

Estimating International Student Impact on Alberta's Economy in 2022-23

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Overview

Understanding international student contributions to the provincial economy can impact government and PSI decision-makers on a swathe of issues, including wraparound student supports, financial aid, and immigration policy. However, current data does not exist; as of October 2022, Advanced Education was still [citing](#) the 2018 Global Affairs Canada (GAC) [figures](#) released in 2020.

Alberta's past five years have seen increased numbers of international students, radically increased international tuition, and serious cost-of-living impacts. Alberta did see fewer international students in 2020, but bounced back quickly. It is certain that international students' annual spending in Alberta is now significantly higher than 2017's \$872 million or 2018's \$1.03 billion.

Our impact assessment attempted to replicate the portions of GAC's methodology (as found in their 175-page research report) that dealt specifically with spending estimates. Approximating their methods, working from more current versions of the same government sources where possible, and comparing these sources with Alberta Advanced Education data, we estimate that, for the 2022/23 academic year, international student expenditures in Alberta were at least \$1.8 billion.

Compared to the last available GAC data, this conservative estimate represents:

- A 29% increase after factoring in rising numbers of international students, following GAC's methodology and Advanced Education data.
- A 17% increase after factoring in sharply rising international tuition, and another 0.9% from compulsory fees, following GAC's methodology and Statistics Canada data.
- An approximated 20% increase after factoring in the rising costs of housing and food, following available Statistics Canada and CMHC data.
- An approximated 9.3% increase across GAC's 'discretionary' and 'transportation' categories, following Alberta CPI.

Our \$1.8 billion estimate is somewhat lower than a basic extrapolation from the 2017 and 2018 GAC data. This likely reflects how conservative our estimates are, and also the 'lost progress' in 2020 due to COVID-19.

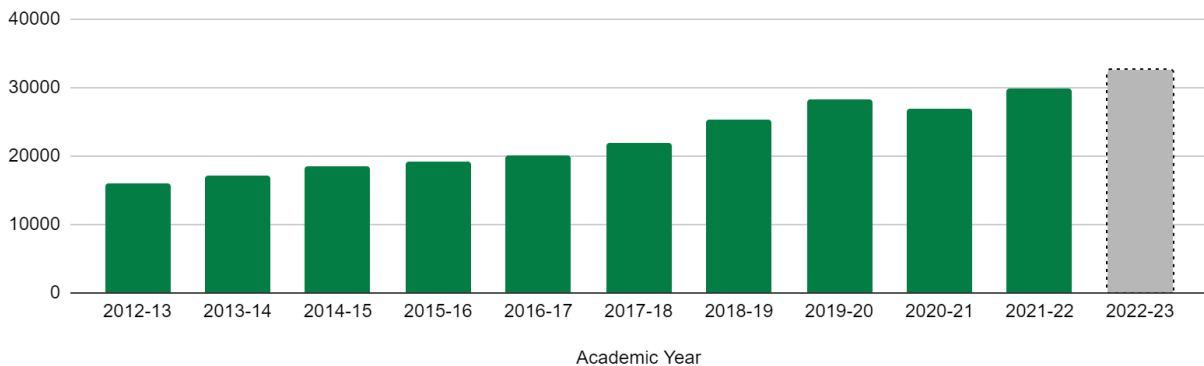
Lever #1: Increased Headcount

While reconciling GAC and Advanced Education international headcount estimates is challenging, as Advanced Education only lists around 89% of the students in the GAC analysis' scope (e.g. there are some international K-12 students), we can plausibly use Advanced Education's international student growth rate as a proxy to estimate how much the total international student population has grown.

Advanced Education international student tallies are available through 2021/22, and we are using the five-year average (8.6%) as a conservative working figure for 2022/23. This would give us, between 2018/19 and 2022/23, a 29% increase in the number of international students in Alberta. In other words, even if all economic factors have stayed completely stable, annual international student spending has increased by roughly 29% due to headcount growth alone. All of this should, of course, be taken with a grain of salt, as the GAC data followed calendar years rather than academic years.

International headcount enrolment within the Alberta post-secondary education system

Source: Alberta Advanced Education. 2022-2024 estimate based on five-year average increase.



Lever #2: Tuition Increases

This element is more challenging to work with, as GAC's estimates for spending broke down across 11 distinct groups of students, each with its own average tuition rates which have varied in unique ways.

We know, however, that GAC's analysis for undergraduate and graduate tuition rates drew from a specific Statistics Canada table, which now has data current through our target year of 2022/23. We also know from the GAC report (in table series C, F, I, L, N, and O; see Appendix A) that undergraduate and graduate university tuition accounted for 51% of international tuition expenditures, and 24% of all international student expenditures, in 2018. We can estimate that that specific share increased by rates proportional to the severe growth in average undergraduate and graduate tuition since 2018/19.

	2018 tuition revenue (AB)	Growth since 2018/19 (StatCan 37-10-0045-01)	2022
International undergraduate	\$169M	38%	\$233M
International graduate	\$75M	25%	\$94M

If nothing else had changed, undergraduate and graduate university tuition increases would still have increased total international student spending by a total of \$83.2 million, or 8.1%.

