

A Little Knowledge Is A Dangerous Thing

**How Perceptions of Costs and Benefits
Affect Access to Education**

Alex Usher

July 2005

The Educational Policy Institute

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Executive Summary

This study introduces the concept of cost-barriers to education and the decision-making framework within which individuals determine whether or not to invest in post-secondary education, and explores Canadians' perceptions of the costs and benefits of a university education. The purpose of this paper is therefore twofold: to investigate the quality of the information available to Canadians and whether or not that information might affect rational decision-making in such a way as to be called a "barrier" to education in its own right.

Using data from a survey commissioned by the Canada Millennium Scholarship Foundation in 2003, this report finds that substantial differences exist in Canadians' perceptions of the returns to university education and that these differences are primarily income-related. However, this barrier of poor information is not actually financial in nature, but can best be described as an income-based, non-financial barrier.

The report's main findings include:

- A year's average university tuition cost (\$3,749) is overestimated by Canadians in general (\$4,989) and in particular those from low-income backgrounds (\$6,834).
- The average annual income differential between high school and university graduates (\$27,191) is underestimated by Canadians in general (\$5,337) and by low-income Canadians in particular (\$4,885).
- Similarly, the future value of a university education (taking into account tuition-costs, foregone income, interest, and potential earnings) is underestimated by Canadians in general and low-income Canadians in particular.
- When asked directly, 9 out of 10 Canadians agree that a university education is a worthwhile investment.
- There is dissonance between the findings which suggest that Canadians may perceive the benefits of a university education as primarily non-financial.

The results show clearly that given limited and incorrect information, many Canadians –and those from low-income backgrounds in particular – are making rational choices which imply they do not view university education as being a "good investment." The policy implications of such mis-estimation of costs and benefits of education are relevant to all stakeholders concerned with equitable access to education.

Acknowledgements

A number of people have contributed their time and effort to this paper, which has been over two procrastination-filled years in the making: Amy Cervenak has performed her usual peerless editing magic; Massimo Savino has done a sterling job in rendering the graphics for figures 2 through 4. The patience and good humour shown by Sean Junor when this work was in its infancy was greatly appreciated, as were the comments of a number of participants at the May 2003 Canadian Economics Association meeting in Ottawa and of participants at the June 2003 Invitational Conference on University Reform and Access to Higher Education: Special Focus on Eastern and Central Europe in Prague. Alexy Kluyev's patience in waiting for the final version of this paper is especially appreciated.

Most importantly, however, a word of thanks is due to my valued colleague Natasha Sawh, whose thoughts and comments were essential to the genesis development of this report. This report would not have been written without her.

Despite the large cast of characters who assisted in the gestation of this report, however, any mistakes, errors or omissions are entirely the responsibility of the author.

Introduction

The literature on access to post-secondary education shows that there are many barriers to post-secondary education. One important barrier – and perhaps the one that receives the most attention is the cost of education. Debates on access to education in North America and Europe tend to revolve around questions of tuition (or, in more sophisticated discussions, around concepts of “net cost”). Drawing on work such as Heller (1999) and earlier examinations of student price response co-efficients (SPRCs) such as Leslie and Brinkman (1988), the case has been made that even small changes in net cost can have measurable effects on participation, and that these changes in participation are disproportionately concentrated among poorer students.

Yet, while it is possible to make the case that marginal changes in tuition have marginal effects on participation in the United States, it is less easy to make the case elsewhere. Simply put, the United States has spare capacity in its higher education system and other countries do not. In situations where capacity is constrained, it is unlikely that changes in cost will affect aggregate demand in the way suggested by SPRC models (though it may still affect the social composition of demand). Moreover, the explanation of short-term changes in tuition causing short-term changes in demand is unconvincing in many cases, given both the long-term benefits of higher education and the long-term investments in preparation for education made by young people in their families. Can years of high school study and hundreds of thousands of dollars really be thrown out the window because of a \$100 change in net costs, as SPRC studies suggest?

The argument presented in this paper is that whatever merits SPRC analyses have, they miss a deeper truth. Individuals make rational decisions based on the information available to them; however, rational decisions made with bad data can lead to irrational results. An increasing amount of evidence suggests that “popular knowledge” of the costs and benefits of higher education are drastically out of kilter with reality, making higher education seem far less attractive than it actually is. Indeed, the extent to which perceptions differ from reality would appear to be so large that they may form a separate form of barrier to education all on their own.

