Appendix D (Online Only)

Detailed Description of Canadian Financial Aid Rules and Assumptions in our Aid Calculations

This is a companion (online) appendix to "Post-Secondary Attendance by Parental Income: Comparing the U.S. and Canada" by Philippe Belley, Marc Frenette, and Lance Lochner. In this appendix, we provide a detailed description of Canadian financial aid rules and key assumptions used in calculating financial aid-related measures for Canada in the paper.

D.1 General Structure of Student Financial Aid Determination

We use provincial and Canada Student Loan Program (CSLP) rules in 2003-04 to determine financial aid availability for students from different backgrounds. We specifically consider detailed rules in the three largest provinces (Quebec (QC), Ontario (ON), and British Columbia (BC)) and actual Millennium Foundation awards to determine financial aid as a function of parental income in these provinces.[1] Financial aid in most other provinces is similar in nature to that of BC and ON.

In general, financial aid is awarded to students who have financial need FN = TEC − EFC, where TEC is total estimated cost of schooling and EFC is the expected family contribution. Students receive loans and/or non-repayable aid if financial need is positive. The exact formulas that determine TEC and EFC, as well as the allocation between loan and non-repayable aid, vary across jurisdictions.

In all Canadian provinces except Quebec, financial aid is awarded by both federal and provincial governments. Subject to upper limits, the CSLP provides 60% of aid in the form of loans while provinces cover the remaining 40% with both loans and non-repayable aid. Rules at the federal level are set by the CSLP, while provinces set their own similar rules. Each province offers different grant and scholarship programs, and each uses different allocation rules for Millennium Foundation awards.

Students in Quebec receive financial aid governed exclusively by provincial rules that differ significantly from those of the CSLP and other provinces. Broadly speaking, Quebec puts relatively more emphasis on non-repayable aid rather than loans compared to the rest of Canada.

TEC and EFC calculations depend on a number of family-specific factors. Our calculations make the following assumptions to best reflect a 'typical' university student in Canada. First, we assume that students register for a full-time academic year of 34 weeks (i.e. a two-term program). Second, we assume that students are dependent on their parents.[2] Third, we assume that students live with both parents and have a younger sibling that is not of PS age. Fourth, we assume that both parents work with a 60%-40% income split between them. Finally, whether a student lives with his parents or away from home has important implications for the computation of financial aid, so we consider both types of students.

[1] Rules for QC can be found in "Regulation respecting financial assistance for education expenses",O.C. 844-90, as posted between May 30th 2003 and February 10th 2004. ON rules are found in the OSAP 2003-2004 Student Eligibility and Financial Need Assessment Manual. BC rules are found in the BC Student Assistance Program Policy and Procedures Manual 2003-2004.

[2] A student must typically be married, have children, been in the workforce for at least 2 years, or been out of secondary school for at least 4 years (5 years in Ontario, out of full-time studies for 7 years in Quebec) in order to be considered independent. A student may also be considered independent in a few other more specific situations (e.g. foster children, an individual with deceased parents).

Table D1: Living Allowances for a Full Academic in Canada

Residential Status	BC	ON	QC
Living With Parents	\$3,048	\$3,092	\$2,006
Living Away From Parents	\$7,402	\$7,409	\$5,610

Notes: Figures taken from the BC Student Assistance Program Policy and Procedures Manual 2003-2004 for BC, the OSAP 2003-2004 Student Eligibility and Financial Need Assessment Manual for ON, and the "Regulation respecting financial assistance for education expenses O.C. 844-90 for QC."

D.2 Total Estimated Cost

The total estimated cost (TEC) of school is the sum of both education and living costs. This includes (i) tuition and compulsory fees; (ii) books, supplies and equipment; (iii) living allowances; and (iv) return transportation for students living away from home. In some cases, CSLP and province-specific aid rules impose different upper limits on costs in computing TEC. We describe each cost component in detail below, specifying assumptions used for our aid calculations in the paper.

