

Post-Secondary Attendance, Parental Income, and Financial Aid: Comparing the U.S. and Canada

In CIBC Working Paper (2010-3) entitled “Post-Secondary Attendance by Parental Income: Comparing the U.S. and Canada”, Philippe Belley, Marc Frenette and Lance Lochner analyze the extent to which parental income affects post-secondary education decisions for recent high school cohorts in Canada and the United States. Accounting for differences in family background (e.g. parental education, immigrant status, race/ethnicity, etc.) and adolescent

cognitive achievement scores, the authors estimate that post-secondary attendance rates in the U.S. are 18 percentage points higher among youth from the top family income quartile relative to similar youth from the bottom quartile. The same income – attendance gap is only 8 percentage points in Canada. (Figures 1a and 1b show post-secondary attendance rates by parental income and math/reading achievement in Canada and the U.S.) Even within schools or local geographic areas, family income plays an important role in the U.S., so differences in the extent of geographic segregation, peers, or secondary schools by family income cannot account for the stronger U.S. income – attendance relationship.

continued

Figure 1a: Post-Secondary Attendance by Math-Reading Ability and Parental Income Quartiles in Canada (YITS)

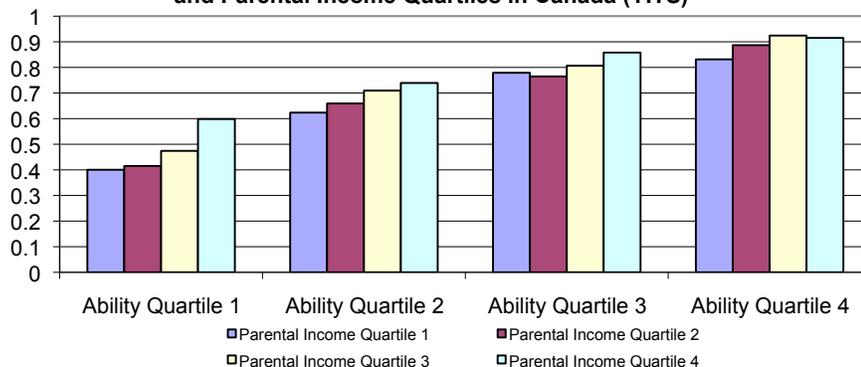
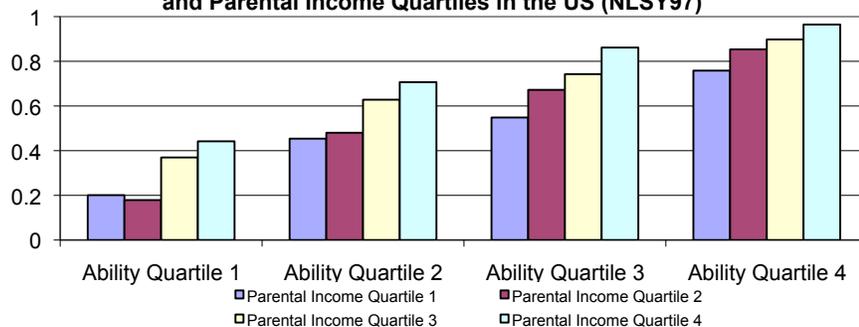


Figure 1b: Post-Secondary Attendance by Math-Reading Ability and Parental Income Quartiles in the US (NLSY97)



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Figure 2
net tuition:
tuition and fees less non-repayable aid such as grants,
scholarships, tax credits, and loan remissions