This paper uses specifically Canadian data to make a point about the effects of “bad data” on educational decision-making, because it is the only country where reliable recent data exists on perceptions both of the cost of education and its benefits. However, given the similarity of Canadian and American results on perceptions of costs, one suspects that this may be a much wider phenomenon, and one that all countries that charge tuition fees need to monitor.

The Canadian Context

In Canadian discussions on access to education, the barrier to education that receives the most emphasis is the cost of education. Boothby and McMullen (2001) show that 36 percent of Canadian high school graduates who do not go on to post-secondary education within two years cite “financial reasons” as a barrier to post-secondary. This figure rises to 71 percent if those who cite “no barriers at all” to attending post-secondary education (but who still choose not to attend) are excluded. It is not clear that YITS respondents who cite “financial barriers” for non-attendance in post-secondary are actually referring to the cost of tuition as the barrier; after all, close to of thirty per cent of high-school drop-outs also cite “financial barriers” as a reason for not completing secondary school. However, stakeholders and policy-makers have in recent years tended to act as if “financial barriers” means tuition, which has led to widespread concern about the effect of tuition on access.

The assumption that cost/tuition is the major barrier to post-secondary education rests on two assumptions which deserve careful scrutiny. The first relates to our understanding of the term “financial barriers”. As Finnie (2004) has noted, at least conceptually, two types of cost-barriers exist: One relates to cash constraints (i.e. this purchase is a good deal, but it is beyond my means at the moment) and the other relates to cost-benefit analysis (i.e. this costs too much relative to the benefit received). It is unclear which of these two cost-barriers is the more important barrier to education; despite the recent explosion of research on access to education in Canada, little new light has been shed on this issue. For instance, Hemingway (2003), in his examination of design deficiencies in student assistance program implicitly points to the former as a problem while CAUT (2003), by ignoring the role of student assistance in overcoming short-term cost-barrier implicitly favours the latter interpretation. If the Hemingway interpretation is correct, then any cost increases could be offset by loans; if the CAUT interpretation is correct then loans would be ineffective, and only grants and/or lower tuition would reduce financial barriers. For cost/tuition to be the major barrier, one must implicitly accept that the latter interpretation of “financial barriers” to be the correct one.

Is this assumption true? As Junor and Usher (2004) noted, the data presently available to Canadian researchers is insufficient to permit us to determine which of the two cost barriers is the more important deterrent to access to PSE. Let us assume for moment – as anti-tuition campaigners do – that the CAUT interpretation is correct. If so, then it must ipso facto also be true that youth and their families have some means of quantifying the costs and benefits of post-secondary education and that they make cost-benefit calculations in at least a quasi-rational manner. This leads us to the second assumption required to sustain the cost-as-barrier thesis: that both the costs and the benefits of post-secondary education (PSE) are well-known and

At least conceptually, two types of cost-barriers exist:

One relates to cash constraints and the other relates to cost-benefit analysis

well-understood, so that families and individuals make decisions based on fact.

While this assumption may seem straightforward, it is in fact untested in Canada. As this paper will demonstrate, Canadians - particularly those from low-income families - actually have a very poor sense of the costs and benefits of education. As a result, they may be making decisions not to pursue post-secondary education based on calculations which are highly “irrational” when viewed from an objective point of view, but which seem “rational” to them given their own knowledge.

The Cost Barrier

The extent to which tuition fees - or more generally, costs of attendance - affect access to PSE is somewhat unclear and may differ considerably depending on the national or institutional context. The most extensive research in this area has been done in the United States. Leslie and Brinkman (1988) made estimates regarding the negative effects of tuition on enrolment and estimated the effects of a \$100 increase in tuition (net of changes in student assistance) as leading to diminutions of enrolments on the order of 0.7%. A decade later, using the same techniques Heller (1999) found the effects to be just 0.33%, a decline he ascribed to either the increasing returns to education or the increasing differentiation between tuition in public and private colleges. However, these analyses have tended to focus on the effects of dynamic changes in enrolment *between institutions*, given a competitive pricing environment. Thus, in these cases a \$100 rise in tuition reduces enrolment *at a particular institution* by 0.7%, but these students may simply be switching to cheaper institutions, not dropping out of education altogether.

