Tandem Social Research Consulting

Literature Review of Postsecondary Education Affordability in Canada

Council of Ministers of Education, Canada
Conseil des ministres de l'Éducation (Canada)

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ISBN 0-88987-171-X

Ce rapport est également disponible en français.

Acknowledgements

Though Tandem assumes full responsibility for the content of this report, we are greatly indebted to Fiona Deller of CMEC for her continuous support and guidance, her editorial expertise, and her generosity in sharing her vast wisdom in the field.

We would also like to thank the members of the Affordability Subcommittee, who provided valuable advice and helped guide this project:

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A. BACKGROUND AND INTRODUCTION

The aim of this literature review is to assist the Council of Ministers of Education, Canada (CMEC) in its goal of developing a research agenda pertaining to the affordability of postsecondary education in Canada. The report addresses this goal by identifying emergent themes and knowledge gaps and by providing recommendations for future research.

This is a timely endeavour given that equality of opportunity and a highly educated workforce are central goals of the provincial/territorial and federal governments. The importance of having an affordable postsecondary system is further highlighted by the need to address a growing gap between low- and high-income earners in Canada. Widespread participation in higher education can reduce economic disparities and promote social cohesion and citizen engagement; as well it will ensure that Canada generates the skills and knowledge required in an increasingly competitive knowledge economy.

Affordability refers to the ability to pay for education; *accessibility* refers to the ability of people from all backgrounds to obtain the postsecondary education they desire. The growing number and type of institutions and the student enrolment and completion rates show that postsecondary education has become more accessible in the past few decades. Accessibility, however, is influenced by complex interacting factors of which affordability is only one, albeit an important one.

A comprehensive assessment of the affordability of Canada's postsecondary system requires an examination of a number of these interacting factors. Section B of this report reviews the macro-level influences on affordability by examining international, national, provincial, and institutional postsecondary trends and funding policies. In Section C we situate Canada within an international context of affordability measures and dissect these measures across the provinces for comparison. In Section D, we review the literature on the influence that income and education background have on the participation of youth, and in Section E, we deal with the effect of the costs of education. In Section F, the largest component of this report, we look closely at how postsecondary education is funded by the private contributions of students and their parents and by the public aid provided by governments. In Section G, we review the literature on what is commonly referred to as the "return on education," that is, how both private individuals and the public benefit from postsecondary education.

Any review of postsecondary affordability must consider what the public perceives to be the costs and benefits of participating because these perceptions inform people's decisions. In Section H, we review the literature on public perceptions of financial barriers, of the costs of postsecondary education, of available funding, and of the return on education, ending with an examination of the cost-benefit literature. In Section I, we provide a review of the overall

accessibility of under-represented groups such as Aboriginal and rural Canadians and focus on affordability as a barrier to accessibility. In Section J, we summarize the "knowledge gaps" identified at the end of each preceding section and present our conclusions about their implications for future research.

This literature review draws primarily on the growing body of Canadian research, but includes international (especially American) research when appropriate.

B. MACRO PERSPECTIVES ON POSTSECONDARY AFFORDABILITY

B.1 Introduction

This macro-level review of postsecondary affordability looks at two interrelated worldwide trends in postsecondary education and at national, provincial, and institutional trends in expenditures and funding. To the extent that governments regulate costs and provide funding to both institutions and students, they have the largest influence on affordability as far as the public is concerned.

B.2 International Trends in Postsecondary Education

In the last twenty years, two major trends have swept the world of higher education. The first relates to the great expansion of postsecondary systems in many countries, and the second relates to the shifting of higher education costs from government to students (and their parents).

The expansion of postsecondary systems has been driven largely by the increasing demands of the labour market for particular skills and knowledge and by upwardly aspiring populations. Demographic shifts have also driven demand around the world, but especially in Latin America, Africa, and parts of Asia, where college-age cohorts have increased significantly. In the West, increased participation by women has also been a factor. Lastly, the burgeoning enrolments in postsecondary institutions now include middle-age adults seeking professional upgrading or career changes (Johnston, 1998). In Canada, university enrolments have increased beyond 40% since the early 1990s, and much of the increase occurred after the late 1990s; college enrolments have similarly increased by approximately 35% (Snowden, 2005). A continuation of this expansionary trend is limited only by the ability to make room for an increasing student body.

The pressure of increasing enrolment combined with increasing competition for limited public revenues has posed difficult choices for governments in their expenditures on higher education. Policy makers within the education portfolios have to perform a difficult balancing act in order to provide education that is both accessible and affordable.[1] In large part, their response has been to shift higher education costs from government to students (and their parents), which is the second major international trend. This decision about how to spend public money, according to Swail and Heller (2004), reflects the idea that because the individuals who participate in higher education reap greater occupational and income rewards than those who don't, they should bear

[1] Efforts to increase affordability must be balanced by an understanding of the importance of maintaining quality. That said, some maintain that the system can be simultaneously widely accessible and of high quality (see, for example, Rae, 2005 and Saunders, 2006).

a greater portion of the costs (see Sections G.3 and G.4 for a review of these returns). Nonetheless, such a shift in who pays clearly has the most direct implications for postsecondary affordability at the student level.

Public funding accounts for 57% of all expenditures on postsecondary institutions in Canada and 43% in the United States. Although governments are still the major source of funding in most OECD countries, private funds from tuition fees and other sources have increased. In 12 of the 14 OECD countries for which comparable data are available, the private contributions to funding by students or their families increased between 1995 and 2003. In Canada, the proportion of total funding by private households (excluding other sources of private funding) increased from 16.7% in 1995 to 20.6% in 2003. As of 2003, the household share of postsecondary funding was larger in only 7 of the 27 countries reporting (CMEC, 2006a).