D.2.1 Tuition and Compulsory Fees

The CSLP uses the full value of tuition and compulsory fees to compute TEC. When computing the Ontario provincial portion of financial aid, the TEC limits tuition and fees to \$2,250 per term. In Quebec, tuition and compulsory fees are capped at \$6,000 per term in computing TEC. Based on average tuition and fees across provinces reported in Junor and Usher (2004), we set tuition and fees for an academic year to \$4,800 in BC, \$5,600 in ON, and \$2,500 in QC.[3]

D.2.2 Books and Supplies

We assume that students in BC and ON claim \$760 per academic year for books and supplies. This figure is obtained by taking the average of maximum allowable costs for books in a general arts and science program (\$390) and an applied science and engineering program (\$440) plus the maximum allowable amount of \$345 for expendable supplies in a non-fine arts program.[4] We assume that students in QC claim the maximum of \$650.

D.2.3 Living Allowances

Living allowances vary within provinces based on program length and whether students live with their parents or not. We use values specified by student aid rule manuals as reported in Table D1.

D.2.4 Transportation Costs

In BC (ON), we assume that students living away from their parents claim the maximum allowable amount for return transportation of \$1,800 (\$1,200). In QC, we assume students claim \$476 (\$14 per week) to pay for transportation costs, regardless of their residential status.

[3]See Figure 4.III.3 of Junor and Usher (2004).

[4]Programs that require more material (e.g. dentistry) are allowed higher ceilings.

D.3 Expected Family Contribution

For dependent students, the expected family contribution (EFC) is the sum of the (i) expected student contribution and (ii) expected parental contribution. In theory, both student and parental contributions depend on assets; however, we ignore assets in our aid calculations, since students generally have few assets and parental asset exemption levels are quite high.[5] We focus on the relationship between income on expected contributions. In some cases, expected contributions differ for CSLP and province-specific aid calculations as noted.

D.3.1 Student Contribution

Students are expected to make a minimum contribution in all provinces. In BC and ON, the student contribution is computed separately for income earned during the "pre-study" period and in the "study" period. The student's contribution in QC is based on income earned during the calendar year that ends during the current academic year. We first describe contributions coming from pre-study income and study income in BC and ON, followed by a discussion of student contributions in QC.

In BC and ON, the pre-study period is defined as the period that precedes the beginning of the current academic year. In BC, this period is fixed at 18 weeks, while in ON, this period starts at the end of the previous academic year and is capped at 16 weeks. For ON, we assume an 8-week pre-study period for first-year students, since the high school academic year typically ends in June. The ON pre-study period is set to 16 weeks for students in other years, since the PS academic year typically ends in April.

The pre-study period minimum student contribution in BC and ON depends on the student's residential status during that time. We assume that all students live with their parents during the pre-study period, even those living away from their parents during the academic year. In BC, the pre-study student contribution is the minimum of $2,826 or 80% of "disposable income" (i.e. net income minus a living allowance of $90 per week). Students must earn more than $314 per week (pre-tax) to contribute more than the minimum. In ON, the minimum pre-study contribution is $1,028 for first year students, and $2,057 for those in upper years. Students must earn more than $267 per week (pre-tax) to contribute more than this minimum. In our calculations, we assume that students from BC and ON earn just enough pre-tax income during the pre-study period to pay the minimum contribution.[6]

In BC and ON, students must make additional contributions if they earn income during the study period. In BC (ON), students are expected to contribute 80% (100%) of their after-tax study period income minus a $90 weekly living allowance.[7] Our calculations assume that BC and ON students do not earn any income during their study period.

In QC, the student contribution is independent of residential status, but it depends on schooling status (high school student, CEGEP student, university student, or not a student) the winter preceding the beginning of the current academic year. As is standard, we assume that first year university students were attending CEGEP

[5] Students in BC and ON are expected to contribute the value of their assets, with the exception of a $5,000 exemption on vehicles and a limited exemption on Registered Retirement Savings Plans. The student contribution does not depend on assets in QC. In computing the parental contribution, principal residence, motor vehicles, business and farm assets are fully exempt in BC; 1% of the value of all other assets in excess of $150,000 must be contributed. The parental contribution in ON does not depend on parental assets. For the purpose of computing grant aid in QC, parents must contribute 2% of the total value of their assets net of $90,000, or net of $250,000 if parents are farmers or fishermen. The parental contribution for computing loan aid in QC is independent of parental assets.