Kane (1999) and Junor and Usher (2002) take a more system-wide look at the effects of tuition increases. Kane, looking at a small sample of New England states, notes that large changes in net cost in a single state seems to change that state's *relative* levels of university enrolment vis-à-vis neighbouring states. Junor and Usher, looking at twenty years of data from Canadian provinces note simply that there is no obvious connection between the level of tuition and provincial enrolment. Raymond and Rivard (2003) go further and suggest that in Canada there is no observable relationship between tuition and enrolment at an individual level once secondary school grades are held constant.

While the econometrics of specific policy changes may be debated, it is not seriously open to debate that an increase in tuition - holding educational benefits constant - leads to a diminution in the desirability of postsecondary education as an investment of time and money. For this to have an effect on access to PSE, however, it must be the case that some individuals actually

There is no observable relationship between tuition and enrolment at an individual level once secondary school grades are held constant

make the necessary calculations and decide against making the investment in PSE. But how, precisely, does this happen?

Personal Investments in Post-Secondary Education: The Framework

Anders-Bellamy (1993) has observed that Canadian youth do not rationally calculate cost-benefit ratios when making decisions regarding post-secondary education. While this is true in a general sense – one does not as a rule see seventeen year-olds making calculations of net present value before choosing a course of post-secondary study – it is possible to take this observation too far. As the University of Chicago economist Richard Thaler once observed, people are “neither rational automatons nor blithering idiots” (Bernstein, 1996); in other words, they do calculate costs and benefits in a very rough and ready kind of way, using the knowledge available to them.

Evans (2002) cites Goldthorp (1998) for making a case that the decision to pursue PSE is likely made, as rational action economists would suggest, by individuals making calculations regarding the costs and benefits of the decision. Similarly, in the Canadian context, COGEM (2002) noted in its study of Canadians in their mid-20s who had not participated in PSE “many participants [in the COGEM study] had concluded that PSE was not worthwhile to them because the cost was too high relative to the expected benefits and the advantages they could reasonably expect to obtain from it”. This suggests that some form of financial cost-benefit reckoning – however crude – is part of the decision to go or not to go. However, Evans also suggests that this rationality only operates “within people’s (existing) horizons and social norms”. In other words, what matters in decision making is not what is *actually* true, but what one *believes* to be true.

It follows from this that individuals do not conduct cost-benefit analyses based on *actual* costs and benefits of post-secondary education, but rather based on its *perceived* costs and benefits. This represents a sort of “bounded” cost-benefit analysis. Cost-benefit analysis using only actual costs may be fine in an abstract sense, but will not yield insights into the actual decision-making process particularly given the evidence that considerable gaps exist between perceptions and reality in this area. Ikenberry and Hartle (2001) noted in the American context that most people overestimate the cost of tuition. This conclusion was recently re-confirmed by Horn, Chen and Chapman (2003), who found that 11th grade students and their parents by roughly 70%. If it is perception of cost which affects decision making, this overestimation represents a kind of hidden barrier to post-secondary education, particularly if mis-estimation is shown to have a correlation with other social or economic factors.

**Individuals
conduct
cost-benefit
analyses
based on
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PSE**

The Unit of Analysis

Most consumer goods can be bought on impulse and consumed at leisure; by this definition higher education is most certainly not a typical consumer good. Many young people are oriented towards higher and further education from a very young age. Junor and Usher (2002) note that nearly two-thirds of Ontario university applicants report making the decision to attend university before their fifteenth birthday. This implies that prior to actually attending university, students are investing several years of time and energy to prepare for and obtain the grades required to attend university. Similarly, parents begin financial planning for their children's education long before their children are eligible to attend university. Acumen Research (2002) notes that close to 60 percent of all university applicants began having financial planning discussions with their parents in grade 11 or earlier, which, given Ontario's then-unique secondary structure implies that for most students' planning discussion begin two years prior to post-secondary education.

The decision to attend university, therefore, is usually one taken long in advance of the purchase of university services, and which involves many family members, not just the student. Higher education requires long-term commitment, is not an "impulse buy" and moreover, has few if any close substitutes in the economic sense of that term. While community colleges are sometimes mooted as a potential substitute, the evidence does not bear this out. As Junor and Usher (2004) note, only one in ten applicants to Ontario universities say they even considered – let alone applied – to a community college.