Meanwhile, tuition rates for trades and college programs, short-term students, K-12 students, etc. (i.e. the students contributing the other 49% of tuition expenses) have likely gone up as well over this time period, but this data is much more difficult to find. GAC's solution was to estimate all of these tuition rates based on some proportion of undergraduate tuition.

As a result, following GAC's methodology, the 38% increase would apply to all those numbers as well, for an additional \$89M or 8.7% increase to total international student expenditures.

In other words, using a conservative extrapolation of GAC's methodology based on Statistics Canada data, international student expenditure in Alberta increased around 17% between 2018/19 and 2022/23 due to rising tuition, all else being equal.

GAC also appears to have estimated compulsory fees using the same Statistics Canada table and using a portion of total tuition/fees as a proxy for this field. With this in mind, their category of compulsory fee expenditures would have increased by \$8.9M. This would increase total international expenditures by 0.9%.

	2018 compulsory fee expenditures (AB)	Growth since 2018/19 (StatCan 37-10-0045-01)	2022
International graduate	\$6.0M	25%	\$7.5M
All other international students (as estimated by GAC based on rates for international undergraduates)	\$19.4M	38%	\$26.8M

Lever #3: Cost of Accommodations

This is an even more complex topic and, again, we are only looking for a conservative, reasonable approximation. GAC calculated most of its estimates from a combination of Statistics Canada data that is not available to us and would be both unreliable and time-consuming to reverse-engineer. We approximated growth over our target period using available data:

- The CMHC's [Historical Average Rents by Bedroom Type](#) data indicates that, between October 2018 and October 2022, Alberta's rents on bachelor, one-bedroom, and two-bedroom apartments rose by 7.5-10%. The Alberta Regional Dashboard relies on the same data.
- Edmonton and Calgary, respectively, hosted roughly 47% and 32% of Alberta's international students in 2021/22 per Advanced Education institutional data. Statistics Canada's [New Housing Price Index](#) indicates that, between January 2018 and January 2023, Edmonton's housing prices rose 11% and Calgary's rose by 33%. Substantiating this, Rentals.ca reports indicate that, between June 2021 and June 2022 alone, Edmonton rent rose by 5-6%, and Calgary by 17-21%, for a one- or two-bedroom apartment.

It also appears likely that food fell under GAC's Accommodation category. While reliable and relevant food data for our specific case is difficult to find and to factor in rigorously, [Statistics Canada data](#) suggests that, from October 2018 to October 2022, the cost of food purchased from stores across Canada rose by 23%.

All that to say, using an estimate of 20% on the Accommodation line across the board would increase international student expenditures by \$68.2 million or 6.6%. For clarity, this would represent a 20% increase in the cost of rent and food between 2018/19 and 2022/23, a very conservative estimate.

APPENDIX A: 2018 Alberta GAC Estimates Compiled

2018 ALBERTA GAC ESTIMATES (SOURCE)	Tuition	Books/Materials	Accommodation	Discretionary	Transportation	Compulsory Fees	ROW TOTAL
COLUMN TOTAL (ALL INTL STUDENTS)	\$480,713,574	\$31,611,911	\$340,945,114	\$104,767,743	\$43,684,251	\$25,413,220	\$1,027,135,813
COLUMN TOTAL AS PERCENT OF EXPENDITURES	47%	3%	33%	10%	4%	2%	100%
Undergraduate FT (from table C2)	\$166,223,071	\$9,949,042	\$84,090,698	\$19,531,675	\$12,549,721	\$9,109,573	\$301,453,780
Graduate FT (from table C4)	\$75,008,830	\$7,192,308	\$60,790,399	\$14,119,734	\$9,072,377	\$5,947,232	\$172,130,880
Other FT (from table C6)	\$41,356,555	\$2,475,337	\$20,921,895	\$4,859,511	\$3,122,390	\$2,266,476	\$75,002,164
Undergraduate PT (from table C8)	\$3,227,246	\$386,324	\$273,646	\$758,421	\$243,655	\$176,864	\$5,066,156
Graduate PT (from table C10)	\$348,184	\$66,772	\$47,297	\$131,085	\$42,113	\$27,607	\$663,058
Other PT (from table C12)	\$2,908,505	\$696,338	\$493,239	\$1,367,030	\$439,180	\$318,791	\$6,223,083
Trades and College FT (from table series F)	\$97,614,220	\$7,712,177	\$97,776,600	\$15,140,325	\$9,728,139	\$5,296,086	\$233,267,547
Trades and College PTT (from table series F)	\$3,923,886	\$310,013	\$5,270,226	\$1,217,218	\$391,051	\$212,892	\$11,325,286
Other Long-Term Students (from table series I)	\$37,926,242	\$2,823,600	\$25,326,221	\$5,882,500	\$3,779,693	\$2,057,699	\$77,795,955
Short-Term Students (from table series L)	\$1,335,421	\$0	\$15,437,391	\$36,685,422	\$4,315,932	\$0	\$57,774,166
K-12 Students (from table series N,O)	\$50,841,414	\$0	\$30,517,502	\$5,074,822	\$0	\$0	\$86,433,738