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Education Spending and Public Student Enrolment in Canada 2017 Edition

by Angela MacLeod and Joel Emes

Summary

- To accurately understand education spending, both enrolment changes and the effects of price changes must be considered.
- For Canada as a whole, over the last decade (2005–06 to 2014–15), the increase in per-student spending in public schools is 22.3 percent (once adjustments have been made for inflation). Specifically, per-student education spending in public schools, accounting for changes in prices, increased from $10,339 to $12,646 between 2005–06 and 2014–15.
- Prince Edward Island saw the largest increase in per-student spending in public schools (after adjusting for inflation): 41.8 percent, from $8,891 in 2005–06 to $12,610 in 2014–15. The smallest increase was in British Columbia (14.0 percent). Per-student spending in public schools in all 10 provinces increased over this period (after accounting for the effects of inflation).
- Saskatchewan had the highest level of per-student spending among the provinces in 2014–15, at $15,040 per student. It also had the second highest increase in inflation-adjusted per-student spending over the period (37.2 percent).
- In aggregate, Canada increased education spending in public schools by $11.2 billion more between 2005–06 and 2014–15 than was necessary to account for enrolment and price changes. If per-student spending in public schools had remained constant over this period, the aggregate amount of education spending in public schools would have been 17.6 percent lower.

Introduction

In an ongoing effort by the Barbara Mitchell Centre for Improvement in Education to provide Canadians with basic information regarding the state of K–12 education, this bulletin focuses on the change in per-student education spending in public schools over the last decade (2005–06 to 2014–15). It is an update to, and based on the study by, Clemens, Emes, and Van Pelt (2016).

The bulletin has five short sections. The first explains the increase in total education spending on public schools by province over the last decade (2005–06 to 2014–15). The second shows enrolment numbers for each of the provinces for public schools over the same period. The third calculates per-student spending in public schools over time, combining the data from the first two sections. The fourth section then adjusts the data from section three to account for inflation (i.e., price changes). The fifth compares the actual increases in education spending on public schools by province with the amount predicted by enrolment changes in order to give a better context for the increases in spending in public schools across the country.

Total Education Spending on Public Schools

This section examines total spending in public schools over the last decade (2005–06 to 2014–15). It is important to recognize several aspects of this measure. First, it is limited to spending on public schools, as distinct from spending on public education. This means government spending on independent schools in Quebec and the four western provinces (where the provincial governments do provide funding to those schools) is excluded.

Second, Statistics Canada's currently available data includes some small categories of revenue and spending that could be considered non-governmental and are difficult to remove. Specifically, "Fees & Other Private Sources" is included in this bulletin's data series. The category includes rentals and leases, investment revenues, capital fund-sourced revenues, other fees, trust account revenues, interschool transfers, and adjustments. These items represent a comparatively small amount of revenues and spending relative to the entire envelope of spending on public schools. However, it is important to recognize that the measure relied on for this bulletin may include a small amount of private revenues and spending.

In addition, the dataset used includes several categories of spending on public schools that are often ignored or purposefully excluded. Specifically, this dataset includes spending on capital (particularly new school construction and renovations to existing schools), as well as contributions to teacher pension plans. The inclusion of these spending categories is particularly important given their relative growth in recent years.[1]

The specific definition used for this dataset is as follows: "public elementary and secondary education expenditures" less "direct government expenditures on public education by the Department of National Defence," "federal school expenditures," and "special education expenditures on public education" (Statistics Canada, 2017).

Table 1 and **figure 1** show data for spending on public schools in 2005–06 and 2014–15. In aggregate, spending on public schools in 2014–15 amounted to $63.9 billion, an increase of $17.5 billion, or 37.7 percent from 2005–06 when spending on public schools was $46.4 billion.

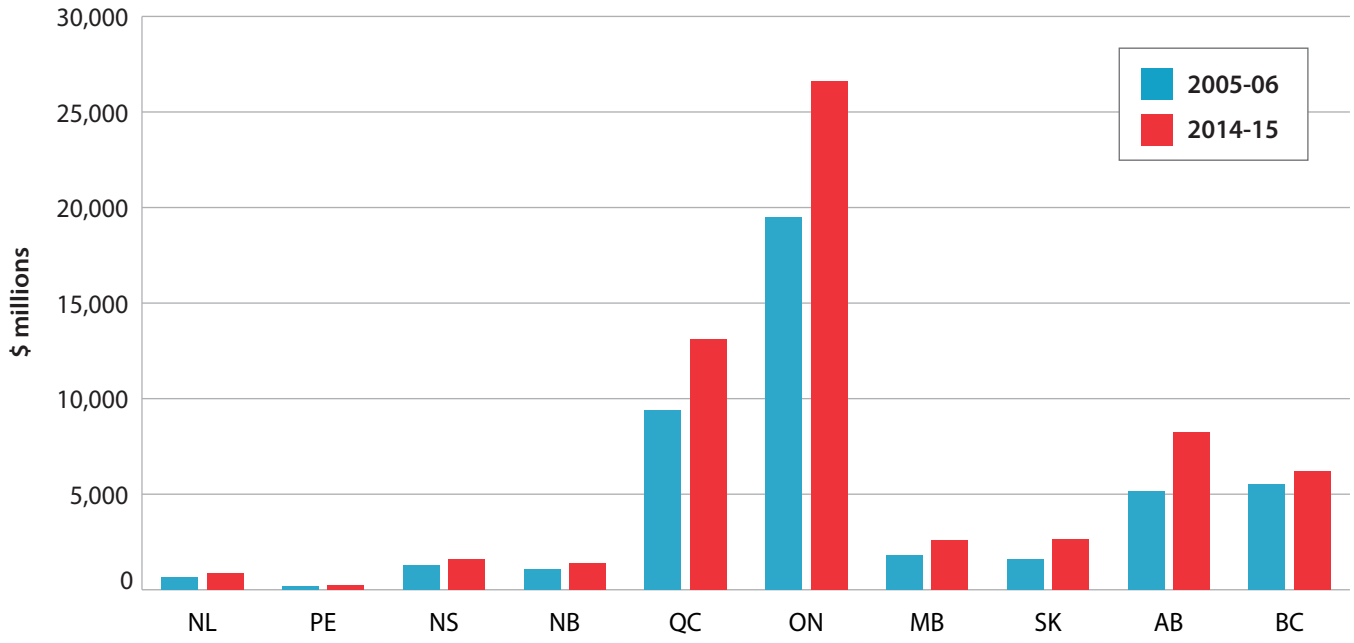
The largest provincial increase in spending on public schools over the last decade was in Saskatchewan, which experienced a 65.0 percent rise. The smallest increase was in British Columbia (12.6 percent). A total of seven provinces had a marked increase in spending on public schools—in excess of 35.0 percent.