Since higher education is not a typical consumer good, it is unlikely that much of the economics of consumer goods applies to the purchase of higher education. With consumer goods, price elasticity matters; a small increase in the price of a good can persuade people to switch to a substitute good. Higher education, given the long preparation period and lack of close substitutes is consequently unlikely to be susceptible to short-term changes in tuition. This same logic suggests that changes in tuition are more likely to affect young people indirectly, by altering *parents'* views about the desirability and affordability of post-secondary education in the long-term and thus their likelihood of raising or lowering their children's expectations about post-secondary education. If so, this would be consistent with French sociological theories about education in the Bourdieu tradition (Wilms, 2003).

However, for our purposes the key insight is that unlike most economic decisions, the identity of the "purchaser" is unclear. There is not, as orthodox economic theory would suggest, a single purchaser with a single set of preferences and utility curves. Instead, we have a situation where the utility functions of at least two people (one parent, one child) and possibly more (other parents, extended family, etc) must be examined. In order to exam-

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of Ontario
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15th
birthday**

ine the effects of *perceived* costs and benefits on the decision to undertake post-secondary education, it is not enough to examine young people's (i.e. the "purchaser's") views on costs and benefits, but that of their parents as well, and that in fact it may be the views of the parents that are ultimately more important in the equation.

Canadians' Perceptions of Costs and Benefits

In August 2003, the Canada Millennium Scholarship Foundation commissioned the Ipsos-Reid public opinion firm to survey Canadians in order to gauge their knowledge of post-secondary costs and benefits. This is, admittedly, not a perfect proxy for parental and student knowledge of costs and benefits, as it surveys the general population rather than parents. However, two key pieces of evidence suggest that the proxy is more than acceptable:

- 1) Most families have children, and 90 percent of families with children have aspirations for their children to attend post-secondary education (Anisef and Sweet, 2002). This suggests that views in the general population will largely mirror those of parents who are considering post-secondary education for their children; and
- 2) When families look for information about post-secondary education in general or student assistance in particular, they are most likely to turn first to family and friends (Junor and Usher, 2002) rather than "official" sources of information. This suggests that "common wisdom" quickly becomes "parental wisdom" where information concerning post-secondary education is concerned.

The data that follows are the findings from two waves of polling conducted by Ipsos Reid between August 12th and August 14th 2003 and September 9th and September 11th 2003. The telephone surveys were each based on a randomly selected sample of 1,055 adult Canadians. With samples of this size, the results are considered accurate to within ± 3.0 percentage points, 19 times out of 20, of what they would have been had the entire adult Canadian population been polled. The margin of error will be larger within regions and for other sub-groupings of the survey sample. These data were statistically weighted to ensure the sample's regional and age/sex composition reflects that of the actual Canadian population according to the 2001 Census data. The full data for this survey was published by the Canada Millennium Scholarship Foundation in 2004 (Ipsos-Reid 2004).

Results: Costs

Survey respondents were asked the following question: "What would you guess it costs for one year of undergraduate university tuition last year in your province, not counting books, fees, or living expenses?" The median response

90 % of families with children have aspirations for their children to attend PSE

overall was \$4,989, somewhat higher than the 2003 actual average cost of \$3,749 (see Table 1 below).

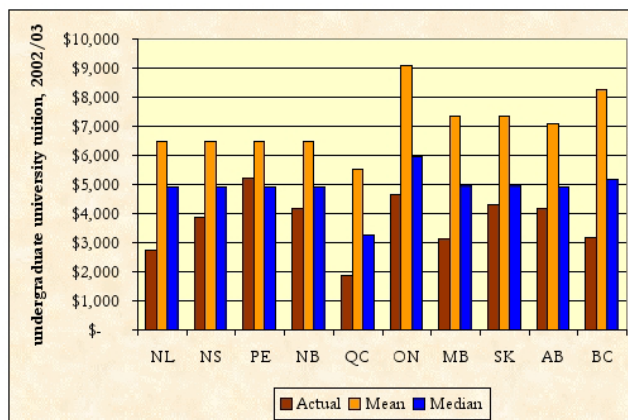
Table 1: Median Average Cost Estimates by Education And Income

	Median Average Cost Estimates
Less Than High School	\$4,950
High School	\$5,874
Some Post Secondary	\$4,999
University Graduate	\$4,906
Family Income \$30k or less	\$6,834
Family Income \$30-60K	\$4,977
Family Income \$60K plus	\$4,969
Actual Average Cost	\$3,749

25 % of respondents thought that a year of university tuition cost more than \$8,000

However, with a mean response of \$7,774, it is clear that a portion of respondents vastly overestimate this cost. Exactly one-quarter (25 percent) of respondents thought that a year of university tuition cost more than \$8,000. Respondents in Ontario thought tuition cost the most (mean = \$9,152) while those in Quebec thought it cost the least (mean= \$5,616). Females tended to estimate the cost of tuition higher than men do (\$5,535 versus \$4,876). With respect to age, 18-30 year olds gave the most accurate response of all age groups, with a median estimate of \$4,909, compared to a median estimate of \$6,813 for those over 55.