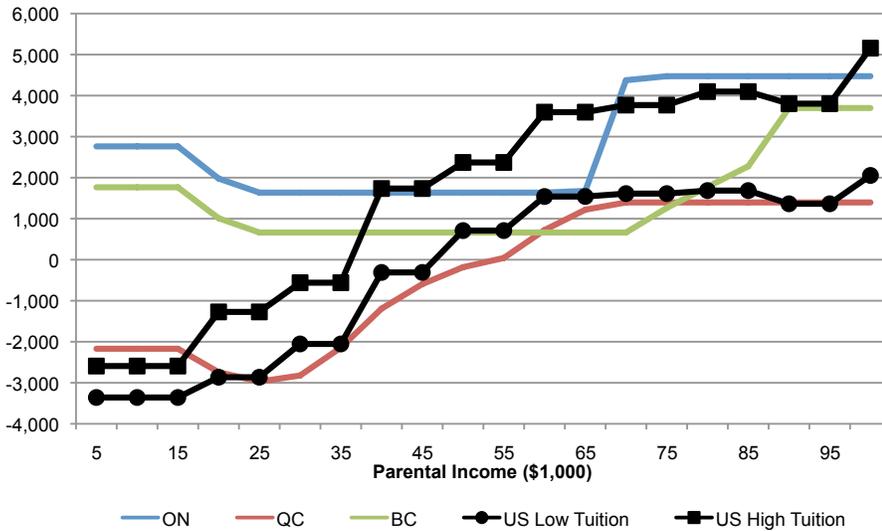
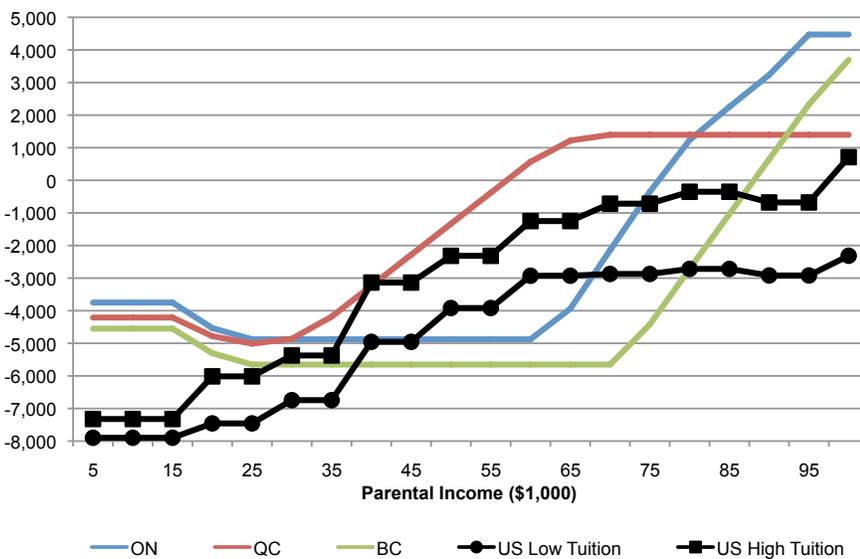


Figure 3
out-of-pocket expenses:
net tuition less available government student loans



Can Canada – U.S. differences in tuition and financial aid policies explain why family income is so much more important in the U.S.? The answer may be surprising: not really. First, the authors note that average tuition and fees for in-state residents attending public colleges and universities in the U.S. were quite similar to their Canadian counterparts (except in Quebec) in 2003-04 when most youth in their data were enrolled. Of course, tuition does not necessarily reflect the actual price paid by students, since need-based aid is quite important for low-income students. The authors next examine the structure of need-based aid in Canada and the U.S., focusing on average *net tuition* (tuition and fees less non-repayable aid such as grants, scholarships, tax credits, and loan remissions) and *out-of-pocket expenditures* (net tuition less available government student loans) at public four-year institutions. Net tuition reflects the effective price paid by students, while out-of-pocket costs reflect the amount of money students and their families must come up with out of their own pockets (or from private lenders) to cover tuition and fees during school.

It turns out that the U.S. is quite generous and effective at targeting financial aid to families at the very bottom of the income distribution (primarily through federal Pell grants) compared to Canada. Both net tuition and out-of-pocket expenditures are lower in the U.S. than in Canada, on average, for youth from low-income families. The U.S. generosity at the bottom is not matched in the middle of the income distribution, since the U.S. sharply reduces financial aid as family income rises from \$20,000 to \$50,000. By contrast, most Canadian provinces provide similar aid to all families earning less than \$50,000, only reducing aid at the top of the income distribution.