Table 1: Education spending in government schools

	2005/06	2014/15	2005/06–2014/15	
	$ millions		*Nominal change ($ millions)*	*% change*
Canada	46,444	63,938	17,494	37.7%
NL	649	885	236	36.4%
PE	168	251	83	49.3%
NS	1,276	1,573	298	23.3%
NB	1,066	1,370	305	28.6%
QC	9,393	13,116	3,723	39.6%
ON	19,470	26,596	7,125	36.6%
MB	1,819	2,606	787	43.2%
SK	1,592	2,628	1,036	65.0%
AB	5,171	8,257	3,086	59.7%
BC	5,508	6,200	692	12.6%

Source: Statistics Canada (2017c).

Figure 1: Spending on public schools



Source: Statistics Canada (2017c).

Enrolment in Public Schools

As explained in a previous essay in this series (Van Pelt and Emes, 2015), aggregate spending on public schools misses a critical component: enrolment. Any analysis of education spending that ignores enrolment risks materially misrepresenting the reality of education spending. An increase in aggregate education spending that is less than the increase in enrolment results in a per-student decrease in spending on education. Alternatively, a reduction in education spending that is less than a reduction in enrolment results in an increase in per-student spending. It is, therefore, critical to account for changes in enrolment when analyzing education spending.

Table 2 contains enrolment data for Canada as a whole and for the individual provinces between 2005–06 and 2014–15, the most recent data available. **Figures 2a to 2d** illustrate the provincial enrolment over the same period by region.

Table 2: Enrolment in Public Schools, 2005–06 to 2014–15 (number of students)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	% change, 2005-06 to 2014-15
Canada	5,212,533	5,163,824	5,115,188	5,086,549	5,074,254	5,072,031	5,048,127	5,050,212	5,052,339	5,055,987	-3.0%
NL	76,806	74,343	72,111	70,641	69,666	68,655	67,827	67,479	67,293	67,167	-12.5%
PE	21,948	21,366	20,811	20,325	19,956	21,162	20,829	20,406	20,130	19,938	-9.2%
NS	142,304	138,661	135,303	133,134	130,548	128,133	125,538	122,643	121,029	119,382	-16.1%
NB	114,819	112,014	110,286	108,405	106,395	104,421	102,579	101,079	99,921	98,907	-13.9%
QC	1,216,293	1,204,622	1,188,903	1,187,612	1,189,632	1,179,801	1,172,145	1,176,852	1,183,587	1,187,106	-2.4%
ON	2,118,546	2,103,465	2,087,586	2,070,735	2,061,390	2,051,865	2,043,117	2,031,195	2,015,385	2,003,238	-5.4%
MB	182,373	180,042	179,322	177,960	177,498	177,681	178,920	179,292	179,106	179,733	-1.4%
SK	174,206	166,498	167,181	164,763	166,002	165,573	166,863	169,725	171,987	174,744	0.3%
AB	551,739	560,562	559,119	564,051	567,810	573,102	578,115	594,549	611,874	629,592	14.1%
BC	589,388	578,626	571,267	565,875	562,740	579,111	569,736	564,531	558,984	552,786	-9.1%

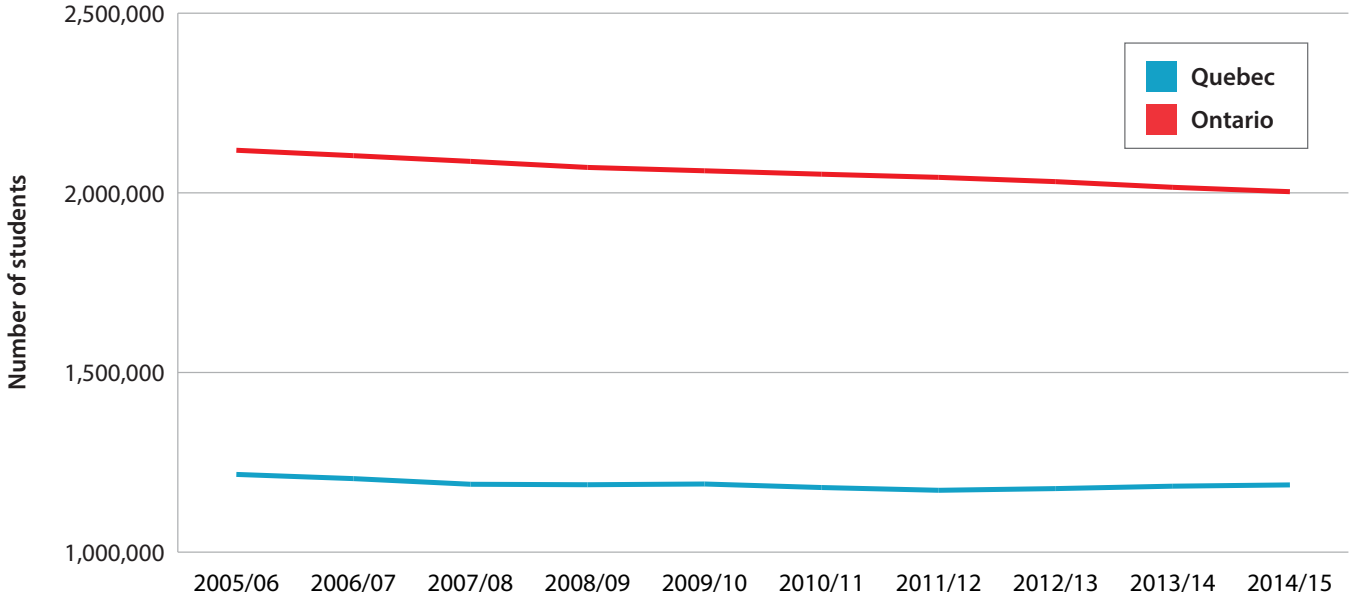
Source: Statistics Canada (2016, 2017b).

