

Who Gets What?

The Distribution of Government Subsidies
for Post-Secondary Education in Canada

Alex Usher

May 2004

The Educational Policy Institute

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Educational Policy Institute

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Executive Summary

This study is one part of a two-part inquiry into subsidies for post-secondary education in Canada. A second study, which looks more specifically at need-based assistance, also available from the Educational Policy Institute, is entitled *Are the Poor Needy? Are the Needy Poor? The Distribution of Student Loans and Grants by Family Income Quartile in Canada*.

Governments in Canada spend over \$4 billion each year in transfers to individuals for the purpose of post-secondary education. Roughly half of this money goes out in need-based loans and grants, while the other half goes in “universal” benefits to which all are entitled, such as tax credits and the Canada Education Savings Grant. Based on a combination of administrative and survey data, the study estimates the distribution of these two forms of assistance by family income quartile.

The study shows that need-based assistance is only lightly progressive; 40% of all assistance goes to students from families with above-median incomes. “Universal” assistance is outright regressive, with over 62% of assistance going to students from families with above median incomes. As a result, the overall skew in combined need-based and universal assistance is slightly regressive. Given the known problems in access for low-income students, this skew is inconsistent with a strategy to help low-income families.

An appendix also examines the distributional effects of the major hidden subsidy to students, which is the indirect subsidy to tuition fees implicit in government subsidies to institutions. The examination finds that these subsidies, too, are highly regressive and that a fee-reduction approach to improving access will in fact aggravate the overall problem of too many subsidies going to high-income families.

Acknowledgements

This paper is based on a presentation given by the author at the Canada Millennium Scholarship Foundation's Annual General Meeting in Ottawa on 17 September, 2003. The author is grateful to the Foundation's Board of Directors and to its Executive Director, Norman Riddell, for the opportunity to make this presentation.

The author is also greatly indebted to Sean Junor for his contribution to analysing the data that lies at the heart of this study, and to Laura Chapman who first asked the simple but maddening question: who gets what? The author is, of course, solely responsible for errors in data or interpretation thereof.

Who Gets What?

The Distribution of Government Subsidies for Post-Secondary Education in Canada

Introduction

Over the past decade, Canadian governments have begun shifting the focus of their investments in post-secondary education. In 1994, when the federal government's "Green Paper"¹ suggested taking 2 billion dollars out of transfer payments to provinces (and via them to educational institutions) and giving it directly to students in the form of subsidized loans, opposition to the plan was so widespread that it triggered large-scale street demonstrations.² In the face of such opposition, the plan was firmly shelved.

Yet an accretion of small fiscal decisions over the past few years has led Canada to a point very near that originally advocated in the Green Paper. As Junor and Usher (2002) demonstrated, between 1995 and 2001, total government spending on post-secondary education stayed roughly the same at \$20 bn/year (in 2001 dollars), but there was a substantial shift from spending on institutions to spending on individuals. Whereas transfers to institutions dropped from \$18 bn/year to \$16 bn a year, transfers to individuals rose from just over \$2bn/year to just over \$4bn/year.³ The increase came partly from increased government spending on targeted, need-based programs such as student assistance, but more than half the increase came in program spending that were completely untargeted in nature, such as tax credits and the Canada Education Savings Grants.

Whatever its merits, the Green Paper at least set out a rationale for switching from one type of transfers to another. Because the current situation came about as a result of a number of small and not-always-related decisions, there is no way to know whether or not governments actually have a larger policy rationale for continuing to tilt subsidies away from institutions and towards individuals. What is known, however, is that there is no data to indicate the relative effectiveness these subsidies to individuals have in promoting better access to post-secondary education.⁴

Part of the problem in evaluating the effectiveness of subsidies is that there has been a notable lack of attention paid to the question of *who* receives each of these subsidies. Governments tend either not to collect relevant data or to be reluctant to hand it out. Statistics Canada is not of much help because it does not survey

¹ Social Security Reform Task Force, 1994. *Improving Social Security in Canada: A Discussion Paper*. Ottawa, Human Resources Development Canada.

² The best short history of the Green Paper can be found in Edward Greenspon and Anthony Wilson-Smith's *Double-Take: The Inside Story of the Liberals In Power*.

³ Junor and Usher, *The Price of Knowledge*, pp 178-180

⁴ Finnie, Schwartz and Lascelles. "Smart" Money? *Government Spending on Student Financial Aid in Canada*. in *How Ottawa Spends*, 2003-04.

the student body as a whole. Its largest sample of students is the Youth in Transition Survey (YITS), but it looks only at the 18-20 population, which, as we know from other work such as *Making Ends Meet*, is unrepresentative of the student population where questions of student finance are concerned.⁵ The more recent Postsecondary Education Participation Survey (PEPS) has a better (but still incomplete) coverage of the student body - it looks at students up to age 24 - but with a smaller sample size.⁶ As a result, there has never been a comprehensive study that determines whether or not existing subsidies reach students from low-income backgrounds or high-income backgrounds - data that presumably should be at the heart of government program decisions.

The purpose of this study, then is to try to determine, on the basis of known data:

- *how much* assistance is going out through each government transfer program
- *how* each program works; and
- *who* is receiving assistance from each government transfer program

On the basis of this, it should be possible to determine the effective distribution of subsidies for post-secondary education by income quartile.

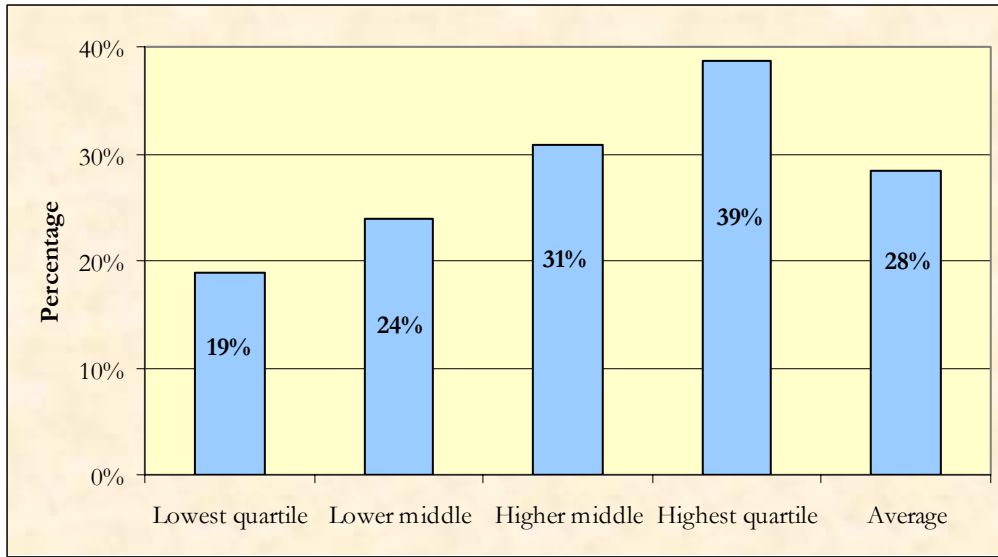
⁵ Ekos Research Inc. *Making Ends Meet: The 2001-2 Student Income/Expenditure Survey*.

⁶ See Lynn Barr-Telford, et. al, *Access, Persistence and Financing: First Results from the Postsecondary Education Participation Survey (PEPS)*. Despite the difference in sample sizes, PEPS essentially confirms all the major findings of the earlier *Making Ends Meet*.