The net result of these policy differences can be seen in Figures 2 and 3, which report average net tuition and out-of-pocket expenditures by parental income for students living away from home in Ontario, Quebec, British Columbia, and high- and low-tuition states in the U.S.

Three specific features of financial aid policies in Canada and the U.S. explain most of the discrepancies observed in Figures 2 and 3. First, Canadian students are expected to contribute a minimum amount each year towards their education from summer employment, while no such contribution is required in the U.S. This reduces aid to youth from low-income families in Canada relative to the U.S.; however, it matters less and less as parental income rises. (While Quebec requires a minimum student contribution like other Canadian provinces, it charges low tuition and offers much of its aid in the form of non-repayable grants.) A second important difference in aid policies derives from exemption levels in expected parental contribution formulas. In the U.S., parents are expected to begin contributing towards their children's education at fairly low income levels (roughly \$20-25,000), while most Canadian parents are not expected to contribute until their family income exceeds \$50,000. A third important difference is the treatment of student loans. In the U.S., (unsubsidized) Stafford Loans are available to all students, regardless of financial need. This is not true in Canada, where both loans and grants are both need-based.

What does all this mean for students trying to finance their education? Figure 3 reveals that, on average, very low income American university students receive considerable financial help enabling them to cover more than \$7,000 in living expenses without dipping into their own pockets. Low-

income Canadian students are in a slightly worse position than their American counterparts from high tuition states. Even with \$5-8 thousand at their disposal each year, most students could almost certainly earn more if they chose to work instead. This may discourage some low-income youth from attending university even if they could, in principle, cover their costs. Because the U.S. provides relatively little aid for middle-income families, many middle class American youth (especially from high tuition states) may face cash-flow problems. Without help from their parents (or considerable work during school), they cannot even finance a minimal living standard. In contrast, middle-income students from Ontario and BC can at least finance educational expenses and a meager lifestyle without much help from their parents. The availability of Stafford Loans enables wealthier American students to attend most public four-year schools with modest parental aid or a summer job. In contrast, it is difficult to see how higher income Canadian youth could attend university without substantial family support or delaying attendance to work a few years.

Overall, the U.S. is relatively more generous at the low- and high-ends of the income distribution, while Canada is more generous in the middle.

These differences in financial aid policies may help explain the stronger effects of income on post-secondary attendance in the U.S. at the top end of the income distribution, but they do not help in understanding differences in attendance patterns at the bottom. What might explain attendance differences among lower income youth in Canada relative to the U.S.? The authors discuss a few possibilities. First, the relatively low attendance rates among

low-income Americans may be driven largely by those from high-tuition states who receive below average financial aid offers. Unlike in Canada, there is considerable heterogeneity across and within states in tuition and financial aid, such that some youth face much worse prospects than the averages reported in Figures 2 and 3. Second, many students and families may be ill-informed about the costs and financial aid associated with higher education. This is likely to be a greater problem in the U.S. for two reasons: (i) there is greater heterogeneity in tuition across states and institutions in the U.S., with the press emphasizing skyrocketing costs of elite private institutions and (ii) a large share of financial aid is institution-specific in the U.S., making it difficult for families to determine the actual amount they might receive. These factors may contribute to a steeper income – attendance gradient in the U.S., since poor information and uncertainty about financial aid is more detrimental to the most disadvantaged.

Finally, the authors note that parental income has modest effects on high school completion in the U.S. and weaker effects in Canada. They estimate that roughly half of the U.S. – Canada difference in parental income – post-secondary attendance gaps may be explained by differences in high school completion rates by parental income. As such, it is possible that family income affects schooling more in the U.S. than in Canada simply because the intrinsic value families place on schooling (regardless of its financial rewards) are more strongly correlated with income in the U.S. However, it is not clear why these 'tastes for higher education' should have become much more strongly correlated with income in the U.S. since the early 1980s when family income – post-secondary attendance gaps were similar to those in Canada today (Belley and Lochner 2007).

References

Belley, Philippe, Marc Frenette, and Lance Lochner, "Post-Secondary Attendance by Parental Income: Comparing the U.S. and Canada," CIBC Centre for Human Capital and Productivity Working Paper 2010-3, 2010.

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