Note: From 2010/2011 onwards, the enrolment counts for British Columbia include students in "distributed learning." British Columbia's percent change calculation is adjusted for this fact.

Total enrolment in public schools in Canada declined by 3.0 percent between 2005–06 and 2014–15, from 5.2 million to a little over 5.0 million students. Total Canadian enrolment was at its lowest point over the last decade in 2011–12, and has seen small increases in each of the following years. Alberta saw the most significant increase in public school enrolment at 14.1 percent over the entire period. Saskatchewan is the only other province to experience a positive change in enrolment, although its increase is quite small at 0.3 percent.

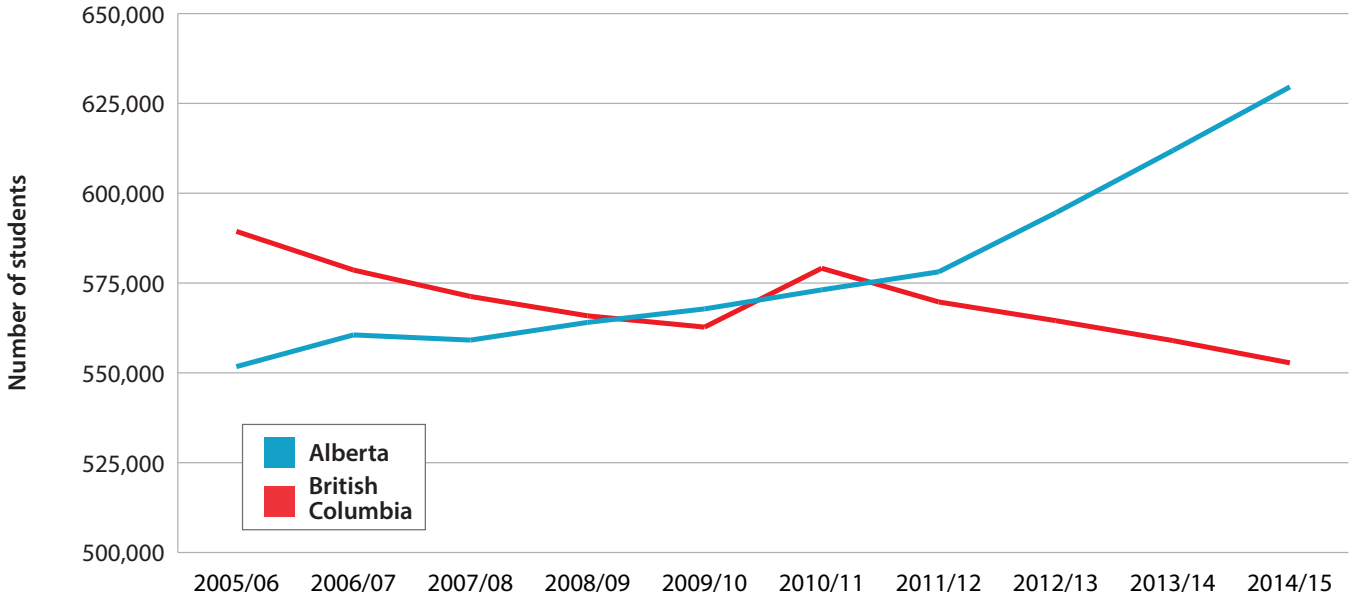
The other eight provinces all saw a drop in public school enrolment over the period. The largest declines were in Atlantic Canada, which ranged from a drop of 9.2 percent in Prince Edward Island to a drop of 16.1 percent in Nova Scotia. Outside of Atlantic Canada, British Columbia recorded the largest fall in public school enrolment at 9.1 percent.

Figure 2a: Enrolment in public schools, Ontario and Quebec



Source: Statistics Canada (2016, 2017b).