I. A Portrait of the Student Body

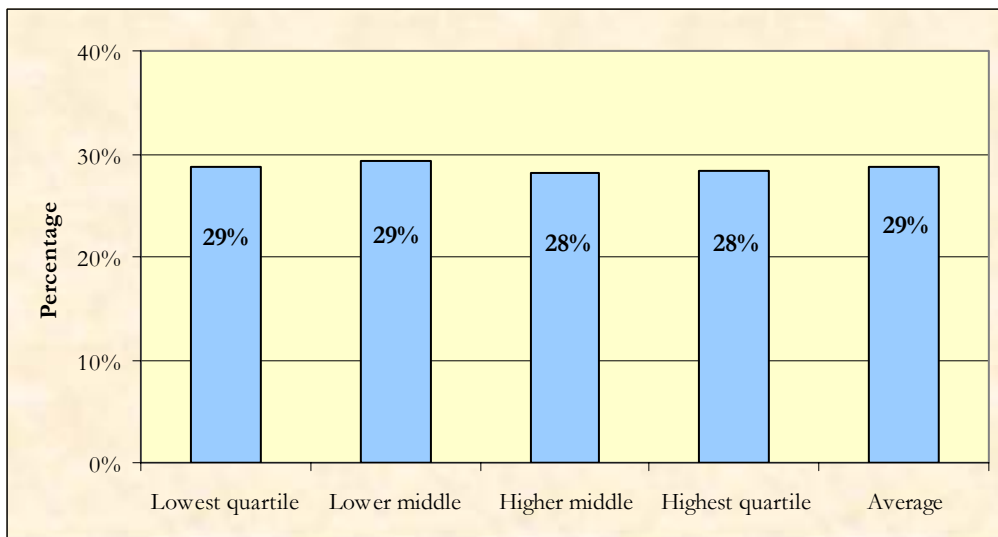
Crucial to an understanding of the distribution of benefits of PSE transfers is an understanding of the student body itself. Figure 1 and Figure 2 show the likelihood of attending university and college, respectively, by income quartile, as shown by Statistics Canada.

Figure 1. University Participation rate for 18-21 year olds, by income quartile, 1998



Source: Statistics Canada's Survey of Labour and Income Dynamics

Figure 2. College Participation rate for 18-21 year olds, by income quartile, 1998



Source: Statistics Canada's Survey of Labour and Income Dynamics

Simple mathematical manipulation of this data can then provide a breakdown of each income quartile's "share" of the student population.⁷

Table 1. PSE student body "shares"

	University	College	PSE (combined)
Top Income Quartile	34.5%	25%	31.7%
Upper Middle Quartile	27.4%	25%	26.5%
Lower Income Quartile	21.2%	25%	22.5%
Lowest Income Quartile	16.8%	25%	19.7%

Source: Usher, Alex (2004). Are the poor needy? Are the needy poor? The Distribution of Student Loans and Grants by Family Income Quartile in Canada. Toronto, ON: Educational Policy Institute.

Note that these discrepancies in enrolment between rich and poor are not necessarily caused by the cost of post-secondary education. Research both international (which tends to show major gaps in participation by parental income whatever the level of tuition fee) and domestic (which shows that differences in literacy and numeracy rates – which play a major role in determining eligibility for post-secondary education, are themselves correlated with socio-economic status) suggests that while participation in PSE is strongly correlated with income and wealth, the cause of this correlation is not strictly – or even primarily – financial in nature.

A quick glance at Table 1 confirms two relatively self-evident facts about subsidies to post-secondary education. First, subsidies that treat all students equally will tend to benefit students from higher income families more, as a group, than students from lower income families simply because there are more of them. Second, subsidies that favour university students over college students will tend to favour the wealthy (again as a group) more than the poor because the discrepancy in enrolment by income is even greater. It will be important to bear these two facts in mind as we proceed with an examination of the distribution of PSE subsidies.

⁷ Note that technically, the data provided by SLID is only valid for the 18-21 section of the PSE population. However, as demonstrated in the companion EPI publication, *Are the poor needy? Are the needy poor? The Distribution of Student Loans and Grants by Family Income Quartile in Canada*, data from a recent student panel survey conducted by the Canada Millennium Scholarship shows that there is no difference in the reported family incomes of younger and older students, which strongly suggests that the SLID data is a reasonably accurate picture of the student body as a whole.

II. The Size of the Pie: Total Government Transfers to Individuals in Respect of Post-Secondary Education

According to the most recent available data, the total annual amount of transfers from all levels of government in respect of post-secondary education is just over \$4.75 billion. The breakdown of this spending is shown in Table 2.

Table 2. Total Transfers to Individuals

Publicly Financed Student Financial Assistance	Million
Loans	\$943
Grants & Remission	\$1,070
Tax expenditures	\$1,989
Canada Education Savings Grants (CESGs)	\$360
Student employment	\$392
TOTAL	\$4,754⁸

The category *loans* includes all spending related to the loan portion of public student financial assistance, including in-school interest subsidies, interest relief programs and loan defaults. It does not refer to the value of loans issued (which is closer to \$3bn) but rather to the cost of supporting those loans. *Grants and Remission* includes all need-based non-repayable assistance, including Canada Savings Grants, provincial grant and remission programs, and the Canada Millennium Scholarship Foundation Bursary Program. *Tax Expenditures* refers to the notional cost to governments of providing certain forms of transferable or deferrable tax benefits for students and/or their families. *Canada Education Savings Grants* is the Government of Canada's program to partially match family contributions to Registered Education Savings Plans. *Student Employment* refers to the cost of programs specifically designed to boost student summer employment either through wage subsidies, funded positions, subsidised loans for business start-up, etc.

For the purposes of analysis, we can divide up these expenditures into two categories.

Need-Based expenditures are those incurred in programs to which not all students or families are eligible because entry is restricted by a needs test. These include all expenditures under *loans* and *grants and remission*. They also include a very small portion of tax expenditures; namely, those incurred through the tax credit for interest paid on student loans. Although available to everyone regard-

⁸ The figure for loans is for the 2001-02 year, taken from Finnie, Schwartz and Lascelles, op. cit. The figure for grants and remission is taken from a combination of Junor and Usher (for grants) and Finnie, Schwarz and Lascelles for loan remission. Data on tax credits comes from the Department of Finance's biannual survey of tax expenditures. CESG expenditures are from the CESG' quarterly statistics report. Student Employment expenditures are from Usher and Junor.

less of income at the time of use, they do require one to have *previously* had a need-based student loan and in this sense are means-tested in a post-hoc manner.

Universal expenditures are those which are available to all students and families, regardless of income. Some – such as tax expenditures (with the exception of the one noted above) and student employment – are genuinely available equally to all. Others – such as the Canada Education Savings Grant – are equal only in so far as one is able to save money on one’s own. In practice, as we shall see, this universally available program tends to be used disproportionately by wealthier families.

The balance of this paper will examine each category of expenditures in turn. The section on need-based assistance draws heavily on an earlier work by the author entitled *Are the poor needy? Are the needy poor? The Distribution of Student Loans and Grants by Family Income Quartile in Canada* which examined need-based assistance in considerably greater detail.

III. The Distribution of Need-based Transfers

Canada's student assistance system is need-based rather than income-based. Loans are given (up to a maximum amount per week) according to need. Grants, which are highly targeted, go only to those with the highest need. As Usher (2003) noted, there has been a complacent – and incorrect – assumption that “high-need” is synonymous with “low-income”. In fact, the situation is considerably more complicated than this.

Among *dependent* students – that is to say, those students who are not married, do not have children, have never spent two years full-time in the labour market or are less than four years out of secondary school⁹ – the system works more or less as advertised. A generous “floor” on parental contributions ensures that most families in the bottom two-income quartiles are not expected to contribute anything to their children's education. An almost equally ungenerous formula for parental contributions – which at fairly modest levels of income assumes that parents are transferring 75 cents of every after-tax dollar they earn to their children for the purpose of their education – ensures that families from the top income quartile are almost never eligible for assistance. As a result, students from the lowest income quartile make up 38.1% and 42.4% of all dependent students receiving loans and grants, respectively, while students from the top income quartile receive just 3.6% and 1.7% of loans and grants, respectively.

