (<\$51,999)."

(Source: ISCA submission to the review of SES scores)

MISLEADING

ISCA further cite data summarised in Figure 3 to illustrate the apparent 'similarity' between families in Catholic schools and independent schools.

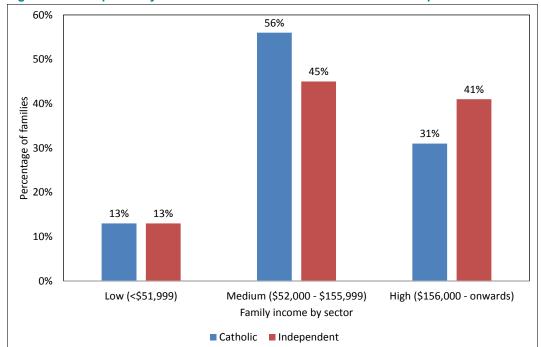


Figure 3: Data reported by ISCA to show 'similarities' in Catholic and independent school families

The reality

ISCA is attempting to overstate similarities between Catholic school families and independent school families in the way it is presenting data on family incomes by school sector. It is doing this by grouping family income data in ways to conceal important differences.

A more detailed breakdown of data on the distribution of family incomes from the 2016 Census, by school sector, is shown in Figure 4.

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There are distinct differences in family incomes by school sector 29% 30% ISCA groups these income ranges 25% together to conceal the fact that 23% Percentage of families %07 the highest income families mostly 21% go to independent schools 17% 13% 12% 12% 10% 6% 6% 6% 5% 0% <\$33.8k \$33.8k-\$65k \$65k-\$104k \$104k-\$156k \$156k-\$182k \$182k-\$208k \$208k-\$260k Above \$260k Family income by sector (range) ■ Catholic ■ Independent

Figure 4: Data on family incomes by school sector from the 2016 Census, Australia

Percentages excludes 'nil income', 'negative income', 'partial incomes stated' and 'all incomes not stated' Source: ABS Census of Population and Housing 2016 (unpublished)

Figure 4 clearly shows that families in Catholic schools and families in independent schools have distinctly different incomes.



Catholic schools have many more middle-income families, and independent schools have many more high-income families.

THE REALITY

The families with the highest incomes mostly go to independent schools. For example, 25% of families in independent schools have annual incomes above \$208,000 per annum (compared to only 15% of families in Catholic schools), while 13% of families in independent schools have annual incomes above \$260,000 per annum (compared to only 6% of families in Catholic schools).

ISCA has chosen particular ways to group the data shown in Figure 4, to attempt to conceal these differences. In particular, by grouping together all families with incomes above \$156,000 per annum, ISCA is concealing the high share of families in independent schools with the highest incomes.

Distinct differences in families in Catholic schools and families in independent schools are also evident in data on the Socio-Educational Advantage (SEA) of students (see Table 3).

Table 3: Share of students in independent and Catholic schools by SEA quartile (2017)

Students by SEA quartile	Share of enrolments in independent schools (%)	Share of enrolments in Catholic schools (%)
SEA quartile 1 (most disadvantaged)	9.1%	14.7%
SEA quartile 2	17.5%	25.4%
SEA quartile 3	27.4%	30.8%
SEA quartile 4 (most advantaged)	46.0%	29.2%

Source: ACARA MySchool dataset (2017)

Catholic schools have significantly more disadvantaged students than independent schools (SEA quartile 1 and quartile 2 students), while independent schools have a very high proportion of the most advantaged students (SEA quartile 1 students).

THE REALITY

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Misleading ISCA claim

"ISCA's analysis of the ABS Census data also shows that by far the largest group of high income families send their children to government schools (47 per cent), followed by Catholic schools (28 per cent) and finally independent schools (25 per cent)."



MISLEADING

(Source: ISCA submission to the review of SES scores)

The reality

ISCA has prepared this data in a misleading way, to argue that there are 'few' high income families in independent schools. It has done this by:

- Categorising all families who earn above \$156,000 per annum as 'high income' this figure has
 been set at an artificially low level, to try and include as many families as possible in Catholic and
 government schools. The data changes significantly when a higher income threshold is set.
- Reporting figures in terms of the total number of students given that the independent sector has only 15% of total enrolments in Australia, reporting on the total number of students lead to an artificially low estimate for independent schools. Since government schools have over 4 times more enrolments than independent schools, it is to be expected that they have a higher number of students from high income families. Similarly, the Catholic sector has 33% more students than independent schools. The data changes significantly when it is adjusted for the enrolment share of each sector.