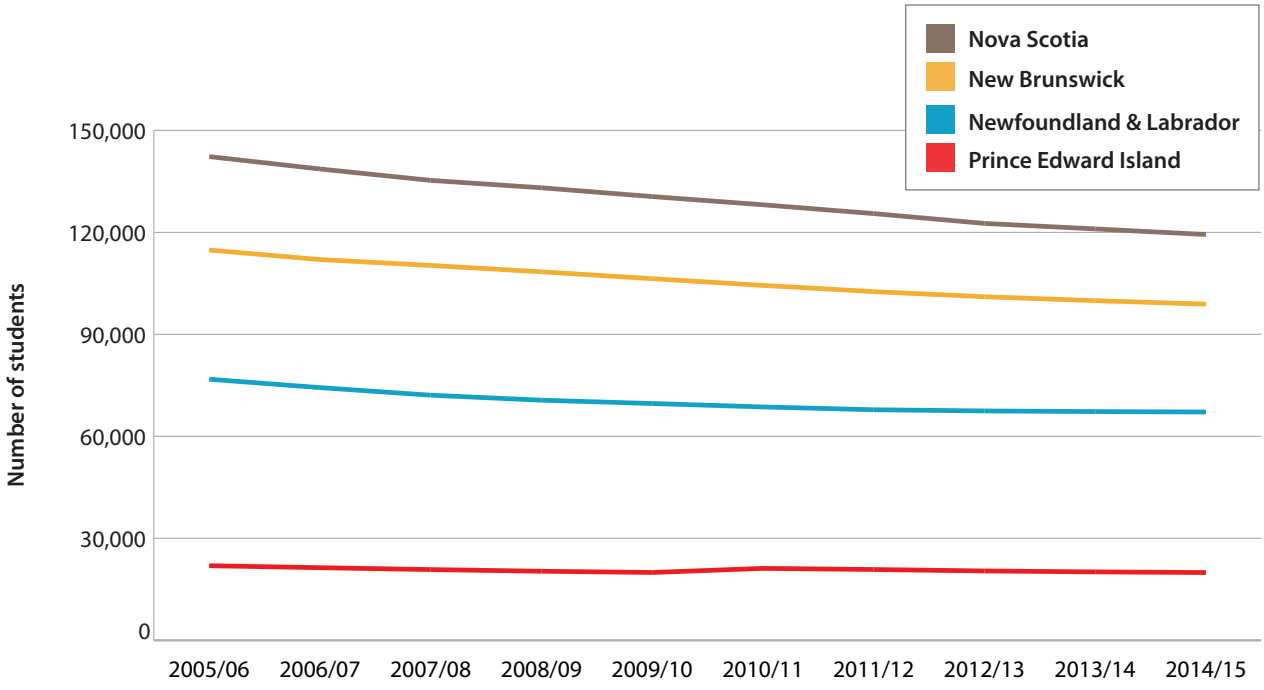
Figure 2b: Enrolment in public schools, Alberta and British Columbia



Source: Statistics Canada (2016, 2017b).

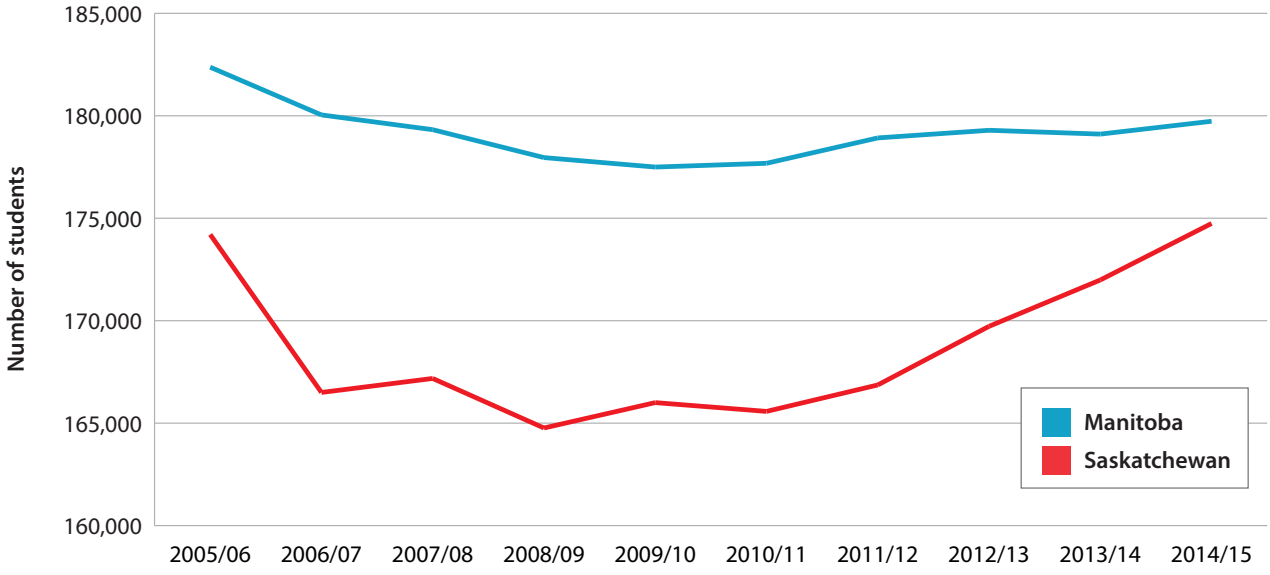
Notes: From 2010/2011 onwards, the enrolment counts for British Columbia include students in "distributed learning."
Alberta's enrolment change is consistent with the rest of Canada when calculated as a share of population. Specifically, enrolments to population fell by 7.7% in Alberta and by 12.0% in Canada as a whole.

Figure 2c: Enrolment in public schools, Atlantic Canada



Source: Statistics Canada (2016, 2017b).

Figure 2b: Enrolment in public schools, Manitoba and Saskatchewan



Source: Statistics Canada (2016, 2017b).