Figure 1 – Actual vs. Mean and Median Estimated Costs of Tuition, by Province



While Canadians generally make relatively accurate estimates of the cost of university tuition, those from low-income families tend to overestimate the cost by substantially greater amounts than other Canadians. Respondents with family incomes below \$30,000 gave a median response of \$6,834 (and a mean of \$9,595), compared to a median of \$4,969 (and a mean of \$6,758) for those with family incomes of \$60,000 or more. It is notable that 33 percent of those from families with incomes under \$30,000 believe that tuition costs more than \$8,000 per year, which exceeds that observed from respondents with family incomes over \$60,000.

There are also gaps by educational attainment: Canadians with no post-secondary education gave a median estimate of \$5,560 compared to \$4,906 for those with a university degree. It is also worth noting that those with less than high school education (30 percent), as well as those with family incomes under \$30,000 (18 percent), were much more likely than others to answer “don’t know,” even when asked for their best guess.

Results: Benefits

Survey respondents were also asked the following question: “According to the 2001 Census, the average income for a high school graduate is \$34,632. What would you guess the average university graduate makes?” Canadians gave a median estimate that university graduates make \$39,967, or a mere \$5,337 more than high school graduates (see Table 2). The 2001 Census reported that the average university graduate in Canada made \$61,823; that is to say \$27,191 more than the average high school graduate. In other words, the average Canadian underestimates the actual benefit of university education by a factor of five.

Table 2: Median Annual Salary Estimates by Education And Income

	Median Estimated Average Earnings of University Graduates
Less Than High School	\$38,995
High School	\$40,189
Some Post Secondary	\$41,670
University Graduate	\$39,872
Family Income \$30k or less	\$39,517
Family Income \$30-60K	\$39,943
Family Income \$60K plus	\$41,594
Actual Average Earnings of University Graduates	\$61,823

The average Canadian underestimates the actual benefit of university education by a factor of five

Low-income families tend to ascribe lower premiums to a university education

Very few Canadians were even close to guessing the right response – only about one in six (16 percent) estimate that the average university graduate has an annual income of \$50,000 or more. Just over one-quarter (26 percent) of respondents thought that university graduates actually made *less* than high school graduates on average.

While there was not substantial variation by region, respondents in Quebec gave the highest median estimate for university graduates’ average earnings (\$9,002 more than high school graduates), followed by Albertans (\$6,730). Respondents in Saskatchewan and Manitoba gave the lowest median estimate (\$4,272). Males gave a slightly more accurate median estimate (\$6,886) than do females (\$5,265). Differences in median estimates by age were negligible.

Canadians from low-income families tend to ascribe lower premiums to a university education than other Canadians do. Those with family incomes under \$30,000 estimated the average university graduate’s income at \$4,885 more than the average high school graduate, compared to a median estimate of \$6,962 more by Canadians with family incomes of \$60,000 or more. There is no obvious relationship between educational attainment and estimates of financial benefits of post-secondary education.

Rational Cost-Benefit Analysis of Post-Secondary Education in Canada

Looking at the difference between Census-reported average earnings of university and high school graduates (\$27,191 per year) versus the average cost of tuition (\$3,749 per year), it is clear that in purely financial terms, the cost of a university education is indeed a good long-term investment. Here we test the net benefits of a university degree compared to a high school diploma by considering the future value of going to university.

Table 3. Simplified Costs and Benefits of a University Degree

Financial benefits	Additional income benefit of \$27,191 annually
Actual financial costs	\$20,000 in tuition costs (\$5,000/year for four years)
Opportunity costs	\$60,000 in foregone income (\$15,000/year for four years)

In order to calculate the future value of both the costs and the benefits, we have used an annual interest rate of 5%. Since both costs and benefits are subject to the same rate, the actual rate is not important. Costs include tui-

tion costs and foregone income, but they do not include living expenses, as these would be paid regardless of whether the individual went to university or not. Assume an average tuition cost of \$5,000 per year for four years, to take into account annual tuition rises, making the price of a four-year degree \$20,000. Assume foregone earnings of \$15,000 per year of study, which is roughly equal to eight months of revenue from a full-time job at minimum wage. Finally, for the purposes of the calculation, assume that the current income differential between university graduates and high school graduates remains constant at \$27,191.

