



Comparing the Family Income of Students in Alberta's Independent and Public Schools

by Angela MacLeod, Sasha Parvani, and Joel Emes

SUMMARY

- On average, families with children in independent schools earned \$130,127 in after-tax income compared to \$97,301, on average, for families with children in public schools, which represents a difference of 33.7 percent.
- If the families with children attending elite independent schools are removed, the average after-tax income for the remaining families with children enrolled in independent schools falls to \$95,549, which is 1.8 percent less than the average income for families with children attending public schools.
- Only 17.7 percent of independent schools in Alberta were classified as elite in the year of analysis.
- Families with children in elite independent schools earned an average after-tax income of \$192,265, which is 97.6 percent higher than the average income for families with children in public schools.
- Decreasing the coverage ratio to 50 percent or increasing it to 80 percent does not significantly alter the results. Families with children enrolled in non-elite independent schools have levels of average after-tax income comparable to those of families with children attending public school.

Introduction

Public financial support for independent schools in Canada has been a highly contested issue in education policy circles. At present, Alberta is one of five provinces that provide public funding to independent schools. Accredited independent schools in the province receive grants amounting to 60 or 70 percent of the per-pupil operating funding allocated to public schools in the region.¹

This paper examines the average income of families in Alberta with respect to the category of school attended by children in the household. The main analysis provides a comparison of average income of parents with children attending public schools and parents with children enrolled in independent schools. This report builds on and extends the analysis of a previous paper, *Comparing the Family Income of Students in BC's Independent and Public Schools*.

The first section provides an overview of the independent and public school landscape in Alberta. The second section briefly outlines the methodological approach used to construct the analysis. The third section presents the empirical results.

Background: Independent and Public Schools in Alberta

The educational landscape in Alberta provides a variety of educational choices to families. The public school system alone includes public schools, separate schools, and charter schools. In 2014/15, the vast majority of Albertan students were enrolled in a public school, accounting for 94.1 percent of total enrolment within the province.² It is important to note that Alberta is one of only three provinces that operate separate schools—offering primarily

Roman Catholic instruction—within the public school system. In fact, student enrolment in separate schools within the province has increased substantially. In 2014/15, separate school enrolment accounted for nearly a quarter (24.9 percent) of total student enrolment in Alberta.³ Lastly, Alberta is the only province that permits charter schools within the public school system. In 2014/15, 1.4 percent of all students in the province attended a charter school.

Much like Alberta's public schools, independent schools in the province are diverse in their religious orientation and pedagogical approach. In 2014/15 there were 29,400 students in Alberta attending an independent school, accounting for 4.4 percent of all student enrolment in the province.⁴ Although independent schools are often perceived as serving the urban elite, in reality the majority of independent schools address diverse religious, pedagogical (such as Waldorf schools, Montessori schools, and schools emphasizing specific curriculum such as arts, athletics, or Science/Technology/Engineering/Math), and special needs preferences.

In this study, we have classified elite independent schools using a methodology that differs from previous work in this area that used membership in organizations such as Canadian Accredited Independent Schools (CAIS) or the Independent Schools Association of British Columbia (ISABC) as a proxy for identifying elite schools. When looking at Alberta's independent schools, it became apparent that schools we would expect to be classified as elite based on tuition costs were not members of CAIS. As such, in this analysis, elite schools are defined as any school that charges more than 10 percent of the average after-tax family income⁵ in Alberta, or \$11,190.⁶

With the above in mind, the portion of independent schools in the province that can reasonably be identified as elite is relatively small. In 2014/15, only 17 (or 17.7 percent) of the 96 independent schools in Alberta were classified as elite. In contrast, 79 (or 82.3 percent) of Alberta's 96⁷ independent schools were identified as non-elite and remain affordable choices for a wide array of families from diverse backgrounds.

Data Sources and Methodology

The analyses in this report rely on two distinct datasets, one provided by the Ministry of Education in Alberta and the other from Statistics Canada. This section provides an overview of the data sources and outlines the calculations used to determine parental income by family, differentiated by the type of school attended by the family's children.

Data from the Alberta Ministry of Education

Alberta's Ministry of Education compiles data that indicates enrolment by school distributed by postal code and dissemination areas for students attending each school in the province. This paper uses the 2014 file which was collected as part of the Fraser Institute's School Report Card program.

The ministry file also included enrolment data allocated by grade and school. This dataset was used to calculate the proportion of a school's total enrolment in elementary grades. In order to determine the elementary enrolment ratio, we categorized schools as elementary, secondary, or both, where the latter signifies that elementary and secondary students are enrolled in a single school.

Total enrolment for the province in 2014 was 623,136. We were unable to classify 68 students

due to data gaps and another 8,125 were excluded because they were enrolled in early childhood services (ECS), special needs, Saturday learning, and adult education programs. This left us with a total of 614,943 students.