The declines in public school enrolment over this period are generally due to a combination of slow growing or even shrinking school-age population (depending on the province) and the transition of students to independent schools and homeschooling.[2]

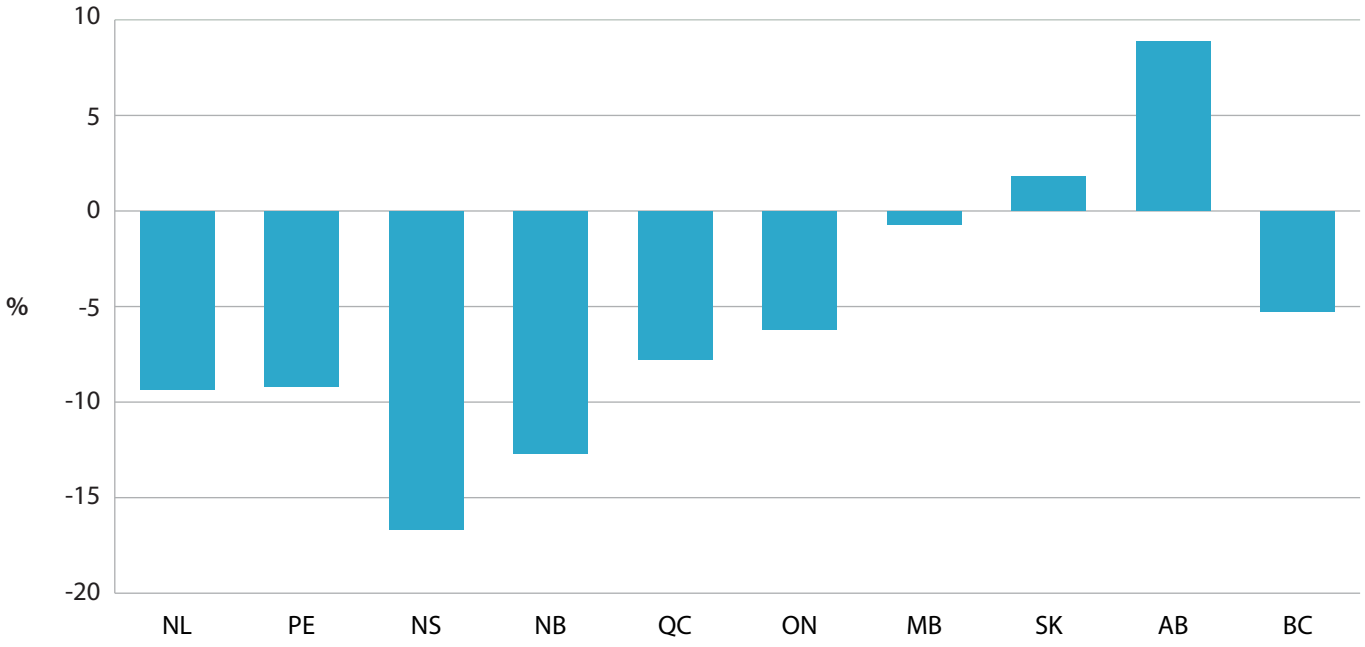
Figure 3 illustrates the percentage change in the number of people of school age (ages 5 to 17) by province between 2006 and 2015. In only two provinces did the number of residents that were school-aged rise: Alberta (8.9 percent) and Saskatchewan (1.8 percent). In every other province, the absolute number of residents that were of school age fell over this period. The reduction in the school-aged population ranged from -0.7 percent in Manitoba to -16.6 percent in Nova Scotia.

Per-Student Spending in Public Schools

The decline in public school enrolment in eight of the ten provinces means that the per-student increases in spending are larger than the simple aggregated spending increase presented above. **Table 3** and **figure 4** present data on per-student spending in public schools between 2005–06 and 2014–15.

Canada as a whole recorded a 41.9 percent increase in per-student spending in public schools between 2005–06 and 2014–15—from $8,910 in 2005–06 to $12,646 in 2014–15. This is higher than the noted increase in aggregate spending of 37.7 percent over the same period because of the influence of declining student enrolment.

Figure 3: Change in school-aged population, by province, 2006–2015



Source: Statistics Canada (2017d).