This is all to the good. The situation is, however, radically different when it comes to *independent* students, who make up 56% of all loan recipients and nearly 65% of all grant recipients. Because independent students are assumed – wrongly¹⁰ – not to be receiving any parental assistance, they tend to have much higher need than dependent students. Students from low-income backgrounds tend not to see the differences when they switch from being “dependent” to being “independent” as no parental contribution is required in either event. Students from higher income families see a much different effect – when the assumed parental contribution disappears, assessed need increases dramatically, thus increasing one's likelihood of receiving both loans and grants. In fact, according to the 2003 Canada Millennium Scholarship Foundation IPSOS student panel, which tried to determine the relationship between “assessed need” and family income among independent students (a hitherto impossible task given the manner in which administrative data is collected), need among independent students is effectively distributed in a random fashion, with students from high-income families as likely to be considered “high need” as students from lower-income backgrounds. This has profound implications, for as we saw in table 1 higher-income students considerably outnumber lower-income students in post-secondary education. The net effect of the independence rule, therefore, is to re-

⁹ In Ontario, one must have spent five years out of secondary school to be considered “independent” for provincial assistance; in Quebec, one must have accumulated 90 credits at the university level to be considered independent.

¹⁰ Ekos Research Inc, *Making Ends Meet*

direct a considerable amount of assistance away from younger low-income students and towards older students from higher income backgrounds.

Assuming that loan expenditures are distributed in the same manner as loan recipients¹¹, the implicit distribution of assistance by income quartile, therefore, looks something like this:

Figure 3. Student Loan Expenditures by Income Quartile

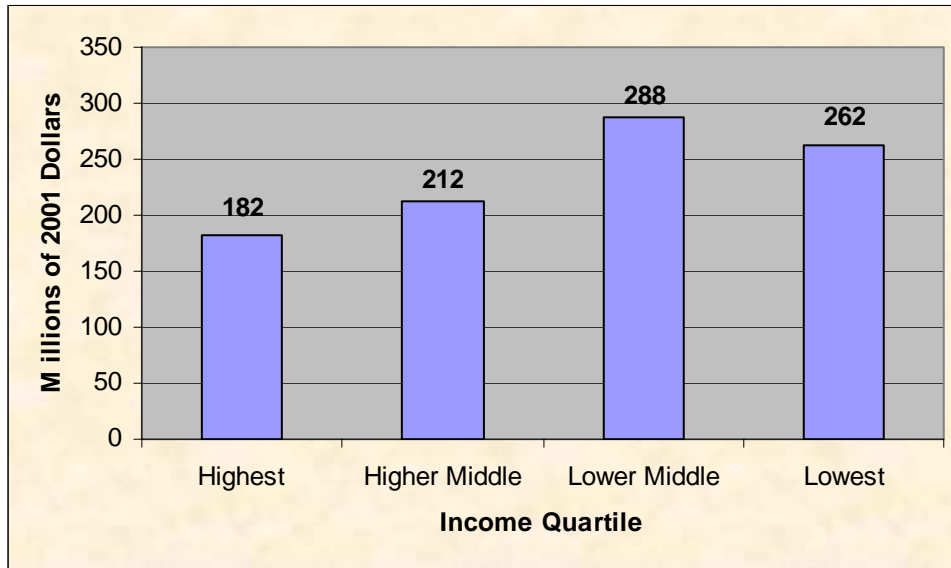
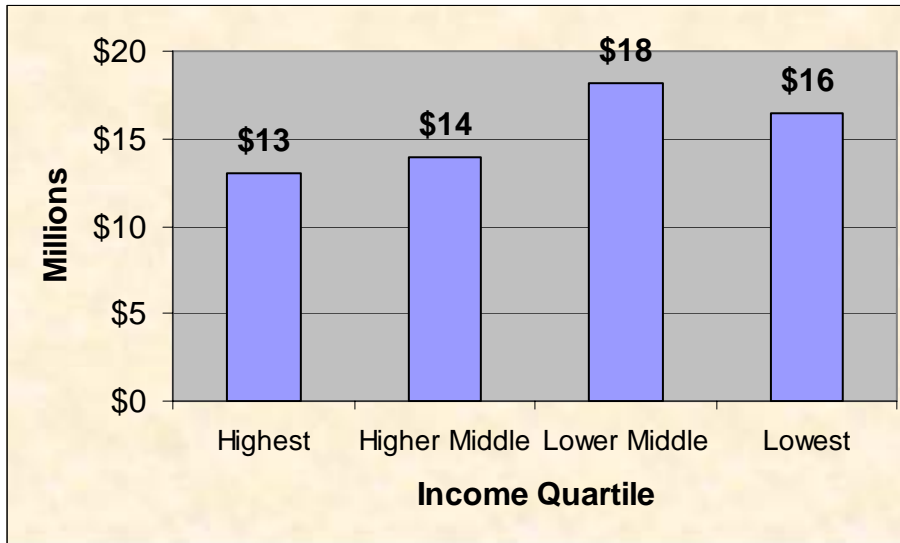


Figure 3 shows the distribution of total expenditures to all students. While government expenditures on student loans are “progressive” (in the sense that more money is spent on students from poorer backgrounds than from richer ones), they are only lightly so – over 40% of expenditures go to students from the two highest income quartiles.

The Student Loan Interest Tax Credit, by definition, has a distribution pattern that closely mirrors that of student loans (the credit is a flat proportion of the amount repaid, which itself is a function of the amount borrowed). Information on the distribution of money from this program is shown in figure 4.

¹¹ This is unlikely to be precisely the case for two reasons. First, while costs related to loan interest and risk premiums are certain to be mirror the borrowing population, this accounts for only about 40% of total spending on student loans. The balance of costs lie in loan defaults and interest relief measures, where no data exists to help us understand how these subsidies are distributed, but it seems unlikely that they would *exactly* mirror the student population. Second, it is intuitively likely that independent students should have higher loans than dependent students because of the absence of parental contributions. The former seems likely to tilt costs in the direction of low-income students, the latter in the opposite direction. As a result, the simplifying assumption steers a middle ground.

Figure 4. Student Loan Interest Tax Credit Expenditures by Income Quartile

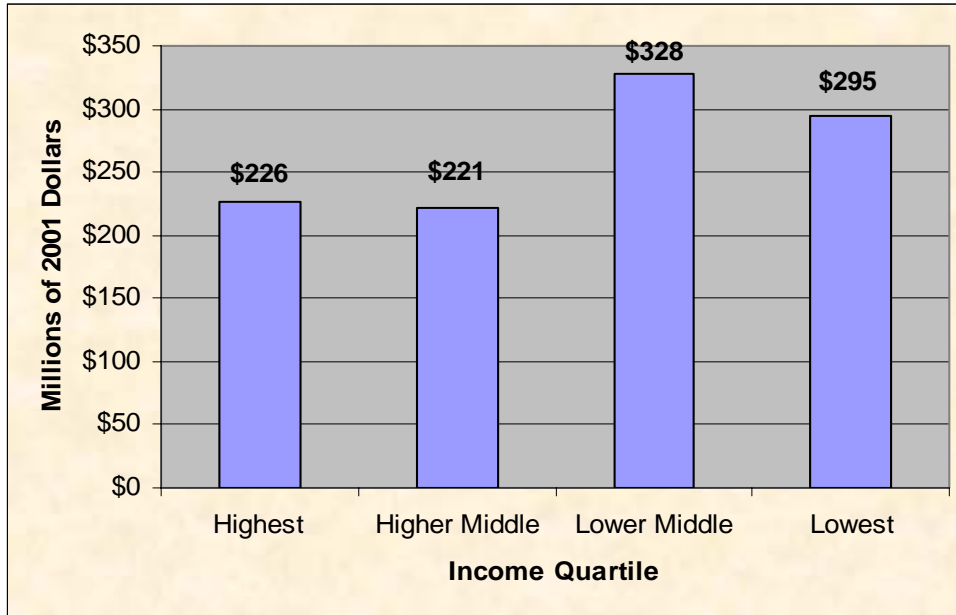


The distribution of grant and remission money is only slightly different from the distribution of loan money. In effect there are only two things that affect the distribution of grants as differently than loans.