Assuming individuals work for 35 years (regardless of whether they spend an additional 4 years in university), the future value of the cost of university is \$441,281, calculated as follows:

$$\begin{aligned}FV &= PV(1 + i)^{N_{per}} \\FV &= \$80,000(1.05)^{35} \\FV &= \$441,281\end{aligned}$$

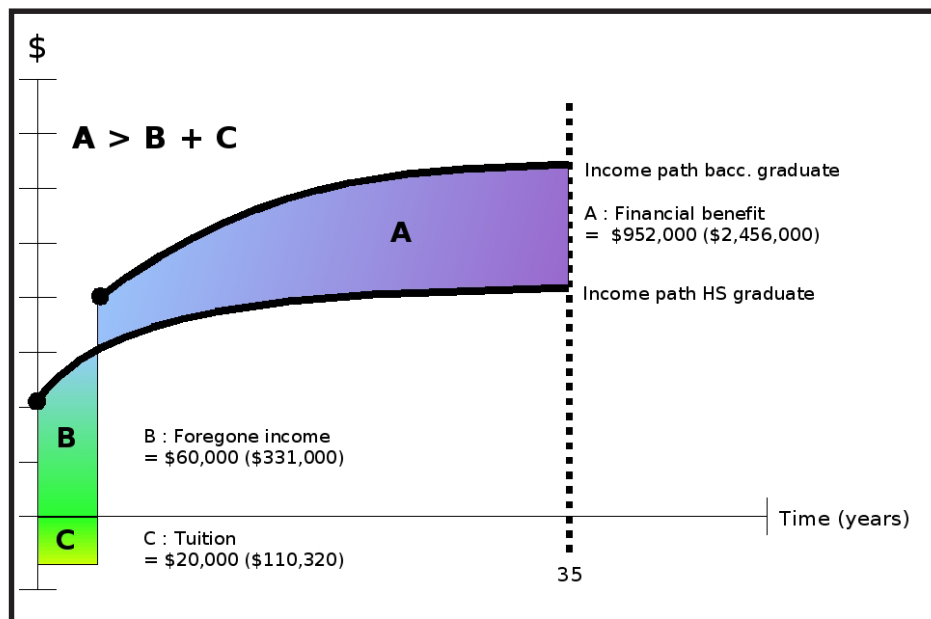
In other words, if, instead of attending university, the individual were to save that \$80,000 at an annual interest rate of 5%, it would yield \$441,281 in 35 years.

The benefits are calculated according to a schedule of payments – in effect, the individual receives a bonus of \$27,191 each year she (he) works for having completed a university education. Thus the future value of the benefits is \$2,455,899, calculated as follows:

$$\begin{aligned}FV &= (PMT/i) * [(1+i)^{N_{per}} - 1] \\FV &= (27,191/0.05) * [1.05^{35} - 1] \\FV &= \$2,455,899\end{aligned}$$

These returns can be demonstrated graphically using Stager's (1989) diagram of cost-benefit analysis (which is used in Figures 2, 3, and, 4 below). According to human capital theory, people decide to invest in human capital when the benefits of doing so (i.e. the financial returns) outweigh the costs (in this case, tuition plus foregone income). With respect to pursuing post-secondary studies, this human capital equation is usually shown in a diagram such as the one used in the figures below, with the assumption that an individual will choose to go to post-secondary education if the benefits (area A) are greater than the costs (areas B plus area C). Clearly, in an objective analysis, area A is much larger than areas B and C, and hence going to university would appear to be an investment with a high rate of return.