B.3 National, Provincial, and Institutional Funding Trends

There have been two distinct phases in the funding of postsecondary education in Canada: first, reductions in federal transfers to the provinces and corresponding reductions from the provinces to institutions of higher learning characterized the early to mid-1990s; second since the late 1990s, the federal government has reinvested in postsecondary education, especially in dollars directed to research and student aid (Snowden, 2005).

A similar funding pattern has been observed in the provinces.[2] In Alberta, for example, provincial funding to institutions declined in the 1990s (by 44% between 1992 and 1999) and, as a result of both federal and provincial decreases, postsecondary institutions struggled to accommodate enrolment increases, the growing student diversity, and the general expansion of programs to meet student needs (Houseman and Stick, 2005). The province's current reinvestment in postsecondary education (Alberta's 2005 budget) provided an 18% increase in operating grants to institutions over a three-year period. British Columbia joins Alberta with recently announced plans to invest in the growth of postsecondary education. Ontario has injected $6.2 billion in new funding over a five-year period, in response to the Rae Report (Snowden, 2005).[3]

Such increases in funding, however, do not translate into greater allocation of resources per student. Although total postsecondary funding has increased by over $11 billion since 1992–93, inflation and enrolment increases in many provinces have offset the new funding measures. As a

[2] There are important national-provincial differences in funding targets; whereas federal funding is largely targeted to research, provincial funding to institutions is primarily for operating support, although some provinces also provide significant research funding (Snowden, 2005).

[3] At the heart of the Rae Report (2005) was the argument that governments tend to approach their funding in terms of what they can afford to give institutions in any given year, rather than in terms of what the needs of the institutions actually are. Accordingly, the report calls for an increase in federal funding and the use of multi-year funding commitments to facilitate institutional planning, greater reliance on private-sector funding, greater emphasis on non-repayable financial aid for students in high-need, higher student loan limits, and income-sensitive repayment terms.

result, total funding per student was still lower in 2004–05 than in 1992–93 for all four Maritime provinces and for Ontario and Manitoba. According to Snowden (2005), these decreases in per student funding may be even more serious when one considers that much federal funding is earmarked for research, that many other funding sources are restricted in their application, and that, for a number of reasons, the costs of running a postsecondary institution have increased over and above inflation.

The redistribution from public funding to private funding is also reflected at the institutional level. Between 1986–87 and 2000–01, the operating revenue of Canada's universities increased by 28%, but the government portion of the operating funds decreased by 4.5%.[4] In 1986–87, governments contributed 81% of operating revenue, but by 2001–02 their contribution accounted for just 61%. To compensate, private revenue increased by 167% during this 14-year period, primarily from tuition fees, which increased by 163%, but also from other private sources such as bequests, donations, non-government grants, contracts, and investments (Robertson, 2003). In 1992–93, tuition accounted for 13% of total funding to postsecondary institutions, and this increased to 20% by 2004–05 (Snowden, 2005). Notably, spending on scholarships accounted for the largest percentage increase (393%) in operation expenditures, suggesting that "universities are attempting to relieve students of some financial pressure" (Robertson, 2003).

These national figures mask great diversity between institutions. As noted by Snowden (2005), institutions handled fiscal constraint in a number of ways. Some institutions drew upon revenue-generating businesses; others drew upon pension surpluses. However, most institutions increased tuition fees as much as possible and directed resources toward securing public donations, especially from corporate and alumni contributors. Despite these similarities, Snowden concludes that every institution has a different story to tell, thus reminding us of the postsecondary diversity, not only from jurisdiction to jurisdiction, but also from institution to institution.

B.4 Summary and Knowledge Gaps

The public to private shift in funding can be seen internationally, nationally, provincially, and at the institution level. In Sections E and F, respectively, we examine how these expenditure shifts translate into costs for families and student aid. The brief review of funding trends in this section reveals the complex interaction of increased demand and decreased federal and provincial funding followed by targeted reinvestment. As Snowden (2005) concludes, "the story of postsecondary education in Canada over the past 15 years is . . . characterized by major upheavals, significant change, and constant fiscal pressures" (p. 1).

This picture of funding trends, however, is blurred by incomplete data. Snowden also noted

[4] Note that although this analysis covers the period from 1986–87 to 2000–01, the most predominant changes occurred after 1992–93.

(2005) that very little analytical work on funding mechanisms and trends has been carried out, likely because of incomplete data and the variations in the structure and operations of higher education systems across the country. For example, Statistics Canada's most recent enrolment data on universities is for 2003 and on colleges for 1999.

C. MACRO-LEVEL STUDIES OF AFFORDABILITY

C.1 Introduction

This review of macro-level studies on affordability draws primarily on the body of work by Usher and his colleagues, which employs a highly instructive methodological strategy: they first examine the components of affordability to determine their relative influence, then enter all the components into a single comprehensive analytical equation to determine which combination of tuition fees and student aid is most likely to result in relative affordability. This method helps reveal that no single component of an affordability policy is the determining factor, nor is there a single best route to making postsecondary education affordable. It is important to understand that this research agenda allows us only to determine the relative affordability of postsecondary education within regions and says nothing about their absolute affordability.