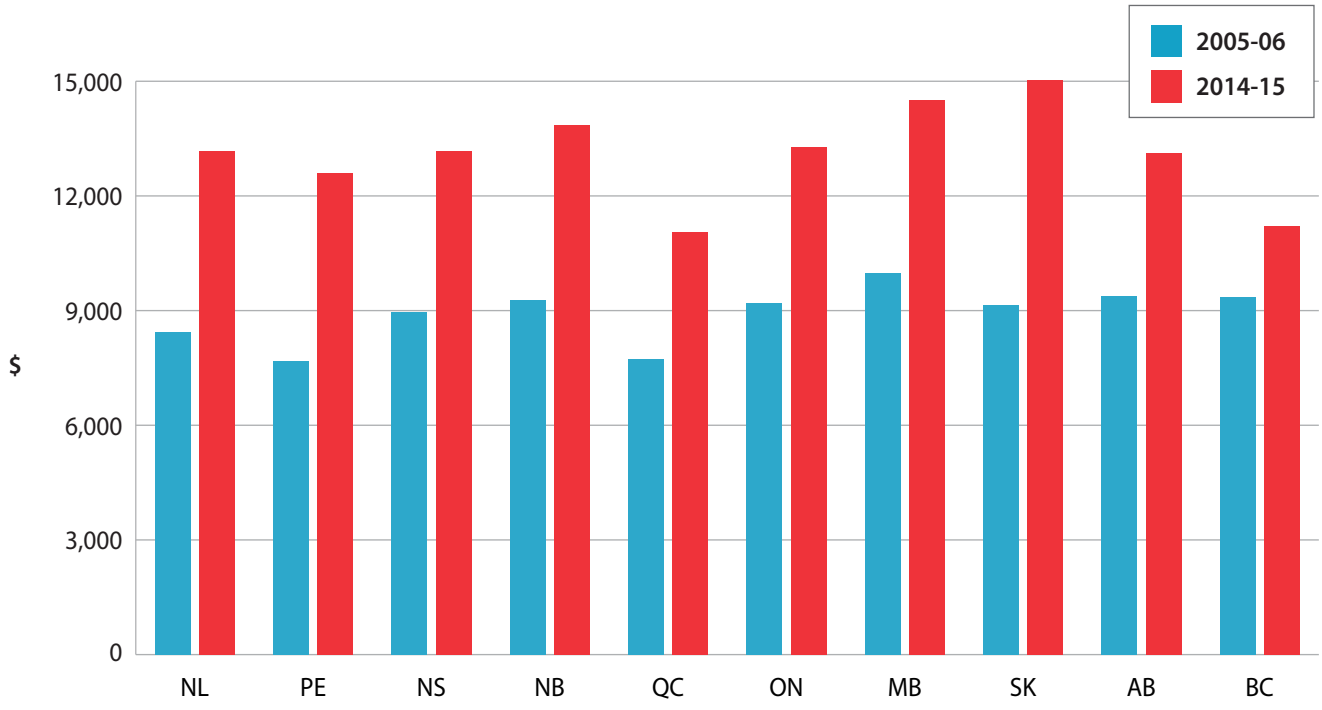
Table 3: Per-student spending in public schools, 2005–06 to 2014–15 ($)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	% change, 2005-06 to 2014-15
Canada	8,910	9,466	9,986	10,628	11,154	11,554	11,804	12,019	12,383	12,646	41.9%
NL	8,445	8,821	10,105	10,953	12,611	12,491	12,755	12,865	13,190	13,174	56.0%
PE	7,674	8,484	8,971	10,102	12,013	11,373	11,318	11,899	12,411	12,610	64.3%
NS	8,964	9,706	10,216	10,867	11,510	11,955	12,031	12,191	12,382	13,179	47.0%
NB	9,283	9,914	10,339	11,396	11,951	13,053	13,181	13,538	13,271	13,855	49.3%
QC	7,723	8,051	8,892	9,191	9,448	9,882	10,200	10,412	10,904	11,049	43.1%
ON	9,190	9,600	10,010	10,651	11,316	11,946	12,117	12,299	12,753	13,276	44.5%
MB	9,975	10,241	10,672	11,188	11,571	11,894	12,150	12,950	13,888	14,499	45.3%
SK	9,141	9,526	9,821	10,545	11,643	11,926	13,223	14,331	14,681	15,040	64.5%
AB	9,371	11,043	11,034	12,367	13,235	13,537	13,489	13,231	13,378	13,115	39.9%
BC	9,346	9,939	10,679	11,204	11,035	10,672	11,038	11,382	11,388	11,216	23.2%

Source: Statistics Canada (2016, 2017b, 2017c).

Note: From 2010/2011 onwards, the enrolment counts for British Columbia include students in "distributed learning." British Columbia's percent change calculation is adjusted for this fact.

Figure 4: Per-student spending in public schools, by province ($)



Source: Statistics Canada (2016, 2017b, 2017c).

All of the provinces recorded increases in per-student spending in public schools over the period of 2005–06 to 2014–15 (figure 4). Saskatchewan has seen the largest increase. Per-student spending in that province's public schools went from $9,141 to $15,040 over the period, an increase of 64.5 percent. Prince Edward Island was close behind with an increase of 64.3 percent, from $7,674 in 2005–06 to $12,610 in 2014–15.

British Columbia recorded the smallest increase at 23.2 percent, and Alberta had the second smallest increase at 39.9 percent. All other provinces experienced per-student spending increases of over 43.0 percent. Three provinces—Newfoundland & Labrador, Prince Edward Island, and Saskatchewan—had increases over 55 percent. Simply put, every province introduced marked increases in per-student spending in public schools over this period.

Accounting for Inflation

An important factor has been left out of the analysis so far: the influence of changing prices. Inflation, or what is commonly referred to as increases in the price level, refers to changes in prices that affect the real or effective value of money. Governments could well be spending more in nominal dollars on education over time, but if these increases are less than inflation, the real or effective level of spending could be decreasing, as inflation erodes the value of money by making the goods and services purchased more expensive. This section recalculates the increases in per-student spending in public schools in each of the provinces adjusting for inflation over the time period. **Table 4** and **figure 5** present the recalculated numbers.