1. The distribution of grants among dependent students are even more progressive than the distribution of loans generally. This is an inevitable consequence of the parental contribution rule (see figure 1) and the fact that grants are given only to those with the highest need. This would tend to skew the distribution of grants more towards the poor.
2. Independent students make up a greater percentage of grant recipients than loan recipients (see figure 6). Since we know that close to 60% of the independent students receiving student assistance are from the two upper income quartiles (see table 4), this will tend to skew the distribution of grants more towards the rich.

In the final analysis, these two factors more or less cancel each other out. Based on an analysis that is identical to the one performed for student loans, the implicit distribution of grants and remission is as shown in figure 5.

Figure 5. Grants and Remission by Income Quartile



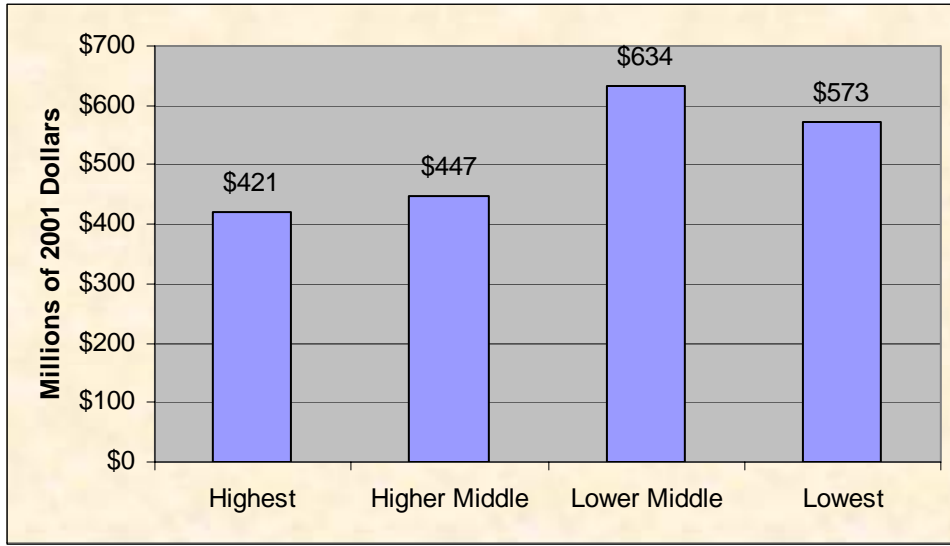
Total Need-based Expenditures

By combining the data from figures 3, 4 and 5 together, one can get an aggregate picture of the distribution of need-based student financial assistance. This is shown below in table 4 and figure 6.

Table 3. Total Need-Based Expenditures by Income Quartile (millions)

Income Quartile	Loans	Grants	Student Loan Interest Credit	Total
Highest	182	226	13	431
Higher Middle	212	221	14	447
Lower Middle	288	328	18	634
Lowest	262	295	16	573

Figure 6. Total Need-Based Expenditures By Income Quartile



In sum, while need-based programs in Canada can be said to “work” in the sense that they deliver the majority of their assistance to students from lower income backgrounds, it remains the case that close to 875 million dollars a year – or over 40% of the total – is sent to students from higher-income backgrounds, largely due to the effects of the “independent” student rule.

IV. The Distribution of Universal Transfers

A universal transfer is one where:

- Eligibility is open to all, regardless of need or income; and
- The amount of the transfer is not based on need or income.

This definition includes not just tax benefits (which in the case of education tax credits are income-neutral in their benefits) and employment subsidies (which are non-preferential in nature) but also savings assistance measures, such as the Canada Education Savings Grants which are universally *available* even if they are not universally *used* (and in fact tend to be used more frequently by those from higher-income backgrounds).¹² Another subsidy that would naturally be considered universal would be those transfers to *institutions* that keep tuition below the cost of educational provision. Tuition subsidies are not dealt with in the main body of this report, but are examined in Appendix A.

As noted above in Section 1, the fact that there are more students from higher income backgrounds in post-secondary education – particularly university – means that a universal student benefit that treats everyone equally will, on aggregate, tend to give more money to students from higher income backgrounds simply due to sheer weight of numbers. This observation will be borne out repeatedly in the analyses that follow.

Tax Benefits (except Student Loan Interest Tax Credit)

Canada has several types of education-related tax benefits at both the federal and provincial level. We have already examined the relatively small student loan interest tax-credit. Canada's two largest tax credits – which account for well over three-quarters of total tax expenditures – are:

- The **tuition tax credit**, which provides a tax credit equivalent to the value of all tuition and mandatory ancillary fees paid in a calendar year times 16% (the minimum tax rate).
- The **education amount** tax credit, which provides a tax credit worth \$400 for each month of full-time study and \$200 for each month of part-time study times 16% (the minimum tax rate).

¹² Some previous authors – notably Junor and Usher – have referred to these programs as “non-need-based programs”, and while this term is certainly accurate, it tends to give the impression that such money does not go to students in need. The term “universal” does a better job of indicating that this money goes both to students who have need and those who do not.

While both of these tax credits are issued to students in a given calendar year, they are transferable to other family members (meaning the benefit may accrue to another person) or may be carried-forward to a future tax year (meaning the benefit may accrue in another at another time). The carry-forward provision is important because it ensures that students whose income is too low to have any tax payable do not lose out on the tax credit altogether but rather receive the benefit at another time.

Most provincial tax expenditures are mirrors of the federal tax credits for tuition and monthly educational amounts. In addition to this, there are also some smaller provincial tax credits such as one to promote the hiring of Co-op students in Ontario, one to reduce tax on recent graduates in Saskatchewan, etc. There is also a tax exemption on income earned on Registered Education Savings Plans, which will be treated separately.

Table 4. Value of Federal and Provincial Tax Expenditures

Name (2001 actual)	Value
Education credit	221
Tuition fee credit	255
Education and tuition credits transferred	450
Carry forward of education and tuition credits	265
RESP	78
Provincial	660
Total	1929

As it happens, all tax credits (with the exception of the RESP tax exemption, which will be dealt with shortly) are distributed on roughly the same basis. Roughly three-quarters of education amount tax credits are distributed to university students and $\frac{1}{4}$ to college students, reflecting the relative distribution of students in Canada.¹³ Similarly, the ratio of student fees collected by universities to those collected by colleges are about 3 to 1, which suggests a 75-25 distribution of tuition fee tax credits between universities and colleges. This implies that the distribution of tax credit expenditures by income quartile will effectively mirror the distribution of the student population, as shown earlier in table 1. The effective distribution of tax subsidies, exclusive of the RESP tax credit, is therefore as shown in figure 7.

¹³ Both numbers are from Statistics Canada's *The Daily*. The most recent year for which data is available on tuition fees received by both colleges and universities in 1997/98. Data for universities for this year was published in the Daily on July 25, 2000 and for colleges on March 22, 2000. No more recent data is available for colleges. The most recent data available on universities is for the 01/02 academic year, which was published on June 11, 2003.