C.2 International Comparisons of Affordability

For the most part, the research demonstrates that postsecondary education in Canada is less affordable than in most other OECD countries, including the United States. In Usher and Cervenan's 2005 comparison of affordability among 16 nations, Canada is ranked 9th and 10th on the two most comprehensive measures: "net costs after-tax expenditures" and "out-of-pocket costs."

The first measure refers to the total cost of education (tuition, books, fees, and living expenses) minus all non-repayable assistance (grants and tax deductions) as a ratio of GDP (used as a proxy for income, or the ability to pay the costs of education). The results demonstrate that grants and tax deductions make education more affordable for North Americans, but not to an extent that is comparable to European levels.

The second measure, out-of-pocket costs, is the same as the first except that average loan amounts are included as a deduction from total costs. Hence, this measure does not represent costs accurately because loans must be repaid; rather, it is a measure of short-term or immediate costs. Only 10 of the 16 countries offer loans and, of these, only Canada, Japan, and Germany do not offer universal loans to all who apply. The assistance that Canada offers is primarily (just under 60%) in the form of student loans, but despite this, Canada remains in 9th position (tied with the United States), because other countries provide even greater assistance in the form of student loans.

Usher and Cervenan's (2005) report concludes that Sweden has the most affordable

postsecondary system because of its combination of low tuition, general grants, and high take-up (usage) of loans. Canada's rank is similar to that of the United States; both are less affordable than all 11 European countries except Italy and the United Kingdom. Both the United States and Canada follow a policy of higher tuition costs, offset by higher student aid and combined with higher national incomes (as measured by per capita GDP).[5] Thus, the offsetting effects of government aid (both grants and loans) make little difference to the relative affordability of the Canadian postsecondary system, which is still less affordable than most countries that have low or non-existent tuition fees.

These conclusions, while instructive in terms of tuition and student aid policy, do not tell us anything about the relationship between affordability and participation. In other words, it is important to keep *affordability* (the ability to pay for postsecondary education) distinct from *accessibility* (the ability of people from all backgrounds to obtain the education they desire). This is vital because low-income youth in Canada are more likely to attend university than are low-income youth in the United States even though a university education in Canada is less affordable. Within Canada, we know that one province (Nova Scotia) has the highest university participation rates although its universities are the least affordable. The findings also mask local differences in countries like Canada and the United States, where there is much regional variation. Section C.3 provides a more detailed review of the literature that examines U.S. and Canadian differences in affordability.

C.3 Affordability in Canada Compared to the United States[6]

Canada and the United States have very similar systems, in which the higher tuition rates during the 1990s that coincided with modifications to student aid policies led to increased student loans. Both countries have turned gradually to tax credits in an attempt to ease students' burden of costs.

Nonetheless, important national policy differences in tuition rates and student aid exist. In Canada, student loans are based upon need; in the United States, they are also provided on a needs basis, however loans with a higher interest rate are also available to all who apply,. This makes loans generally more accessible United States than in Canada. Different jurisdictional policy initiatives across Canada are a significant factor in student aid while in the United States, student loan assistance is primarily the domain of the federal government. The respective grant programs constitute another major difference between the two countries. When comparing all types of grants (including any needs-based, non-repayable assistance, income-sensitive and non-income sensitive remission) and levels of grants (federal, provincial/state, and institutional), on average, Canada provides 58% less than the United States in the form of grants per student

[5] When examined on an international scale, Canadian and American costs and student aid amounts are relatively similar. However, as noted below (in Section C.3) there are important differences in student aid and as noted in Section E.2, tuition fees are, on average, higher in the U.S., than in Canada.

[6] The material in this and the next section (C.4) draws primarily upon Usher and Steel (2006) unless specified otherwise.

($1,567 versus $2,475). However, Canada provides more tax credits — federal and provincial tax credits average $1,497 per student, which is 162% more than that offered in the United States. Although Canadian students receive a greater share of assistance from non-repayable sources (grants and tax credits) than do American students, the total amount is much lower. Therefore, according to Usher and Steele's (2006) calculations, university education is less affordable in Canada than in the United States.[7]

This research raises the important policy question of whether the Canadian system provides sufficient aid, but the findings do not tell us how individual students actually fare in either system. For instance, what are the differences in affordability for low-income individuals (Canada Millennium Scholarship Foundation, 2004)?[8] Furthermore, the discussion masks the interprovincial differences to which we now turn.

C.4 Provincial Comparison of Affordability[9]

Although the federal government is a major player in determining the rules for loan distribution, the provinces also prescribe loan rules, set tuition, and partial tax rates. Combined with the variations in local economies, we find that *affordability* varies greatly across the country.

Table C.1 presents the median household income, total postsecondary education costs as a proportion of income, total education costs minus grants and tax credits as a proportion of income, and total education costs minus grants, tax credits, and student loans as a proportion of income for each province (see Table C.1 below).

In the table the very similar rankings between the ability to pay for total costs (column 3) and the two net cost measures of affordability (columns 5 and 7) demonstrate that grants and tax expenditures have very little bearing on relative affordability in all but one province. Usher and Steele (2006) conclude that student aid does very little to offset costs in most provinces. The exception is Saskatchewan which, though expensive (ranking 9th), ranks 4th on net costs (total costs less grants) and 6th when student loans are included in the calculations. The reason for this large shift in affordability rankings is that Saskatchewan has the 2nd highest grant and tax expenditure reduction in costs of all the provinces ($3,864 compared to the average of $3,194).