[6] This is important later on for determining how much students benefit from PS education-related tax credits.

[7] The study period income contribution in ON can be reduced by the amount by which actual tuition and fees exceed the imposed ceiling of $2,250 when computing the provincial portion of aid.

during the previous winter. QC computes different student contributions in determining loans and grant aid. In determining loans, first year students are expected to contribute \$2,805, while upper year students are expected to contribute \$4,425. In determining grants, first year students are expected to contribute \$940 plus 50% of pre-tax income above that amount, while others are expected to contribute \$1,280 plus 50% of pre-tax income above that amount. In our calculations, we assume that first year QC students earn \$2,805 (pre-tax) and are expected to contribute \$2,805 towards loans and \$1,873 towards grants. For those in higher years, we assume pre-tax income of \$4,425 and expected contributions of \$4,425 for loans and \$2,853 for grants.

D.3.2 Parental Contribution

Parental contributions in all provinces depend on family size, family composition, and parental income. As noted earlier, our calculations assume that students live with both parents and a younger sibling not of PS school age. We also assume that both parents work with a 60%-40% income split between them.

In BC, the expected parental contribution is based on Annual Discretionary Income (ADI): after-tax income minus Employment Insurance contributions, Canada Pension Plan contributions, and a Moderate Standard of Living (MSOL).[8] The MSOL is determined by family size according to CSLP rules and is meant to incorporate living costs associated with shelter, food, household supplies and furnishing, clothing, child care, transportation, etc. Given our assumptions on family structure, this MSOL is \$46,815, which implies zero parental contribution as long as after-tax income is less than \$46,815 (roughly \$60,000 pre-tax). The first \$3,000 of ADI (net income above the MSOL) must be contributed at a 45% rate. The next \$3,000 of ADI is contributed at a 60% rate. Any additional ADI is contributed at a 75% rate. The total contribution is then divided by 52 weeks and multiplied by the program length in weeks (assumed to be 34) to obtain the parental contribution.

In ON, the parental contribution is computed differently in calculating CSLP aid and provincial aid. The CSLP calculation follows the same rules as in BC, with the same contribution rates and an MSOL of \$42,888 for a family of four. For the Ontario calculation, there is no parental contribution if pre-tax parental income is less than \$40,000. If pre-tax parental income is between \$40,000 and less than \$53,000, the expected parental contribution is \$153 plus 7.6% of pre-tax income above \$40,000 all multiplied by 34/52. If pre-tax parental income is \$53,000 or more, the parental contribution is the same as the CSLP portion plus 3% of after-tax parental income multiplied by 34/52.

In QC, the parental contribution is based on pre-tax income net of a base exemption level. This base exemption level is \$13,385 (for two parent households) plus \$2,660 for the student plus another \$2,400 for a younger sibling. Since we assume that both parents work, the lesser of \$2,100 or 14% of net income is also added to the base exemption level.[9] EFC formulas also effectively add another \$8,000 to the exemption level for all families. Parents with income below this effective exemption level are not expected to contribute in Quebec. Expected contributions rise at a 19% rate for the first \$36,000 above the effective exemption level; a 29% rate for the next \$10,000 in income; a 39% rate for the next \$10,000; and a 49% rate for all additional income.

[8] To compute after-tax income, we use the Canadian Tax and Credit Simulator for the fiscal year 2002 [Milligan, K. (2008), *Canadian Tax and Credit Simulator*. Database, software and documentation, Version 2008-1.]. Our measures of taxes, Canadian-Quebec Pension Plan (CPP) contributions, and Employment Insurance (EI) contributions are based on the variables "*tottax*", "*cpp*", "*ui*", "*sptottax*", "*spcpp*", and "*spui*" in the simulator.