Table 4 reports on figures using different thresholds to classify families as 'high income', and adjusts the data for the enrolment share of each sector (by reporting high-income families in terms of the percentage of total families in each sector).

Family income threshold (\$ per annum)	Percentage of families in independent schools	Percentage of families in Catholic schools	Percentage of families in government schools
Above \$156,000	41%	30%	19%
Above \$182,000	33%	22%	13%
Above \$208,000	25%	15%	9%
Above \$260,000	13%	6%	3%
Above \$312,000	7%	3%	2%

Table 4: Data reported by ISCA to show 'similarities' in Catholic and independent school families

Percentages excludes 'nil income', 'negative income', 'partial incomes stated' and 'all incomes not stated'

Source: ABS Census of Population and Housing 2016 (unpublished)



As can be seen, when the data is adjusted for enrolment share, **independent schools have a** disproportionately high percentage of 'high income families' compared to Catholic schools and (especially) government schools.

THE REALITY

The differences between sectors grow with the threshold used to classify families as 'high income'. For example, 25% of families in independent schools have incomes above \$208,000 per annum, compared to 15% of families in Catholic schools and 9% of families in government schools.

The fact is that independent schools have a much higher share of high-income families than Catholic schools and government schools, after taking into account their overall enrolment share.

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Misleading AIS NSW claim

"Independent schools in New South Wales serve a higher proportion of families on low incomes (14 per cent) than Catholic system schools (13 per cent)



(Source: AIS NSW media release, 21 March 2018)

MISLEADING

The reality

AIS NSW is presenting a misleading portrait of the families in Catholic and independent schools through the selective use of Census data. In this instance, AIS NSW has defined 'low income' families to suit its agenda, and ignored enrolments of middle-income and high-income families.

Specifically, AIS NSW has defined 'low income' families to include those earning less than \$52,000 per annum, and in this group it has included families who declared in the Census that they had a 'nil income' or a 'negative income'. It is disingenuous to include such families. The Australian Bureau of Statistics has analysed various characteristics of families who live in households that report nil or negative income, and reports as follows:²

In all the analyses, it was observed that people living in households with nil or negative income tended to have more similar characteristics to those living in higher income households.

Presumably, AIS NSW included families who declared they had 'nil income' or 'negative income' in the Census because there are slightly more of these in independent schools than Catholic schools.

A more detailed breakdown of data on the distribution of family incomes from the 2016 Census, by school sector in New South Wales, is shown in Figure 5.

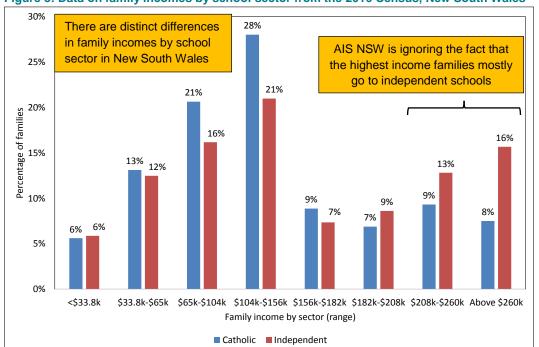


Figure 5: Data on family incomes by school sector from the 2016 Census, New South Wales

Percentages excludes 'nil income', 'negative income', 'partial incomes stated' and 'all incomes not stated' Source: ABS Census of Population and Housing 2016 (unpublished)

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² ABS 2013, Census of Population and Housing: Socio-Economic Indexes For Areas (SEIFA), Australia 2011, Cat no 2003.0.55.001



In New South Wales, Catholic and independent schools have similar shares of enrolments from families with the lowest incomes.

However, there are distinct differences between Catholic schools and independent schools in New South Wales in their enrolments of middle-income and high-income families.



THE REALITY

Enrolments in Catholic schools are highly skewed to low-income and middle-income families.

Meanwhile, independent schools have a relatively high share of enrolments from high-income families.

For example, almost 30% of students in independent schools in New South Wales come from families with incomes above \$208,000 per annum (compared to only 17% in Catholic schools).

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