Looking further at the data in the table, we can see three ways to make the system affordable. First, is Newfoundland and Labrador's approach, which has low income, low cost, and high student aid (mostly loans); a second approach is taken by Alberta with high costs, high

[7] Although they use slightly different measures of costs, student aid, and ability to pay, Swail (2004) draws similar conclusions.
[8] Although these points are made by the Canada Millennium Scholarship Foundation in reference to Swail's (2004) analysis, they can be similarly applied to Usher and Steele (2006).
[9] The following material is based on the provincial data provided in Usher and Steele (2006). Since their focus was on U.S./Canada differences, we have extracted the provincial data and used this to examine affordability more explicitly across the provinces.

assistance, and high ability to pay, which most closely approximates the U.S. model; a third possibility is shown by Quebec, with low income, low costs, and low aid.

Table C.1: Total Education, Net Education Costs, and Out-of-Pocket Expenses as a Function of Ability to Pay; by Province, 2002-03

PROVINCE	Median Household Income[1]	Total Educ. Costs/ Inc.[2]	Rank	Net Costs /Inc[3]	Rank	Net OOPC / Inc[4]	Rank
BC	$42,800	24.6%	4	18.3%	6	11.9%	4
Alberta	$48,900	24.1%	3	14.6%	2	10.9%	2
Sask.	$41,700	28.6%	9	17.2%	4	12.8%	6
Manitoba	$42,900	25.0%	5	17.3%	5	15.6%	9
Ontario	$52,300	23.0%	2	15.8%	3	13.1%	7
Quebec	$40,800	22.4%	1	14.0%	1	11.5%	3
NB	$39,700	28.2%	8	20.0%	9	13.4%	8
Nova Scotia	$39,900	31.0%	10	22.4%	10	17.9%	10
PE	$39,400	28.0%	7	19.4%	8	11.9%	4
NL	$37,700	26.1%	6	19.1%	7	10.2%	1

Source: Usher, Alex and Kim Steel "Beyond the 49th Parallel II: The Affordability of University Education, Education Policy Institute.
[1] Median Household Income is pre-tax
[2] Total Education Costs/ Income = total education costs – (grants + tax expenditures)
[3] Net costs/Income = Total Costs = (grants + tax expenditures) / Median Household Income
[4] Net out of pocket expenses/Inc = Net Costs – student loans / Median Household Income

Similarly, the table shows three ways that lead to relative unaffordability. In Nova Scotia, there is a combination of low income, high costs, and low aid; in Manitoba, a combination of middle-income, middle-level costs, but low aid; and in New Brunswick, low income combined with middle-level costs and middle-level student aid.

These variable patterns reveal that any of the three factors can be important in determining relative affordability. The patterns also bring into question the notion that grants and loans are being disbursed across the country on the basis of need (as measured by income). Based on this reasoning, low-income provinces should have higher grants and loans. This holds for many provinces: low-income provinces such as Prince Edward Island and Newfoundland and Labrador have higher ratios of grants or loans to income while a high-income province like Ontario has a smaller proportion of grants or loans to income. Important exceptions include Nova Scotia and New Brunswick, which are low-income provinces with proportionately smaller loans or grants, and Alberta, which has the 2nd highest level of income, yet disburses the largest

average number of grants per student.

Since 2003, the provinces have developed a wide range of policies and programs to address affordability overall and for under-represented groups in particular. Subsequent changes, therefore, would likely modify the rankings found in Table C.1. Although a full analysis of all the changes in tuition, grants, student loans, and tax credits is beyond the scope of this report, we do know that tuition freezes (excluding inflation increases) are currently in effect in all the provinces whose information we could find, except Ontario. However, Ontario has undergone a major increase in student aid spending and its data would likely resemble more closely that of Alberta. Like the federal government, several provinces have increased student loan limits, modified the amount of parental contributions expected from those receiving student loans, and increased the education allowance exemptions.

C.5 Summary and Knowledge Gaps

This review of international, national, and provincial macro-level studies reveals how significant tuition rates and the amounts of student aid are in determining levels of affordability. On an international scale, Canada's policy of high tuition and high student aid renders postsecondary education less affordable than it is in virtually all European countries. In comparison with the United States, Canada's lower student aid means that postsecondary education is less affordable here than across the border. Within Canada, in 2002-03 the provinces of Newfoundland and Labrador, Alberta, and Quebec offered the most affordable level of postsecondary education when considering costs minus subsidies compared with relative provincial wealth. These findings would be more illuminating if they could be matched to the historical trends in provincial policies and participation rates.

D. INFLUENCES OF SOCIOECONOMIC BACKGROUND ON PARTICIPATION

D.1 Introduction

The relationship between family income and participation in postsecondary education is a good indicator of the extent to which the tertiary level is accessible to all. However, the level of education that a youth's parents have attained (parental education) is a better determinant of whether their children want to, and do, gain access to university. Of course, other variables such as attitudes, values, and academic performance are important influences on participation. However, in this section we deal with parental education and parental income as two key indicators of whether or not youth are likely to continue on to tertiary education.

D.2 Parental Education

Perhaps the most consistent finding in the entire body of literature on postsecondary affordability is the proven transference from one generation to the next of the likelihood of pursuing a postsecondary education. The positive effect that parents' level of education has on their children's participation has been found in virtually all international studies. De Broucker and Underwood's (1998) international research revealed that the higher the level of parental education, in each country studied, the higher the proportion of children attaining postsecondary credentials. In Canada, between 1993 and 2001, the rates of university participation among youth with at least one parent having a university education ranged between 48% and 60%; in contrast, the rate among youth with parents who had earned a high school diploma or less hovered fairly consistently around 19% (Drolet, 2005). Notably, however, this pattern has not been recorded among college students. The youth whose parents completed a full or partial course of studies at secondary school are just as likely to participate in college-level studies as the youth whose parents completed a university degree (Drolet, 2005; Knighton, 2002).