[9] Families with net income of \$15,000 or more have \$2,100 added to their exemption level. Our measure of "net income" includes income net of all taxes, Employment Insurance contributions, and Quebec Pension Plan contributions.

D.4 Need and Financial Aid

To determine need, we subtract EFC from TEC. If need is zero or negative, the student receives no aid; otherwise, the student receives some aid subject to an upper limit. In all provinces, the first dollars of need are covered by loans, then by non-repayable aid if need is high enough. CSLP aid is exclusively in the form of student loans (generally accounting for 60% of all aid), while provincial aid is generally a mix of bursaries/grants (including loan remissions and Millennium Foundation awards) and loans. We report all annual amounts assuming a typical 34-week PS education program.

D.4.1 Financial Aid in BC

For the academic year 2003-2004, no non-repayable aid was available to BC students in their first year of university. Need is, therefore, covered by loans up to $9,350 for a 34-week program with 60% coming from the CSLP (capped at $5,304) and the rest from the BC provincial government.

Non-repayable aid is available to students in their second year and above who have at least $4,250 in need. 60% of this need is covered by a CSLP loan (capped at $5,304). The rest is covered by non-repayable aid from BC Grants and/or Millennium Bursary. The total aid package is capped at $9,350 for the academic year.

D.4.2 Financial Aid in ON

60% of aid in ON is provided by CSLP loans (up to $5,610) and the remaining 40% is provided by the province (up to $3,740). Provincial aid is initially provided in the form of loans; however, loan remissions are available for full-time students that complete their academic year. These students are reimbursed any loan value above $7,000 in the form of an Ontario Student Opportunity Grant. Students in their second year or above can also receive the Millennium Bursary (MB) worth $3,000 if total need for the academic year is at least $8,844. In our aid calculations, we assume that loan awards are reduced by the value of any loan remission or MB received by students.

D.4.3 Financial Aid in QC

In QC, loan awards are capped at $2,400 for a full academic year at the university level, while grants are capped at $13,463 plus $1,370 for tuition.[10]

QC students can also receive loan remissions worth 15% of all loans awarded if they complete their program of study and if they received grant awards in every year of their program. In this case, our calculations reduce loan awards by 15% and increase grants by the same amount.

D.4.4 Non-Repayable Aid from Tax Benefits

Tax credits (federal and provincial) are an additional source of non-repayable aid to students, and we use federal and provincial rules to impute tax credits in Canada. To the extent that some families do not take advantage of all available credits, these amounts will be slightly inflated.

[10] Since the student contribution differs for loan vs. grant calculations, we compute each separately. We assume individuals receive any calculated loan awards (up to the maximum) and subtract these amounts from our calculated grant aid.

There are two main PS education tax benefits in Canada. The Tuition Tax Credit (TTC) provides a credit equal to total tuition and fees multiplied by the lowest marginal tax rate (federal and provincial).[11] The Education Tax Credit (ETC) provides a fixed monthly credit for PS enrolment. A full-time student enrolled for eight months can qualify for a federal ETC of up to $3,200 times the lowest federal marginal tax rate. The maximum provincial amount for BC (ON) is $1,600 ($3,368) times the lowest provincial tax rate. There is no provincial ETC in QC. Neither of these tax credits is refundable, so they can only be used to offset tax obligations. Any credit amount unused by the student can be transferred to a parent (subject to a specified upper limit).[12]

[11] These tax rates are 16% for federal taxes, 6.05% for provincial taxes in BC and ON, and 16% for provincial taxes in QC.

[12] For the federal credit, the maximum transfer to parents (for both credits combined) is $5,000 less the amount claimed by the student. All provinces except Ontario follow the same transfer rule, while Ontario limits transfers to $5,405 less the amount claimed by the student. Students can also transfer education credits to future years; however, we ignore these potential transfers in our calculations. Given our assumptions on student income, our calculations are based on credits given to parents and are, therefore, subject to these upper limits.