Data from the 2011 National Household Survey

Average parental income is based on "average total income after tax" for Census families as defined by and obtained from Statistics Canada. The dataset was categorized by dissemination area and filtered to include only families with at least one child within the age range specified by the analysis. In other words, the data was filtered to exclude families without children. Also, as per Statistics Canada's standard practice, we excluded any records that had a global non-response rate of 50 percent or more. To clarify, Statistics Canada uses a global non-response rate as an indicator of data quality from the NHS. A global non-response rate of 50 percent means that 50 percent of Alberta residents in the specific region of interest did not provide information. In other words, we dropped any dissemination area where more than half of the relevant population did not provide income information for the NHS. Students in dissemination areas with no reported parental income in the Statistics Canada source file were also filtered out.

Families were matched to enrolment by age. Students in Kindergarten through grade 5 were matched to families with children aged 5 to 10, and students in grades 6 through 12 were matched to families with children aged 11 to 16. We used two smaller age ranges rather than one large one to account for the likelihood that families with older children would have higher income (because the parents were older and more experienced and therefore earning more income). We chose age ranges with six years in each group.

The average income reported for a school is based on the average income in the dissemination area where the student's family resides, weighted by the number of students in the school from that dissemination area. For example, if all students in a school (public or independent) resided in a single dissemination area, the income reported for the school would be the same as that for the dissemination area.

Parental income was matched to enrolment by dissemination area for both elementary and secondary schools. A school in this context refers to the group of elementary or secondary students within a school. Although many actual schools contain only elementary or secondary students, a number of schools have both. For each age group, average income by school was calculated as the sum of the share of students in each dissemination area. Average income as reported in the tables below is an average of income by school, weighted by the number of students in the school.

A number of the records in the files supplied by Statistics Canada were suppressed to meet the confidentiality requirements of the Statistics Act. For this reason, 153,657 students in the ministry-provided files were excluded.

Allowing for data gaps, these files provided full information for a total of 461,286 students, with 449,011 in public schools, and 12,274 attending independent schools. This represented 74 percent of all students enrolled in Alberta.

Coverage: Share of Students with Income Data Available

The starting sample was 461,286 students. Suppressed parental income data further impacts the sample as many of the schools have no reported parental income for a select number of their students. The main analysis utilized a

65 percent coverage ratio, which means that at least 65 percent of the students in these schools had reported parental income available. Any schools with less than 65 percent coverage were dropped from the analysis.

Results are also reported for 50 and 80 percent coverage ratios in order to highlight the small variance from the 65 percent coverage ratio.

Empirical Results

Table 1 presents (and **figure 1** illustrates) the empirical results from the 65 percent coverage ratio analysis. Any schools that did not have parental income data for at least 65 percent of the student body were excluded from the analysis. This leaves 419,494 students in the analysis, a reduction of 41,792 students or 9 percent.⁸

The first table (rows 1 and 2) compares the income of families with children attending public schools, and those attending independent schools. The average after-tax income for a family with children in public schools is \$97,301 compared to \$130,127 average after-tax family income for families with children in all types of independent schools. This represents a difference of \$32,826, or 33.7 percent. In other words, when looked at on the whole, families with children attending independent schools have an average after-tax family income that is 33.7 percent higher than families with children attending public schools.