Figure 7. *Distribution of Government Tuition and Education Amount Tax Credits*

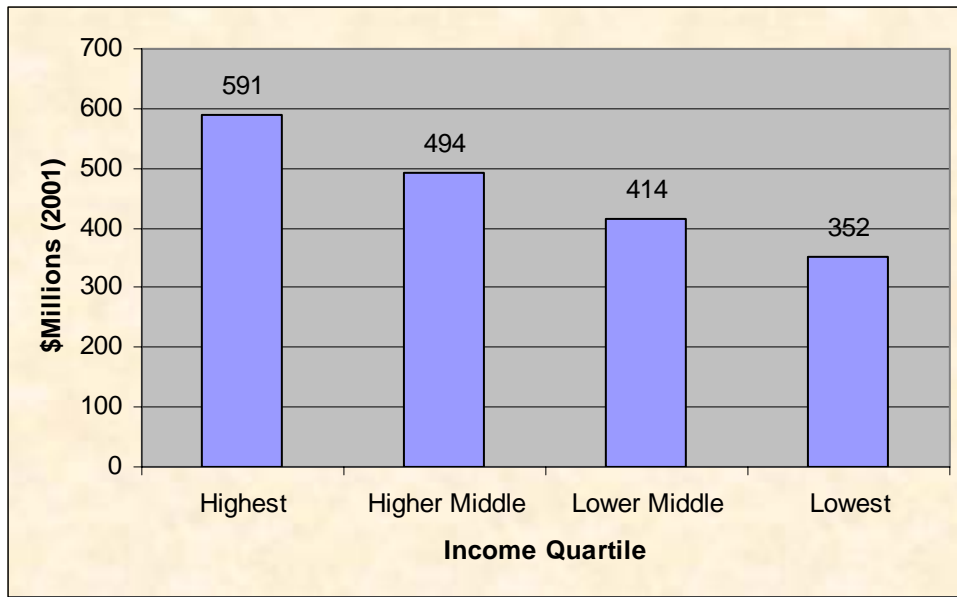


Figure 7 shows that tax credits, on aggregate, tend to favour families from wealthier backgrounds. Note that this does not mean, as some have incorrectly suggested¹⁴ that tax credits are “biased” towards the rich. On a per-student basis, tax credits treat everyone absolutely equally. The reason that the rich, *on aggregate*, benefit more is that there are more of them in post-secondary education.

The distribution of tax expenditures for tax-sheltered growth for Registered Education Savings Plans does not follow the same pattern as that for other tax credits. On the contrary, benefits from this program are fairly heavily stacked towards upper-income Canadians. The distribution of RESP users has been recorded through Statistics Canada’s *Survey of Approaches to Educational Planning* (SAEP) and examined in detail by Kevin Milligan of the University of British Columbia.¹⁵

Statistics showing the share of RESP users by income quartile do not exist; however, using the same data regarding income quartile that was used by Statistics Canada to derive participation rates by income quartile, a crude arithmetical translation can be made from existing data on RESP users by income bracket (see table 4) to RESP users by income quartile and hence to share by income quartile and then to subsidy by income quartile (see Table 5).

¹⁴ Canadian Federation of Students – *Fact Sheet: Tax Credits as Education Policy*, 2003

¹⁵ K. Milligan, *Tax Preferences for Education Savings: Are RESPs Effective?* Toronto: CD Howe Institute Commentary no. 174, November 2002.

Table 5. RESP Beneficiaries

Income Bracket	Percent of Children Who are Beneficiaries
\$80k and over	29.9
\$60k-\$80k	21.7
\$50k-\$60k	16.1
\$30k-\$50k	2.7
Under \$30k	6.3

Source: Statistics Canada Daily, April 10, 2001, as shown in Milligan.

Table 6. RESP subsidies

Income Quartile	% of children who are beneficiaries (see table 6)	Quartile's Share of total beneficiaries	Implicit RESP subsidy (total = \$78M)
Highest	27.2	42%	\$32.39 M
Higher Middle	18.3	28%	\$21.83M
Lower Middle	12.7	19%	\$15.13M
Lowest	7.3	11%	\$8.65 M

Source: Author's calculations

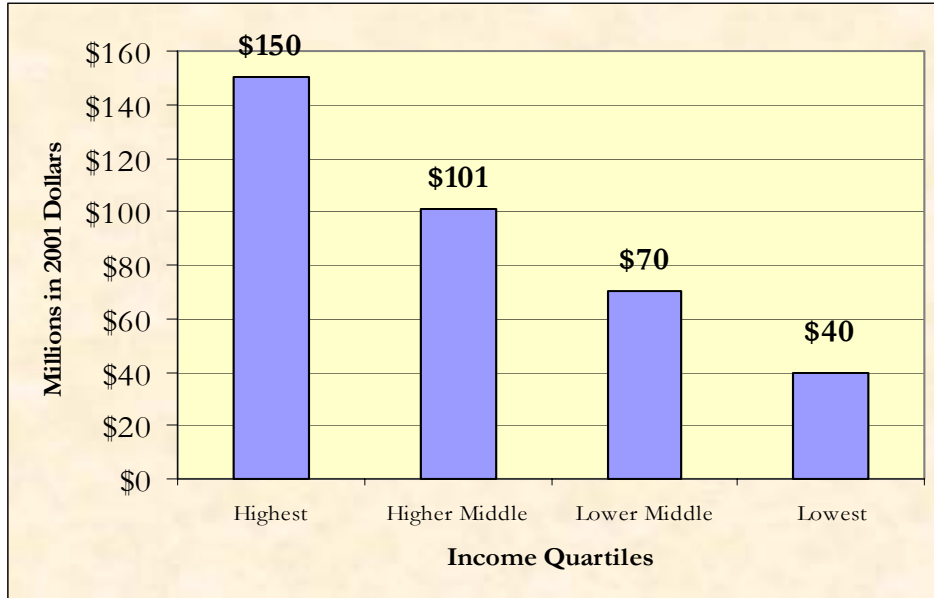
According to Table 5, the implicit distribution of subsidies under the RESP tax exemption is even more heavily biased towards wealthier Canadians than most tax expenditures, with the richest quartile benefiting, on aggregate, four times as much as the poorest quartile. This is not exactly surprising: a subsidy that rewards saving is always likelier to benefit the rich than the poor, because the rich have a greater ability to save. It is worth noting, however, that Table 5 is almost certainly an *underestimation* of the true situation. The table assumes – in the absence of solid data one way or the other – that the distribution of the *amount* of RESP savings is equal to the distribution of the *incidence* of RESP savings, or, more crudely, that the poor and the rich both save the same amount. This is almost certainly not true. If it were to be demonstrated that the rich not only use RESPs more frequently but also save in greater amounts, then one would see an even more skewed picture than the one shown in Table 5.

Canada Education Savings Grants (CESGs)

The Canada Education Savings Grants (CESGs) were introduced in 1998 as a means to encourage families to save for post-secondary education. The CESG operates as a “top-up” on savings. For every dollar put into an RESP, the government will contribute 20 cents, up to a maximum of \$400 per year.

There has been no published account of the distribution of Canada Education Savings Grants by income quartile, in part because the program is still relatively new. It is reasonable to assume, however, that the distribution of CESG beneficiaries parallels the RESP beneficiaries very closely. As a simplifying assumption, then, this paper assumes that the distribution of CESG subsidies matches that seen in Table 6 for RESPs. According to this assumption, the distribution of CESG subsidies is as shown in Figure 8.

Figure 8. Distribution of Canada Education Savings Grant Subsidies By Income Quartile



As with RESPs, we see the almost 4-to-1 difference in the benefit accorded to top- and bottom-quartile beneficiaries. And again, as with RESPs, it is worth noting that this is almost certainly an *underestimate* of the actual ratio of benefits because of the implicit assumption (made due to data limitations) that the rich and the poor save the same amounts and are hence eligible for the same amount of subsidy.