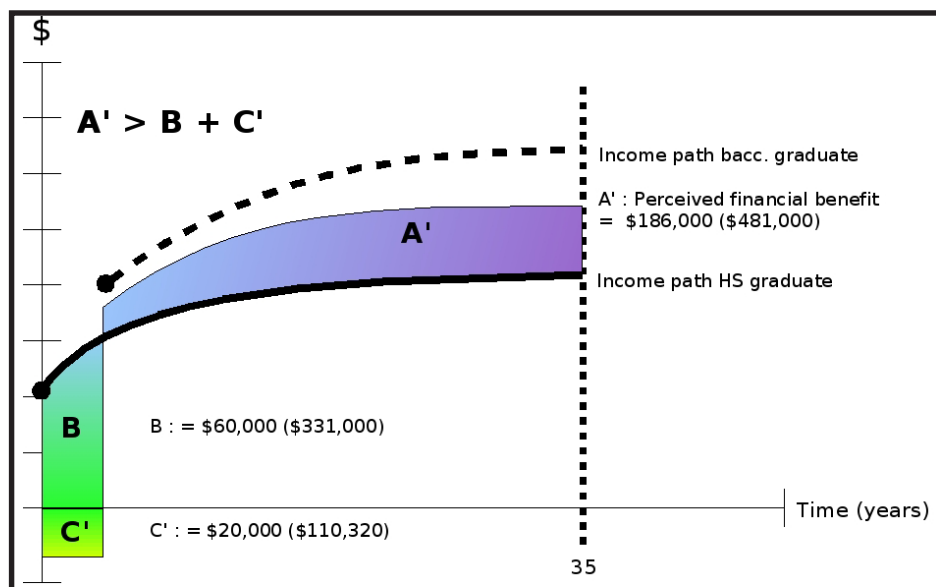
Figure 2 - "Objective" Cost-Benefit Analysis of University Attendance



Incorporating Information Limitations: Estimating Canadians' Bounded Cost-Benefit Analysis

However, as we have seen, Canadians' perceptions of the costs and benefits of education are a long way from objective. If we insert the values for costs and benefits that Canadians *believe* to be true into our cost-benefit equations, it becomes much more difficult to tell whether the cost of a university education is a good investment. With roughly the same estimates of costs (\$80,000) but benefits of an additional \$5,326 per year for university graduates, the future value of the costs is, as before, \$441,281. The future value of the benefits, on the other hand, is much less, at \$481,046. As Figure 3 illustrates, the area of A is now not much larger than the sum of areas B plus C. This demonstrates that, on average, Canadians do not appear to believe that university has very high returns at all.

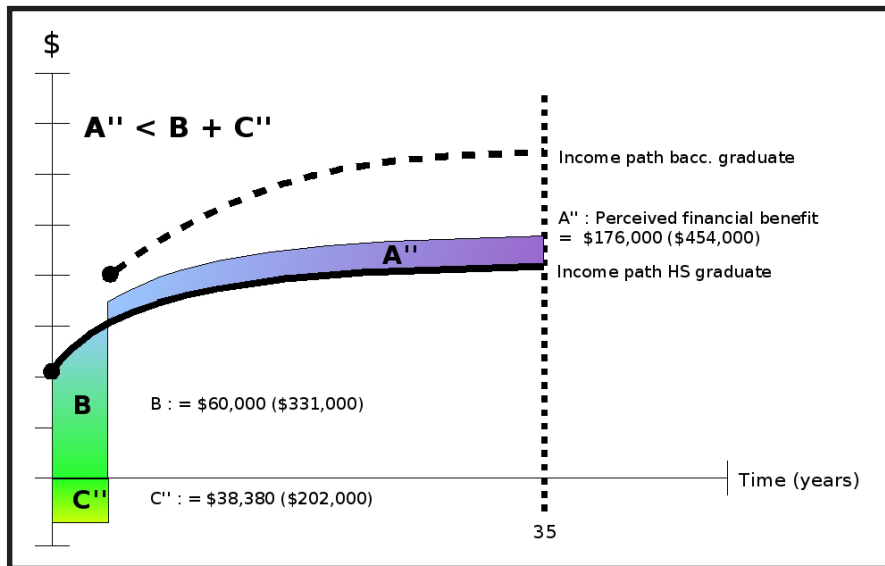
Figure 3 – “Subjective” Cost-Benefit Analysis of University Attendance, Canadian Average



Low-income Canadians, on average, perceive that returns to university are actually negative

Focussing now even more specifically on low-income Canadians (i.e. those from families with under \$30,000 in annual revenue), we find an even more unsettling result. Using the average reported estimates of costs and annual benefits reported by low-income Canadians (cost = \$9,595, benefit = \$5,029), the future value of the costs is \$542,666 and the future value of the benefits only \$454,221. In other words, low-income Canadians, on average, perceive that returns to university are actually negative (see Figure 4). Therefore, given what we know Canadians believe about the costs and benefits of post-secondary education, it would appear that a decision not to attend post-secondary education is completely rational from a cost-benefit point of view.