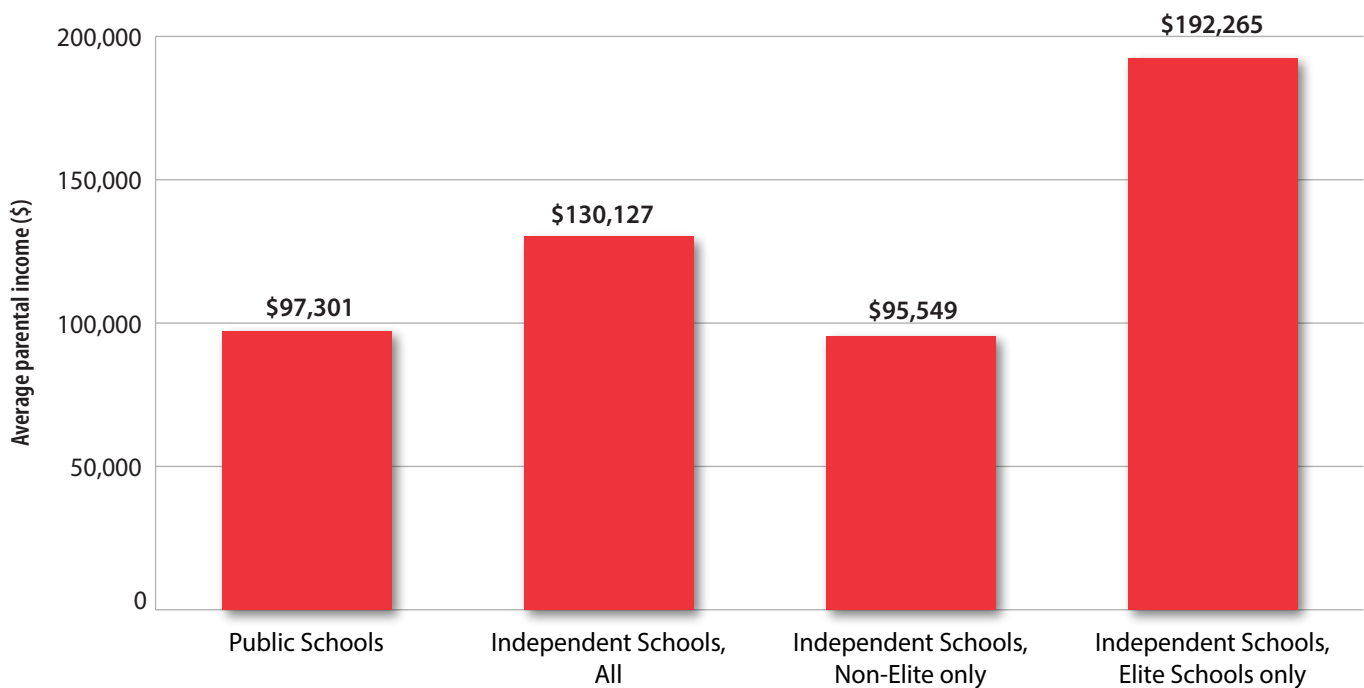
However, these numbers for independent schools include elite independent schools. If the families with children attending elite independent schools are removed, the average income (after tax) for the remaining families with children attending independent schools falls to \$95,549, which is actually \$1,752 or 1.8 percent less than the average income for families with children attending public

Table 1: Parental Income, Public Versus Independent Schools (65% and above coverage)

	Average Parental Income \$	Difference Compared to Public Schools \$	Difference Compared to Public Schools %	Number of Students
Public Schools	97,301			407,777
Independent Schools, All	130,127	32,826	33.7%	11,717
Independent Schools, Non-Elite only	95,549	-1,752	-1.8%	7,528
Independent, Non-Elite, Religious Affiliation	91,990	-5,311	-5.5%	5,412
Independent, Non-Elite, No Religious Affiliation	104,655	7,354	7.6%	2,115
Independent Schools, Elite Schools only	192,265	94,964	97.6%	4,189

Note: The 65% Coverage Ratio used in this analysis removes 41,792 (9%) of the 461,286 students with parental income.

Figure 1: Parental Income, Public vs. Independent Schools



schools (table 1, line 3). Put simply, families with children in public schools have levels of income comparable to those of families with children in independent schools, once the elite preparatory schools are removed.

We can also further sub-categorize non-elite independent schools into those that have a religious affiliation versus those that do not. Rows 4 and 5 of table 1 show the respective average

income for families in non-elite religious and non-elite, non-religious independent schools. Families with children in non-elite, religious independent schools had an average after tax family income of \$91,990. This is \$5,311 or 5.5 percent lower than families in public schools.

Families with children in non-elite secular schools had an average after tax family income of \$104,655. This is \$7,354 or 7.6 percent higher

than the income of families with children attending public schools.

Finally, we look at families with children attending elite independent schools. These families have an average after tax income of \$192,265, which is \$94,964 or 97.6 percent higher than for families with children in public schools. In other words, families with children attending elite independent schools have an after-tax income that is nearly double that of families choosing public schools.

50 Percent Coverage

Table 2 displays the empirical results for schools with at least a 50 percent coverage ratio. This indicates that we have average parental income for 50 percent or more of the school’s student population. This filter removes only 14,629 (3.0 percent) of the 461,286 students. Consequently, the number of students included in this calculation differs only minimally from an analysis using no filter.

On average, families with children in non-elite independent schools earned \$95,000 in after-tax income compared to \$96,475 average

after-tax income for families with children enrolled in public schools. This means that the average income for non-elite independent school families is \$1,475, or 1.5 percent lower than families with children attending public schools. This is only a slightly smaller difference than the 1.8 percent difference that was calculated using a 65 percent coverage ratio.

80 Percent Coverage

Finally, **table 3** illustrates the empirical results for schools with a coverage ratio of 80 percent. This indicates that 80 percent of the school’s student population had parental income available. This filter removes 147,228 (32 percent) of the 461,286 students with parental income.

The average after-tax income for families with children in non-elite independent schools was \$98,600, in comparison to \$100,602 for families with children attending public schools, which is a difference of \$2,002 or 2.0 percent. These results are again generally in line with the results from the main analysis using the 65 percent coverage ratio.