Summer Employment

Governments currently spend close to \$400 million per year in subsidising student summer employment. This money is not usually considered a transfer in respect of post-secondary education, as it tends to be seen under the rubric of job experience and career development. This paper treats these programs as transfers in respect of post-secondary for the simple reason that they are subsidies *reserved* for people who are in post-secondary and thus become inextricably linked with student expenditure *on* post-secondary education.

There is no data on the distribution of student employment subsidies by income quartile. Given, however, that

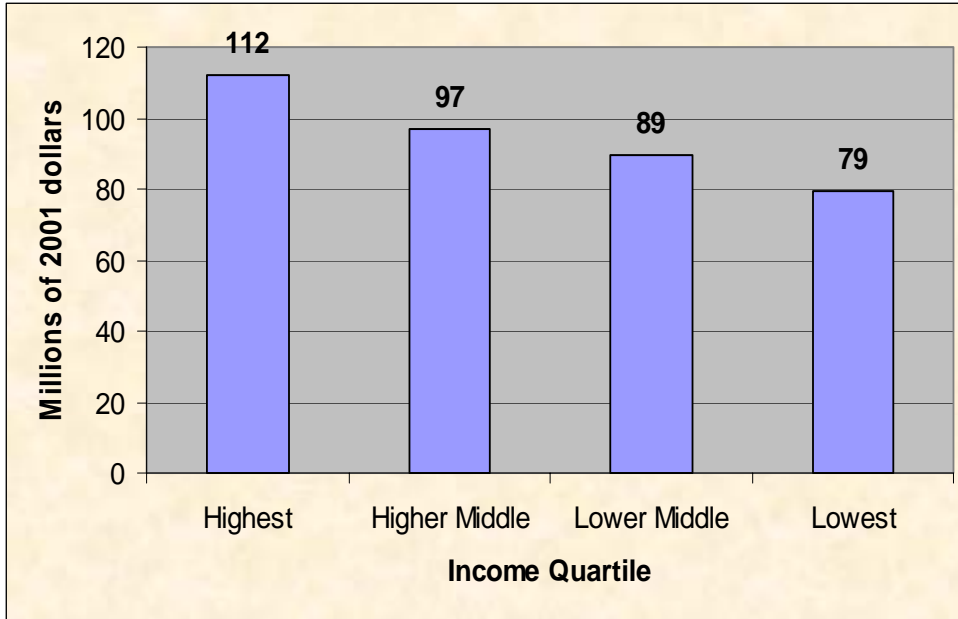
- a. These subsidies are not targeted on the basis of income or need and
- b. These subsidies are nearly all spent on seasonal (i.e. summer) employment and ¹⁶
- c. Nearly all students work in the summer, regardless of family income¹⁷

¹⁶ Junor and Usher, *Price of Knowledge*, pp.172-3

¹⁷ Ekos Research Inc, *Making Ends Meet*

It seems reasonable to conclude that subsidies for student employment are effectively distributed equally across the student population without reference to income. As a result, like tax credits, these subsidies tend to benefit the wealthy more *on aggregate* because there are more wealthy students than poor students. The distribution of subsidies, which we take here to follow the pattern established in Table 1, is therefore as shown in Figure 9.

Figure 9. *Distribution of Student Employment Subsidies by Family Income Quartile*



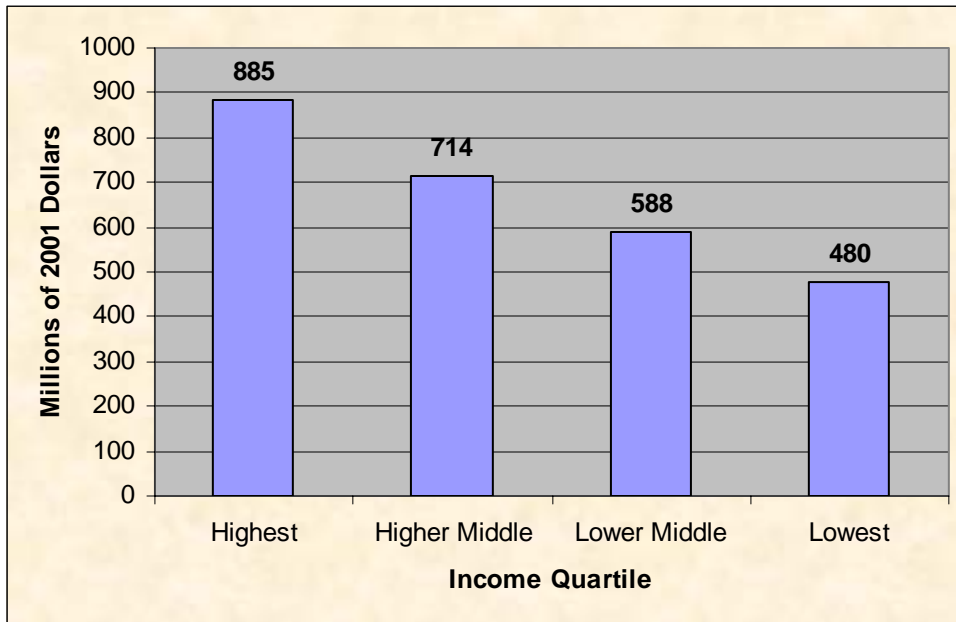
Total “Universal” Expenditures

Table 7 and Figure 10 summarize the distribution of government expenditures under “universal” subsidies for post-secondary education.

Table 7. *Total Universal Expenditures by Income Quartile (millions)*

	Student Employment	CESGs	Tax credits (not including RESP or loan interest)	RESP tax expenditure	Total
Highest	112.12	149.5	591	32.39	885.01
Higher Middle	97.07	100.75	494	21.83	713.65
Lower Middle	89.37	69.82	414	15.13	588.32
Lowest	79.17	39.9	352	8.65	479.72

Figure 10. *Distribution of Universal Transfers by Income Quartile*



V. Total distribution of all PSE Transfers to Individuals

Summarizing the distribution of all transfers is now a simple matter of aggregating data from need-based and universal transfers. This is shown below in Figure 11.

Figure 11. Aggregate Distribution of all Government Transfers in Respect of Post-Secondary Education, by Income Quartile

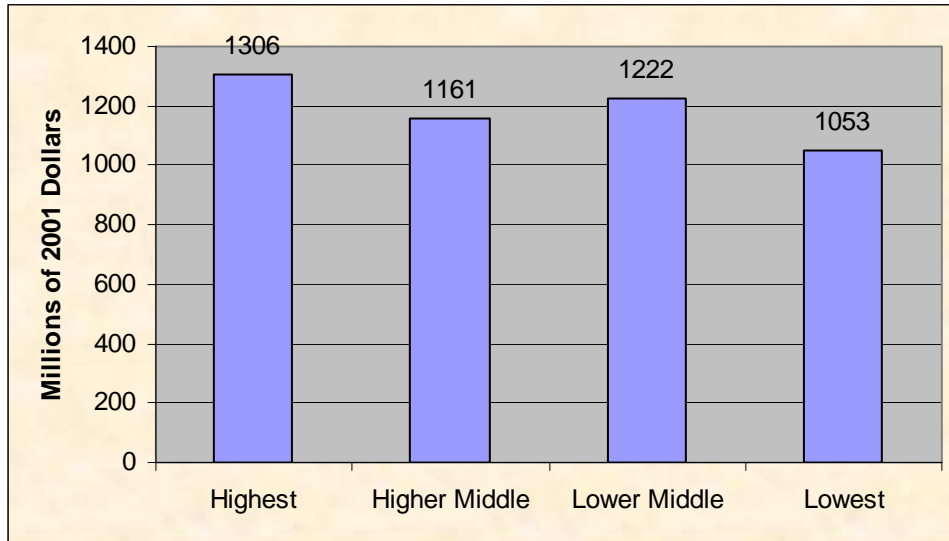


Figure 11 shows the sum of our work so far: on aggregate, the distribution of transfers to individuals for post-secondary education is lightly regressive. The lightly progressive need-based transfer is more than offset by the regressivity of the universal transfers. This study does not look at historical data; however, given that recent government policy changes have tended to put relatively more emphasis on universal transfers (CESGs, tax credits) than on need-based transfers, one might be tempted to say that the present situation is likely more regressive than it was in the mid-1990s. However, as Junor and Usher (2002) noted, this jump in universal transfers occurred at the same time as transfers to individuals dropped substantially. Since transfers to institutions to keep tuition down for all students, they function effectively a “universal subsidy” and hence have a regressive effect (see Appendix A). Thus, the shift in overall spending from transfers to institutions to universal payments to individuals was really just a shift from one form of regressive spending to another and the net effect was therefore probably very close to nil.