A review of two studies that covered slightly different time periods suggests that the effect of parental education on participation increased in the early 1990s, but has remained at the same level since 1993. In the first study, Finnie et al. (2004) found that parental education had an increasing effect on their children's participation between 1991 and 2001. In the second study, Drolet's (2005) examination of trends between 1993 and 2001 does not support such an increase.

Many think that the link between the level of education attained by parents and their children's participation in university can be explained by the higher expectations of parents who have themselves attended university. Virtually all parents who are university graduates expect that

their children will also participate in higher education (Statistics Canada, 2001a). As noted by Looker (2002), these findings suggest that education policy should focus on providing information early enough to elementary and secondary school students to overcome negative attitudes about the costs and benefits of postsecondary education, especially among those whose parents do not have a postsecondary credential.

D.3 Parental Income

Among youth from all income backgrounds, participation in postsecondary education increased until the early 1990s, then remained relatively stable until 2001. Youth from high-income families are still significantly more likely to attend postsecondary education than those from lower-income families (Statistics Canada, 2001, 2002; Lavallée et al., 2001), but there is little difference between middle- and low-income youth (Corak et al., 2003; Drolet, 2005) in the probability of their participating. These findings were fairly consistent throughout the 1990s, according to Drolet (2005). However, Corak et al. (2003) and Christofides et al. (2001) detected a narrowing of the participation gap between the highest and lowest income quartiles up to 1999. They maintain that this was largely due to a slight increase in participation by youth from lower-income households. In contrast, American research shows an increase in the income-participation gap (National Centre for Public Policy and Higher Education, 2002) especially in elite institutions (Astin and Oseguera, 2004).

Income-based differences in participation are more pronounced for university than for college since low-income individuals are much more likely to participate in college courses than in university courses (Zhao and de Broucker, 2002). In fact, youth from the lowest income quartile are just as likely to attend college as those from the highest income quartile (30% and 29%, respectively) (Rahman et al., 2005). Thus, income has an effect on the type of postsecondary institution that youth choose to attend.

The studies that have confirmed a stronger effect of parental education on youths' participation than of family income are by Frenette, 2005 and 2007; Knighton and Mizra, 2002; Rivard and Raymond, 2004; and Drolet, 2005. For example, Knighton (2002) found that 68% of the youth in the lowest income quartile whose parents had postsecondary education also participated in postsecondary education, whereas just 56% of youth in the highest income quartile whose parents had not acquired a postsecondary education went on to postsecondary studies.

Given the strong and established overall correlation between education and income, it stands to reason that there is a great deal of overlap in the effects of income and education on participation.[10] Though Drolet (2005) also found that the effects for parental education were stronger than for income, her multivariate analysis revealed that each had an independent effect

[10] Youth from the highest income quartile are two-and-one-half times more likely to have at least one parent with a university undergraduate degree than those from the lowest income quartile (Drolet, 2005).

on participation. Regardless of parental income, having at least one parent with a university education increases the probability that a youth will go to university by 23 to 31 percentage points compared to a youth whose parents completed only secondary school. And regardless of parental education, having parents with a high income increases the probability that a youth will go on to postsecondary education by between 12 and 21 percentage points compared to youth with low parental income.

In any event, the relationship between income and participation suggests that some lower-income individuals are prevented from enrolling because they are financially constrained from doing so. Other researchers point to the differences in attitudes, values, and academic performance between upper- and lower-income families as the explanation for the participation gap. According to data from Statistics Canada (2001a), low-income parents are somewhat less likely than parents in middle income and high income brackets to expect their children to attend postsecondary education (80% compared to 95%). Youth with parents who expect them to participate in postsecondary education are found to be more likely to participate than youth whose parents do not hold this expectation (67% compared to 34%; Barr-Telford, Cartwright, Prasil and Shimmons, 2003). Family income is also related to performance in secondary school, which in turn impacts a student's eligibility for postsecondary studies (Bushnick, Barr-Telford and Bussiere, 2004) and for merit-based funding (Ouellette, 2006).[11]

A recent analysis by Frenette (2007a) bears on these various explanations for the socioeconomic participation gap. In deconstructing the possible influences on the participation gap between the top and bottom income quartiles, the author found that financial constraints explained just 12% of the gap while parental education accounted for 30% of the gap. The results also demonstrated that, compared to financial constraints, reading ability accounted for a larger share of the gap (20%) and parental expectations the same share (12%). Given this evidence, the author concludes that research should focus more on understanding the lower academic performance of low-income youth. It should be noted that this study, while groundbreaking, can be applied only to 19-year-olds. As the author himself cautions, though the study does not support claims of widespread economic disadvantage among youth, it does not negate his other studies demonstrating the effects of income on participation for specific groups such as those having to relocate (Frenette, 2004) and those who are eligible to participate in second-degree professional programs (Frenette, 2005).

D.4 Summary and Knowledge Gaps

The issue of access to postsecondary education is often framed around the question of whether individuals from low-income families are able to access institutions of higher learning. Yet, the relationship between income and participation has yet to be sorted out in Canada. Lower-income

[11] However, socioeconomic status is found to have less influence on secondary school performance in Canada than in other OCED countries (CMEC, 2006a),

youth are less likely to participate in university education; recent studies suggest, however, that the relationship is not always a direct one. Rather, differences in academic performance and in the value attached to education by the family are found to be important determinants of participation. Furthermore, and as demonstrated in Section H, different perceptions by income level of the costs and the return on education also bear on the decision to participate, as does the provision of need-based student aid (Section F).