Table 2: Parental Income, Public Versus Independent Schools (50% and above coverage)

	Average Parental Income \$	Difference Compared to Public Schools \$	Difference Compared to Public Schools %	Number of Students
Public Schools	96,475			434,617
Independent Schools, All	128,842	32,367	33.5%	12,039
Independent Schools, Non-Elite only	95,000	-1,475	-1.5%	7,850
Independent Schools, Elite Schools only	192,265	95,790	99.3%	4,189

Note: The 50% Coverage Ratio used in this analysis removes 14,629 (3%) of the 461,286 students with parental income.

Table 3: Parental Income, Public Versus Independent Schools (80% and above coverage)

	Average Parental Income \$	Difference Compared to Public Schools \$	Difference Compared to Public Schools %	Number of Students
Public Schools	100,602			304,910
Independent Schools, All	136,911	36,309	36.1%	9,147
Independent Schools, Non-Elite only	98,600	-2,002	-2.0%	5,500
Independent Schools, Elite Schools only	194,685	94,083	93.5%	3,647

Note: The 80% Coverage Ratio used in this analysis removes 147,228 (32%) of the 461,286 students with parental income.

Conclusion

This report examined the average family income in Alberta for families choosing public schools versus those choosing independent schools. The average after-tax income for a family with children attending public schools is \$97,301, in comparison to \$130,127 for families with children in all types of independent schools. However, the average after-tax income for families with children enrolled in non-elite independent schools is \$95,549, which is 1.8 percent less than the average income for families with children attending public schools. Simply put, families choosing independent schools that are not considered elite schools have essentially the same level of household income as families in Alberta that choose public schools.

As a result, the vast majority of independent schools serve families at similar income levels to families who send their children to public schools.

Endnotes

- For information about private schools in Alberta, visit <<https://education.alberta.ca/private-schools/private-schools-in-alberta/everyone/external-links/>>.
- MacLeod and Hasan (2017).
- Ibid.
- Ibid.
- Statistics Canada (2017), average after-tax income for economic families in 2015 (latest year available).
- Although there is no objective measure to identify elite schools, the authors agreed that the classification should be based on income and accessibility. Previous studies on childcare and energy poverty gravitate towards a 10 percent rule. For example, a City of Toronto study on childcare classifies fees of less than 10 percent of net family income as affordable and fees above 10 percent as unaffordable. Similarly, in energy poverty literature, it is a generally accepted convention that households spending 10 percent or more of their incomes on energy services are considered to be fuel poor. See Cleveland et al. (2016), Boardman (1991), and Lesser (2015) for further discussion of these two areas of research.
- Tuition data was collected by the authors through visiting schools' websites and, if necessary, contacting schools directly via phone or email in June, 2017. We were unable to attain tuition information for 1,194 (9.7 percent) of independent students with parental income.
- The number of students attending public schools decreases to 407,777, and the number of independent school students declines to 11,717.

References

- Boardman, B. (1991). *Fuel Poverty: From Cold Homes to Affordable Warmth*. Belhaven Press.
- Clemens, Jason, Sasha Parvani, and Joel Emes (2017). *Comparing the Family Income of Students in British Columbia's Independent and Public Schools*. Fraser Institute. <<https://www.fraserinstitute.org/studies/comparing-the-family-income-of-students-in-british-columbias-independent-and-public-schools>>
- Cleveland, G., M. Krashinsky, S. Colley, and C. Avery-Nunez (2016). *Technical Report: City of Toronto Licensed Child Care Demand and Affordability Project*. Self-published. <https://www.researchgate.net/profile/Gordon_Cleveland/publication/309119751_City_of_Toronto_Licensed_Child_Care_Demand_and_Affordability_Study/links/57ffaf1b08ae6fc7fc65182c/City-of-Toronto-Licensed-Child-Care-Demand-and-Affordability-Study.pdf>
- Lesser, Jonathan A. (2015). *Less Carbon, Higher Prices: How California's Climate Policies Affect Lower-Income Residents*. Manhattan Institute.
- MacLeod, Angela, and Sazid Hasan (2017). *Where our Students are Educated: Measuring Student Enrolment in Canada – 2017*. Fraser Institute. <<https://www.fraserinstitute.org/sites/default/files/where-our-students-are-educated-measuring-student-enrolment-in-canada-2017.pdf>>
- Statistics Canada (2017). *Market income, government transfers, total income, income tax and after-tax income, by economic family type, Canada, provinces and selected census metropolitan areas (CMAs)*. Statistics Canada. <<http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=2060011&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>>>
- Van Pelt, Deani, Sazid Hasan, and Niels Veldhuis (2016). *Independent Schools in British Columbia: Myths and Realities*. Fraser Institute. <<https://www.fraserinstitute.org/sites/default/files/Independent%20Schools%20in%20BC%20-%20WEB%20final.pdf>>



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