Another way of looking at the data is to look at per-capita expenditures. This is done in Figure 12.

Figure 12. Per capita distribution of transfers to individuals, by income quartile

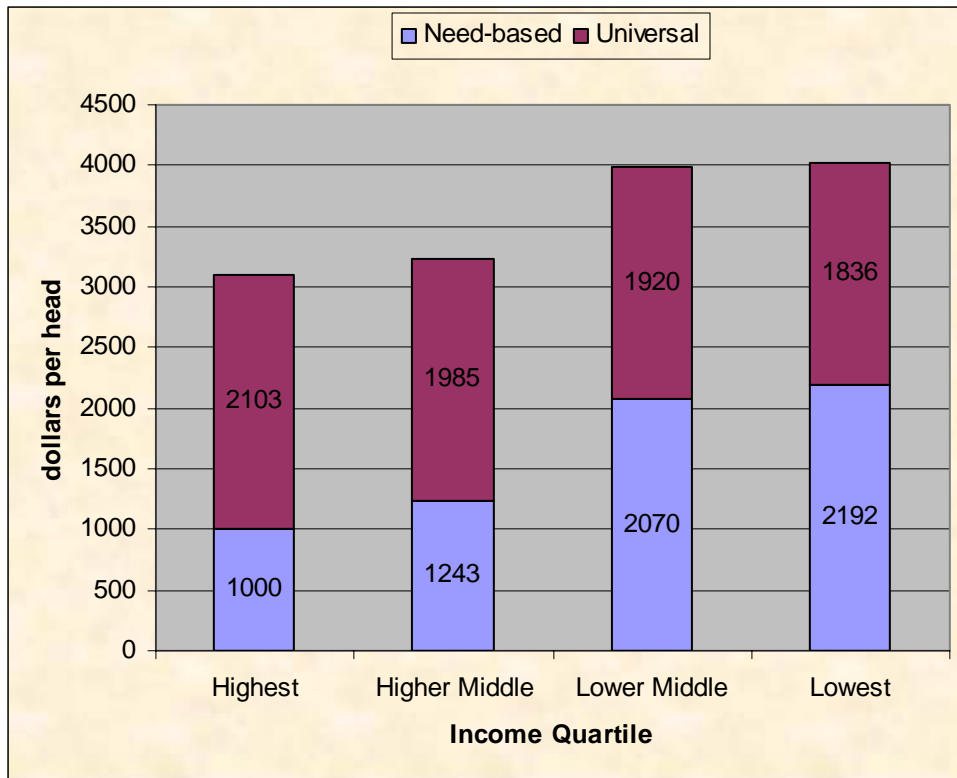


Figure 12 shows a slightly better story than Figure 11. On a per capita level, more public dollars are spent on families with below-median income than families with above-median income. This is entirely due to the family income restrictions on dependent students in need-based assistance programs. Without family income restrictions, the system as a whole would be slightly regressive at the individual level, not just on aggregate. Note this figure does **not** mean that individual low-income student aid recipients get **more** assistance than high-income recipients; it simply means that low-income students are on average **likelier** to receive assistance. Despite this, the sheer number of students from higher income quartiles creates the much less progressive pattern shown in Figure 11.

Some might say that the more encouraging per capita figures mean that we need not worry about aggregate distributions. Yet this would be a mistake. It still is quite surprising to find that Canadian governments appear to believe that students from the lowest-income families are only deserving – on average – of \$1000 per year more in government transfers for education than are students from high-income families. This fact is surprising not only in relative but in absolute terms. Average undergraduate tuition in Canada is just under \$3750 per year; average college tuition is about \$2000 per year. Given these costs, one might be forgiven for questioning the wisdom of spending an average of \$3100 per year in transfers to students from the top income quartile.

Conclusion

The examination that has been conducted here is necessarily incomplete. It is incomplete first of all in terms of data quality. The numbers arrived at in this paper are at least one step removed from reality in that they are not based directly on administrative data. The figures provided herein are crucially based on data sources and reasonable assumptions which – while based on the best available evidence – are not necessarily correct to the last decimal place. If SLID data, for instance, were to turn out to be slightly inaccurate, then this would affect the results of this study. If it were to turn out that the distribution of subsidies for student loans do not exactly follow the distribution of the incidence, then this also would affect the result. This is what one might call a necessary evil, as in most cases the relevant administrative data is either unavailable for study or – more commonly – not collected on the basis of income.

The examination is also incomplete in that it looks only at one side of the public finance equation; namely, expenditures. A more complete study might want to look at the relative shares of income tax paid by families in different income quartiles and compare this against the expenditure patterns described in this paper. More analysis of this type is probably necessary in order to make any firm conclusions about the appropriateness of different combinations and permutations of assistance.

What is lacking most of all, however, is a serious discussion in Canada about why we give out certain types of subsidies, what the intended benefits of each program are, and how alternative arrangements might change the profile of recipients and improve access to post-secondary education. At no time have policy makers or stakeholders said directly that they want a system of transfers that is only lightly progressive, yet an accretion of decisions has given us precisely such a system. At no time have policy-makers or stakeholders said that need-based assistance should help older students from higher-income families on the same basis as younger students from lower-income families, yet that is one of the effects of the system we currently have.

Program rules matter. They have real distributional effects that determine whether or not a program is helping those it is intended to help. When it comes to post-secondary education, Canadian policy-makers and stakeholders have preferred to concentrate on the symbolism of their actions and positions (“help for families”, say governments – “need-based assistance” say student groups) rather than examine the hard distributional consequences of their preferred course of action. Neither taxpayers nor students have been well served by this approach. They both deserve better.

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Appendix A – The Distributional Effect of Subsidies to Educational Institutions

Subsidies from provincial governments to educational institutions serve among other things to keep the “sticker price” of education – that is, the tuition paid by students to the institution – lower than it would be if costs had to be recovered entirely through tuition. Since (low) tuition is the same for everyone, regardless of income, subsidies that keep tuition below cost-recovery level therefore effectively fit the definition of a “universal” subsidy as described in Section 4, even though the subsidy is not received directly by the student. As a “universal” subsidy, its distributional effects are regressive to roughly the same degree as those of tax credits (in theory, they should be exactly the same, but since significant cross-subsidization occurs during the internal institutional resource allocation process and the income distribution in each program is not precisely the same, it is unlikely to be *precisely* equal). Proposals to reduce or abolish tuition, therefore, whatever their long-term effects on access, will in the short-term on aggregate primarily benefit students from higher-income families.