The findings must also be weighed against survey results showing that a significant proportion of low-income youth themselves claim to have been prevented from attending because of finances (Section H.2). Lastly, the studies reviewed in this section all pertain to access among youth, and we know very little about the relationship between income and participation among adults who have greater financial needs and less family support, and who tend to rely more heavily on private loans, perhaps as a result of a student aid system that is largely designed for younger students (Section F.4c). Hence, although income is a significant determinant of participation, there are many individual and structural factors related to income that combine in, as yet, unknown ways.

E. EDUCATION COSTS

E.1 Introduction

This section reviews education costs beginning with a historical examination of tuition fee changes. However, because tuition is not the largest expense, we also look at the available data for other education-related costs, and conclude with an assessment of the research examining the effects of tuition increases on participation.

E.2 Tuition

We have already mentioned the worldwide shift in education costs from government to students (and their parents), which, for the most part, involved increasing or introducing tuition fees. More recently, however, we have seen some retrenchment or at least stagnation in this shift as governments freeze, reduce, or eliminate tuition fees altogether (Swail and Heller, 2004).

As of the 2003–04 academic year, Canada's university tuition fees were the 5th highest among public institutions in 23 OECD countries that provided information; that is, Canada ranked after the United States, where fees were significantly higher than in the other countries, Australia, Japan, and Korea (CMEC, 2006a). The other non-European country, New Zealand, reported lower tuition fees than Canada (2,538 USD compared to 3,297 USD). Notably, when we compare the total costs (including tuition, ancillary fees, books, study materials, rent, and food) of higher education, Canada again ranks 6th after the United States, Japan, the United Kingdom, New Zealand, and Australia (Usher and Cervenan, 2005).

Following two decades of relative stability, the costs of attending a Canadian postsecondary institution increased significantly in the 1990s. As shown in Table E.1 below, however, university tuition increases slowed considerably, growing by just 8.3% between 2000-01 and 2005-06 compared to 30.9% between 1995–96 and 1999–2000. This trend reflects a shift in policy from one driven largely by financial constraint toward one of increasing cost sensitivity for students. The trend toward smaller increases in tuition fees continued in 2006–07 with students paying, on average, 3.2% more in fees compared to 2005–06, roughly the rate of inflation (Statistics Canada, 2006).

In Table E.1, we observe four patterns in tuition changes among the provinces. Ontario and Newfoundland and Labrador most strikingly illustrate the national trend; Alberta, Manitoba, and Nova Scotia also follow a pattern of smaller increases in the past 5 years compared to earlier changes. In contrast, tuition increases in New Brunswick, Prince Edward Island, and Saskatchewan were very similar between the two 5-year periods; the trend in British Columbia is

the opposite of the national one because the increases in tuition fees were higher in the most recent 5-year period (66.6% compared to a decrease of 6.0% in the later 1990s). Finally, Quebec had tuition decreases in both 5-year periods, with the greatest decrease of -7.5% occurring since 2000–01[12].

Table E.1: Undergraduate University Tuition Fees by Province*
1995–1996 to 2005–2006

Year	CAN	BC	AB	SK	MB	ON	QC	NB	NS	PE	NL
1995-1996	$2,945	$3,167	$3,390	$3,311	$3,113	$3,111	$2,104	$3,131	$4,014	$3,516	$2,856
1996-1997	$3,221	$3,136	$3,620	$3,317	$3,272	$3,640	$2,075	$3,401	$4,376	$3,588	$3,287
% change	9.4	-1.0	6.8	0.2	5.1	17.0	-1.4	8.6	9.0	2.0	15.1
1997-1998	$3,435	$3,016	$3,882	$3,681	$3,498	$3,943	$2,160	$3,624	$4,662	$3,787	$3,846
% change	6.6	-3.8	7.2	11.0	6.9	8.3	4.1	6.6	6.5	5.5	17.0
1998-1999	$3,642	$3,001	$4,183	$3,898	$3,744	$4,327	$2,145	$3,834	$4,843	$3,954	$3,823
% change	**6.0**	**-0.5**	**7.8**	**5.9**	**7.0**	**9.7**	**-0.7**	**5.8**	**3.9**	**4.4**	**-0.6**
1999-2000	$3,856	$2,976	$4,315	$3,902	$4,042	$4,733	$2,101	$3,882	$4,939	$4,055	$3,909
% change	**5.9**	**-0.8**	**3.2**	**0.1**	**8.0**	**9.4**	**-2.1**	**1.3**	**2.0**	**2.6**	**2.2**
5 year % Increase	**30.9**	**-6.0**	**27.3**	**17.8**	**29.8**	**52.1**	**-0.1**	**24.0**	**23.0**	**15.3**	**36.9**
2000-2001	$3,890	$2,925	$4,409	$4,139	$3,632	$4,802	$2,053	$4,046	$5,226	$3,949	$3,806
% change	**0.9**	**-1.7**	**2.2**	**6.1**	**-10.1**	**1.5**	**-2.3**	**4.2**	**5.8**	**-2.6**	**-2.6**
2001-2002	$3,934	$2,778	$4,432	$4,265	$3,567	$4,939	$2,026	$4,248	$5,339	$4,080	$3,338
% change	**1.1**	**-5.0**	**0.5**	**3.0**	**-1.8**	**2.9**	**-1.3**	**5.0**	**2.2**	**3.3**	**-12.3**
2002-2003	$3,989	$3,414	$4,477	$4,607	$3,380	$4,915	$1,990	$4,500	$5,604	$4,183	$2,933
% change	**1.4**	**22.9**	**1.0**	**8.0**	**-5.2**	**-0.5**	**-1.8**	**5.9**	**5.0**	**2.5**	**-12.1**
2003-2004	$4,183	$4,297	$4,747	$4,886	$3,320	$5,058	$1,962	$4,690	$5,846	$4,348	$2,742
% change	**4.9**	**25.9**	**6.0**	**6.1**	**-1.8**	**2.9**	**-1.4**	**4.2**	**4.3**	**3.9**	**-6.5**
2004-2005	$4,279	$4,894	$5,106	$5,233	$3,344	$4,993	$1,952	$4,878	$6,205	$4,521	$2,694
% change	**2.3**	**13.9**	**7.6**	**7.1**	**0.7**	**-1.3**	**-0.5**	**4.0**	**6.1**	**4.0**	**-1.8**
2005-2006	$4,214	$4,874	$5,125	$5,062	$3,272	$4,881	$1,900	$5,037	$6,281	$4,645	$2,606
% change	**-1.5**	**-0.4**	**0.4**	**-3.3**	**-2.2**	**-2.2**	**-2.7**	**3.3**	**1.2**	**2.7**	**-3.3**
5-year % Increase	**8.3**	**66.6**	**16.2**	**22.3**	**-9.9**	**1.6**	**-7.5**	**24.5**	**20.2**	**17.6**	**-31.5**
Total % Change	**43.1**	**53.9**	**51.2**	**52.9**	**5.1**	**56.9**	**-9.7**	**60.9**	**56.5**	**32.1**	**-8.8**
Total $ Change	$1,269	$1,707	$1,735	$1,751	$159	$1,770	-$204	$1,906	$2,267	$1,129	-$250