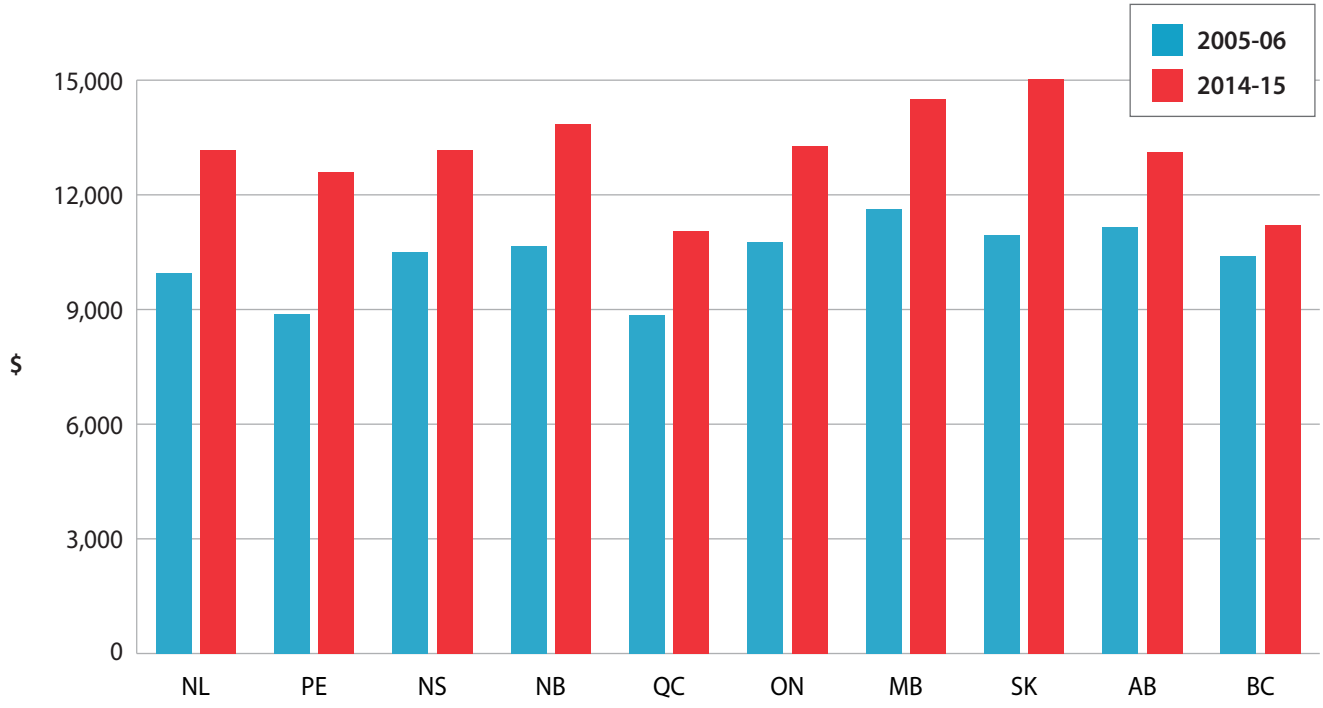
Table 4: Per-student spending in public schools, adjusted for price changes, 2005–06 to 2014–15 ($ 2015)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	% change, 2005-06 to 2014-15
Canada	10,339	10,748	11,080	11,761	12,121	12,200	12,279	12,391	12,521	12,646	22.3%
NL	9,949	10,242	11,405	12,330	13,858	13,273	13,280	13,172	13,251	13,174	32.4%
PE	8,891	9,657	9,872	11,135	12,998	11,956	11,661	12,020	12,335	12,610	41.8%
NS	10,498	11,156	11,397	12,144	12,591	12,598	12,435	12,451	12,430	13,179	25.5%
NB	10,660	11,170	11,453	12,591	12,931	13,641	13,548	13,802	13,335	13,855	30.0%
QC	8,859	9,093	9,839	10,106	10,263	10,416	10,529	10,669	11,019	11,049	24.7%
ON	10,762	11,039	11,255	11,935	12,374	12,672	12,674	12,739	12,905	13,276	23.4%
MB	11,636	11,709	11,933	12,433	12,758	12,738	12,806	13,350	14,054	14,499	24.6%
SK	10,960	11,105	11,084	11,779	12,830	12,787	13,959	14,913	14,920	15,040	37.2%
AB	11,157	12,523	12,132	13,609	14,421	14,399	14,190	13,724	13,530	13,115	17.5%
BC	10,392	10,860	11,430	11,992	11,655	11,011	11,263	11,624	11,513	11,216	14.0%

Source: Statistics Canada (2016, 2017a, 2017b, 2017c).

Note: From 2010/2011 onwards, the enrolment counts for British Columbia include students in "distributed learning." British Columbia's percent change calculation is adjusted for this fact.

Figure 5: Per-student spending in public schools, adjusted for price changes ($ 2015)



Source: Statistics Canada (2016, 2017a, 2017b, 2017c).

For Canada as a whole, over the last decade (2005–06 to 2014–15), the increase in per-student spending in public schools once inflation is adjusted for is 22.3 percent. In other words, accounting for changes in prices and enrolment, spending on public schools in Canada increased 22.3 percent between 2005–06 and 2014–15 – from $10,339 to $12,646 per student.

After adjusting for inflation, the largest increase in per-student spending in public schools was in Prince Edward Island, which experienced a 41.8 percent increase—from $8,891 in 2005–06 to $12,610 in 2014–15. The smallest increase was recorded in British Columbia (14.0 percent).

The percentage increases in per-student spending in public schools in table 4 are all less than the increases calculated in table 3, which did not include the effect of inflation on spending. Note, however, that all ten provinces recorded inflation-adjusted increases in per-student spending in public schools over this period.

The Spending Increases in Context

Inflation-adjusted increases in per-student spending ranging from 14.0 percent to 41.8 percent appear fairly large (table 4). But how large are these increases really? This section provides context by comparing the actual spending increases against the predicted increases based on enrolment in each of the provinces' public schools. Put differently, the analysis is based on a counterfactual assumption where education spending is calculated for 2014–15 based on the per-student

level observed in 2005–06, adjusted for changes in enrolment and inflation. In other words, we compare actual aggregate spending on public schools in 2014–15 with what the spending would have been, in total, if the per-student spending levels on public schools remained constant (adjusted for inflation) based on their 2005–06 values.