Figure 4 - "Subjective" Cost-Benefit Analysis of University Attendance, Canadian Average, Low-Income Only.



These results show that substantial differences exist in Canadians' perceptions of the returns to university education and that these differences are primarily income-related. The attractiveness of university education as an investment is therefore effectively income-related. Since a difference in attractiveness likely constitutes a difference in desire to attend, a differential along this axis can be characterized as a "barrier" to post-secondary education. The barrier is not actually financial in nature – while it concerns financial information, no money changes hands. Poor information, therefore, can best be characterized as an income-based, non-financial barrier.

Are these results generalizable? Admittedly, their applicability may be limited because the Ipsos-Reid survey from which they are drawn surveyed a random sample of all Canadians rather than the more relevant sample of families with children finishing secondary school. However, as noted earlier, much of the information prospective students receive about post-secondary education comes from family and friends. Hence, if low-income families in general are poorly informed about post-secondary education, then it is likely that their children are less able to access accurate information than their wealthier peers.

The Disconnect Between Stated Beliefs and Cost-Benefit Analyses

The results above show clearly that given limited and incorrect information, many Canadians – and those from low-income backgrounds in particular – are making rational cost-benefit analyses which imply that they do not view university education as being “a good investment”. And yet, when asked directly about education as an investment, a different perspective emerges.

The Ipsos-Reid Survey also asked respondents “*In your opinion is the cost to a student of a university education a good long-term investment or not?*” Despite overestimating tuition cost and vastly underestimating the financial benefit of a university degree, just over 9 out of 10 Canadians agree with the statement that a university education is a worthwhile investment. There is very little variation by gender, age, income, or educational attainment. Quebecers (94%) are slightly more likely to think that the cost of a university education is a good long-term investment than other Canadians do (88%). Perhaps unsurprisingly, university graduates (94%) are also more slightly likely to think that university education is a good long-term investment than are high school graduates (86%).

Clearly, the data indicate some dissonance in that a substantial number of Canadians believe both that the financial return on university degrees is negative and that university is a good individual investment. How can this discrepancy be explained? One possible answer is that Canadians are simply poor judges of what constitutes a “good investment”. Another – perhaps more convincing – argument is that parents may not fully grasp the economic benefits of higher education but they nevertheless completely understand the social status benefits of a university education (e.g. working at a desk instead of factory). As Wolf (2002) has noted, not knowing the specifics about educational choices does not prevent parents from making choices that are generally rational.

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So, there is definite evidence both that a) Canadians mis-estimate the costs and benefits of education and that b) the extent of this mis-estimation is inversely related to income. This is an important result because - in theory at least - this problem should represent a major deterrent to the pursuit of higher education by low-income individuals. Care should be taken in putting too much weight on theory, however. While the results of this investigation clearly show the *potential* deterrent effect of poor information on access, it does not represent actual empirical proof of such an effect. Such findings await a more definitive study.

Policy Implications and Future Research

The main policy implications of these results are twofold:

1. The precise effects of educational costs upon access to post-secondary education are unknown. Given the results of this paper, however, we can be certain, that to the extent cost *is* an issue, overestimations of cost must be exacerbating the problem, particularly among low-income families. Governments at all levels that are interested in reducing barriers to education need to pay attention to this issue and ensure that families have better information about educational costs. The same holds true for educational benefits.
2. If it is true that Canadians tend to view the benefits of post-secondary education in other than monetary terms, then this may help to explain their resistance to post-secondary education financing solutions that rely on personal borrowing. While increased borrowing to make a “good investment” might seem a reasonable expectation, the attractiveness of this proposition declines if the positive nature of the return is perceived to be non-monetary. In this context, schemes that combine high tuition with high aid, however attractive they may seem in theory, are therefore unlikely to be perceived as fair by citizens until a better understanding of costs and benefits is reached.

Obviously, this result has serious implications for policies relating to access, cost-sharing and student loans. Left unexplored in this research is *why* individuals have such a poor understanding of the costs and benefits of education and *how* their understanding can be improved. These would appear to be urgent research tasks, given the magnitude of the policy problem herein described.

Where cost is an access issue, overestimations of cost exacerbate the problem, particularly among low-income families

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