* Refers to tuition for Canadian students

Source: Statistics Canada's University Fee Survey in Usher (2006a), adjusted to 2005 levels by the author using

[12] Tuition policy practices in all jurisdictions change on a regular basis. For instance, there will be a $500 tuition reduction in 2007-08 for Nova Scotian students studying in Nova Scotia universities.

Statistics Canada's "Total" CPI measure, obtained from www.bankofcanada.ca/en/cpi.html, with further calculations by the authors of this report.

These variations in tuition reflect provincial policy differences in postsecondary funding. In British Columbia, almost all the increase in tuition took place in a short 3-year period of deregulation between 2001–02 and 2004–05 in which fees increased by 76.2%. In contrast, tuition freezes in Newfoundland and Labrador, and in Manitoba mean that these two provinces have the lowest fees outside Quebec, which has traditionally maintained low tuition fees for its residents.

A second observation from the table is that tuition fees currently vary more dramatically across the nation than they did in the mid-1990s, perhaps reflecting increasing divergence in tuition policies across the provinces during the 2000 to 2006 period. If we exclude Quebec (which consistently has the lowest tuition), the difference between the most and least expensive in the 1995–96 academic year was $1,200 compared to roughly $2,500 by 2005–06. This finding reinforces the importance of examining Canada's postsecondary system on a province-by-province basis.[13]

The most recent provincial policies on tuition fees suggest that the trend toward tuition stability will be maintained, at least in the short term. Tuition freezes (excluding inflation increases) are currently in effect in all provinces but Ontario and New Brunswick. At the time of this writing, Quebec announced the end of a 13-year freeze on tuition, while Prince Edward Island announced a 10% decrease at University of Prince Edward Island.

Tuition increases have also varied considerably by program of study; professional programs such as dentistry, medicine, and law experienced the most significant increases and are currently the most expensive programs, topping out at $13,463, $10,555, and $7,221 respectively in 2006–07 (Statistics Canada, 2006). [14] Yet, not all provinces had such increases in their professional programs. In fact, Ontario accounts for a large portion of this increase because tuition fees in professional programs were deregulated in that province in 1998. Between 1993–94 and 2003–04, professional tuition fees were stable in Quebec; while tuition fees in medicine and law increased somewhat in other provinces, the fees for dentistry rose most dramatically in Manitoba, Alberta, and Saskatchewan (Frenette, 2005). As of 2003-04, the lowest average professional tuition fees were in education, agriculture, and architecture (McMullen, 2004).

Graduate fees have also increased more dramatically than undergraduate fees, rising by 44% since 2001–02 at the pan-Canadian level and by as much as 184% in British Columbia. As of 2006–07, graduate students pay about $6,500 per year on average. Not only does Nova Scotia have the highest undergraduate fees (Table E.1), it also has the highest master's level tuition

[13] Provincial variations in tuition fees also demonstrate that research examining postsecondary affordability should not be on the basis of region (e.g., western or maritime provinces) because, as the data show, there are no detectable regional commonalities.
[14] Unfortunately, Statistics Canada does not collect data on MBA tuition fees which are anecdotally known to have increased significantly in some institutions.

fees; these have increased by the greatest percentage over the previous decade. Quebec, in contrast, has the lowest undergraduate fees and the lowest master's level fees. Prince Edward Island, with the second lowest master's fees, experienced relatively modest undergraduate fee hikes and the lowest master's level increases of just 8.3% (Statistics Canada, 2006b).