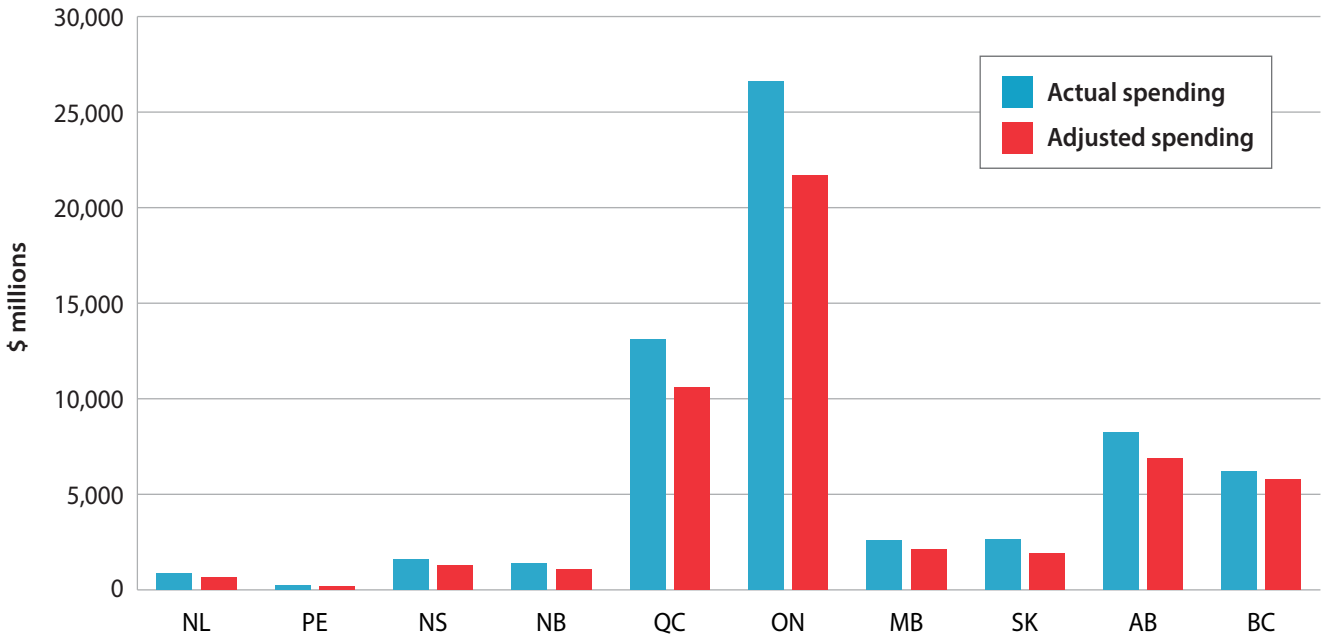
Table 5 contains the calculations for both the actual spending and the hypothetical spending, as well as the difference. **Figure 6** illustrates the total spending on public schools based on two different scenarios relating to per-student spending. The first is the actual level of spending on public schools and the second, referred to as "adjusted spending," illustrates what total education spending on public schools in each province would have been had the 2005–06 per-student spending levels (adjusted for inflation) been maintained through 2014–15.

Table 5: Comparing actual and adjusted spending in public schools, 2014–15 ($ millions)

	Actual spending	Adjusted spending	Difference	Percent difference
Canada	63,938	52,712	-11,226	-17.6%
NL	885	677	-208	-23.5%
PE	251	182	-69	-27.4%
NS	1,573	1,274	-300	-19.0%
NB	1,370	1,067	-303	-22.1%
QC	13,116	10,583	-2,533	-19.3%
ON	26,596	21,683	-4,913	-18.5%
MB	2,606	2,107	-499	-19.1%
SK	2,628	1,923	-705	-26.8%
AB	8,257	6,857	-1,400	-17.0%
BC	6,200	5,779	-421	-6.8%

Source: Statistics Canada (2016, 2017a, 2017b, 2017c).

Figure 6: Comparing actual and adjusted spending in public schools, 2014–15 ($ millions)



Source: Statistics Canada (2016, 2017a, 2017b, 2017c).

In aggregate, Canada increased education spending in public schools by $11.2 billion more between 2005–06 and 2014–15 than was necessary to account for enrolment and price changes. If per-student spending in public schools had remained constant over this period, the aggregate amount of education spending in public schools in 2014–15 would have been 17.6 percent lower.

Prince Edward Island recorded the largest difference between actual spending on public schools and what would have been required to account for price and enrolment changes: $69 million more in 2014–15 than necessary to account for inflation and enrolment changes over the period. Spending on public schools in Prince Edward Island would have been 27.4 percent lower had the province simply increased education spending to account for inflation and enrolment changes over the last decade.

The second highest difference was in Saskatchewan, with public school spending $705 million (26.8 percent) higher than necessary to account for inflation and enrolment changes.

The smallest difference between actual spending on public schools and what was necessary to account for inflation and enrolment changes was recorded by British Columbia ($421 million, or 6.8 percent).

The differences between actual spending on public schools in 2014–15 versus what would have been the case if greater restraint were exhibited across the country to control spending increases illustrates the rather large increases in education spending in public schools implemented over the last decade (2005–06 to 2014–15).

Conclusion

It is clear from the data presented that every province in Canada over the 2005–06 to 2014–15 period increased education spending beyond what was required to account for enrolment changes and inflation. This means real increases in per-student education spending in public schools across the country, which is contrary to the general perception that education spending in public schools has been cut.

Endnotes

1 For more information on the composition of education spending on public schools in Canada, please see MacLeod and Emes (2017).

2 For more information and a detailed discussion on changing enrolments in the public, independent, and home school sectors, see MacLeod and Hasan (2017).

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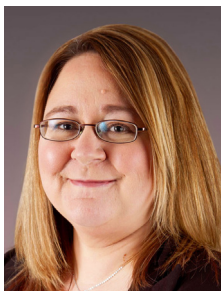

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