To examine how the benefits of tuition subsidies are distributed, we need only examine current institutional income statistics. For the purpose of this exercise, we will concentrate solely on universities, as financial data for colleges is both less complete and less up-to-date. Financial data for universities is derived from Statistics Canada’s *The Daily* for June 11, 2003 and covers the 2001/2002 academic year. The key pieces of information are shown in Table 8:

Table 8. Key Data on Costs and Participation

Provincial Government grants and contracts ¹⁸ :	7.323 Billion
Tuition and fee revenues	3.347 Billion
% of students from highest income quartile	34.5
% of students from higher-middle income quartile	27.4
% of students from lower-middle income quartile	21.2
% of students from lowest income quartile	16.8

Assuming that all students receive an equal amount of benefit from a tuition subsidy (keeping in mind the earlier caveat about cross-subsidization), the distribution of tuition subsidies by income quartile will follow the shares of the student population exactly. Similarly, the immediate benefits of any proposal to eliminate tuition will also follow the shares of student population. The distributional benefits of the existing system and the extra benefits of the elimination of tuition can therefore be determined simply by multiplying current expenditure by population shares, which is done below in Table 9:

¹⁸ Only provincial government revenues are included here as it is provincial “core” operating grants that have the most effect on tuition. Federal government money - \$1.869 BN in 2001/02 - is excluded because virtually none of this money goes to core operating budgets and thus has only a marginal effect on tuition.

Table 9. Tuition Subsidy Effects

Income Quartile	Benefit of Existing Tuition Subsidy	Additional Benefit of a "free" tuition subsidy
Highest	2.53 Billion	1.15 Billion
Higher middle	2.01 Billion	0.97 Billion
Lower income	1.55 Billion	0.71 Billion
Lowest	1.23 Billion	0.56 Billion

Table 9 shows rather starkly the implications of free tuition policies. Assuming that public money could be found to replace tuition revenue, the elimination of tuition would undoubtedly have the effect of removing a barrier to education, and moreover one which is more daunting to the poor than the rich. However, eliminating tuition at universities would also have several other effects, including:

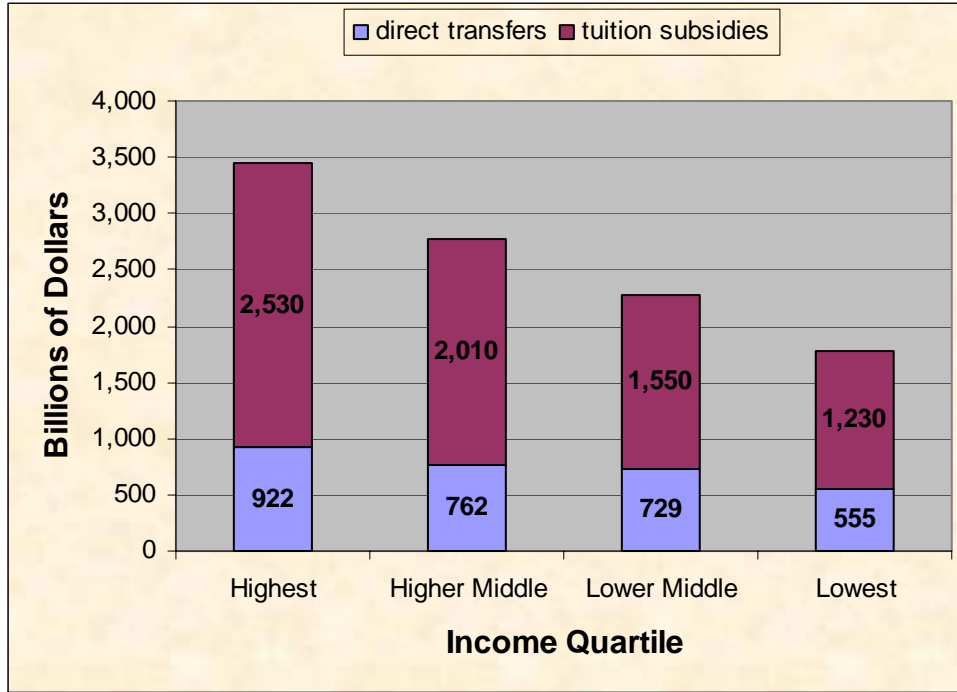
- providing upper-income families with a \$2Bn aggregate windfall
- providing top income quartile families, on aggregate, with \$2.05 for every dollar going to families from the lowest income quartile.

In the long run, some of these inequities would disappear if they created relatively more opportunities for lower-income students at universities. However, barring a policy of actually *removing* higher income students from university, for youth of all income quartiles to enjoy the same 39% rate of university attendance currently enjoyed by those from the highest quartile would require adding another 335 000 students to the university system (assuming no growth whatsoever in higher income students' attendance rates). To put it mildly, there is no evidence whatsoever that there are currently this many students being deterred from attending university on the grounds of cost. Even the fiercest supporters of free tuition only claim (without accompanying research) that 100 000 students are being denied access to PSE (not just university) on grounds of cost¹⁹. Thus, even if the policy of free tuition has the desired effect, it appears that the subsidy required to achieve it will provide significantly more benefits to higher-income families than to lower-income ones.

Turning from potential policies to actual ones, Table 9 also shows the aggregate distributional effect of the subsidies for universities. Figure 13 shows the total aggregate distribution of assistance from both direct transfers to individuals and from the indirect tuition subsidy.

¹⁹ Canadian Federation of Students Press Release, 12 August 2003: "Students call for increased federal investment in post-secondary education"

Figure 13. Total aggregate distribution of subsidies for universities only, by income quartile



A couple of facts become immediately obvious from Figure 13. The first is that the value of tuition subsidies vastly outstrips the value of tax transfers and need-based assistance. The second is that the system of subsidies for universities, on the whole, provides almost exactly double the assistance to families in the top income quartile as it does to families in the bottom quartile. The third is that the distribution of benefits almost exactly parallels the distribution of students, which is precisely what we would expect of a system based almost entirely on “universal” transfers which make no distinction based on need. In such a system those that go to school, get the money. The re-distributive element to the system is effectively non-existent, confined entirely to the approximately \$750 million per year which goes to dependent students receiving student assistance. For the remainder of the post-secondary subsidies – the \$1.25 billion in “need”-based assistance to independent students, the \$2.5bn in universal transfers to individuals, the \$7.3 bn in provincial subsidies to universities, the estimated \$3bn+ in provincial subsidies to colleges – money is distributed strictly on a per student basis, which inevitably biases spending towards higher-income families.

Perhaps this is precisely the system Canadians want. After all, investments in post-secondary are made for a variety of social and economic purposes other than redistribution. Public subsidies for education have both public and private benefits that accrue no matter who the beneficiary is. Yet we have no way of knowing for sure if this is the case because debates about post-secondary subsidies have never fully explored the issue of the relative distribution of benefits. Hopefully, this paper will contribute to a re-framing of this debate so that Canadians’ preferences can be explored more fully.

We believe...

...that education is the fundamental lever for improving social and economic conditions for individuals and nations. Buoyed by a solid foundation of knowledge and understanding, our youth can overcome barriers and stereotypes that fall in the way of human progress. In a truly global society, this knowledge is critical to the development of a population that is cognizant of our collective strengths and weaknesses, underscored by a compassion for all.

Unfortunately, educational opportunity is not equal or equitable. Students and families from the lower rungs of the economic ladder do not frequently enjoy the same opportunities as other students. Only through a concerted and consistent effort on behalf of policymakers, practitioners, communities, and families can we ensure that all youth receive the opportunity to develop to their fullest potential.

At EPI, our research is aimed at facilitating the expansion of educational opportunity for all students, focusing on students with the least support and the most need, through a program of high-level research and analysis on issues that make a difference. Through our efforts, we hope to enlighten policy debates in the U.S., Canada, and beyond, in hopes that policymakers will improve public policies and educational practices to enhance the aspirations, motivations, and skills of our youth and truly open the doors of opportunity for all.



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