Finally, although university tuition fees have received the most attention, college tuition fees have also undergone drastic increases in some provinces. For example, in New Brunswick costs increased by 226 per cent between 1995 and 2000; in Alberta they went from $1,021 to $2,339 during the same period in constant 2000 dollars.[15] Within a two-year period (from 1996–97 to 1998–99), average college tuition fees increased by 20%, surpassing the university tuition increase of just 12% during the same two years. University tuition remains, nonetheless, 2 to 3 times more expensive than college tuition (Rivard and Raymond, 2004).

E.3 Other Educational Costs

Though most of the data collection and analyses have focused on tuition fees, there are other ways of shifting costs. One way is to aim for cost recovery on previously subsidized services like on-campus accommodations. For example, the changes over the past 10 years in the compulsory ancillary fees covering recreation, athletics, and health charged by individual institutions follow a similar rate and pattern as university tuition changes, having increased by 44%, with most increases occurring in the late 1990s. Ancillary fees currently average around $620 per year at the undergraduate level and range between a low of $455 in Saskatchewan to a high of $750 in Manitoba[16]. At the pan-Canadian level, these fees add 13% to a student's costs above tuition; they range from a low of 5.4% in New Brunswick to a high of 24% in Quebec.[17]

Tuition and ancillary fees do not reflect all the costs of education, nor do they represent the largest cost. Barr-Telford et al. (2003) found that non-educational costs (e.g., rent, utilities, food, furniture, and clothing) exceed direct education costs (tuition, fees, books, and supplies); non-educational costs accounted for 55% of the total of $9,740 spent in one academic year by full-time students. University students also spent more on both types of costs than did college or CEGEP students ($11,200 compared to $9,300 and $4,500 respectively). As one might expect, non-educational expenditures were lower among students residing with their parents while attending a postsecondary institution, though this difference was most pronounced for CEGEP students. Overall, college students were more likely to live at home while studying than were university students (72% of students in less expensive schools — which comprise the CEGEPs and colleges — live at home compared to 62% of students attending university) (Ouellette,

[15] Our inability to locate the same level of information on college tuition as for university, perhaps reflects an overall omission in the literature on the affordability of college and technical institutions in Canada.

[16] These numbers reflect Statistics Canada's gathering of ancillary data. It should be kept in mind that there may be special circumstances that affect these numbers. For instance, 15% of University of Manitoba's student body pays higher ancillary fees due to an endowment fund contribution. Without the endowment contribution, ancillary fees for those students would be around $490.

[17] These figures represent the authors' own calculations derived from data provided in Usher (2006a) who reported ancillary fees by province using the mid-point of high and low data provided by Statistics Canada's University Fee Survey.

2006). Though the education-related costs for college are generally lower than for university, the range of college costs across respondents is nearly as broad as for university. For instance, the top 10th percentile of costs for college students are similar to the top 10th percentile of costs for university students (Ouellette, 2006).

A more recent survey (EKOS, 2006) confirms that students spend a smaller portion on education than on non-education related costs. Students spent 28% of their total income on tuition, 17% on accommodations, 11% on food, and 7% on books. For those over 29 years of age, accommodation expenses comprise the largest share of costs (32%). Education costs account for 36% of all expenditures for university students and just 28% for college students (EKOS, 2006).

Table E.2 below provides an overview of total education costs by province in 2002–03. A comparison of the provincial rankings between tuition fees (Table E.1) and total costs (Table E.2) reveals very little difference. Quebec and Newfoundland and Labrador are the least expensive on both measures of cost. Nova Scotia, Ontario, and Alberta are among the most expensive. The largest shift in ranking is observed for British Columbia. Whereas it is ranked in the middle (5th) on tuition alone, when all other education-related costs are included, it moves into a more affordable spot (3rd). Thus, with the exception of British Columbia, the findings demonstrate that even though non-tuition costs are higher than tuition costs, tuition has a strong influence on total education costs and continues to explain much of the interprovincial variation in costs.

Table E.2: Total Education Costs[1] by Province 2002–03

PROVINCE	Total Education Costs
Quebec	$9,156
Newfoundland and Labrador	$9,839
British Columbia	$10,532
Manitoba	$10,738
Prince Edward Island	$11,042
New Brunswick	$11,176
Alberta	$11,766
Saskatchewan	$11,914
Ontario	$12,032
Nova Scotia	$12,351

Source: Extracted from Usher and Steel (2006)

[1] The figure for Total Education Costs includes tuition, ancillary fees, books and study materials, and living expenses, assuming all students are living away from home.

Other than the changes in university tuition fees and ancillary costs, we know very little about how total postsecondary education costs have changed over time or how older students choose the timing of their postsecondary attendance, although they spend a larger share on accommodation than other students. We also do not have a good grasp of how travel costs factor

into education costs. While none of the costs discussed thus far include moving expenses, a significant number of students incur province-to-province travel costs in order to attend a particular postsecondary institution.

According to our research, there have been no systematic attempts to track the costs of living on campus for the estimated 40% of first-year university students who do so (Boothby and McMullen, 2002). Nor do we have an understanding of how other institution-specific costs have changed. Institutions may attempt to compensate for the financial limitations of their tuition freeze or retrenchment policies by increasing costs elsewhere. For instance, the University of Alberta is currently restricted to increasing tuition by no more than the cost of living, but recently announced increases in other areas over and above inflation: a 10% increase in student residence rates, a 5% increase in meal plans, and a 5%, 5%, 10%, increase over 3 years in parking fees over and above inflation.

E.4. Tuition and Participation

In Section D, we looked at the gap in participation between individuals from high and low socioeconomic backgrounds. In this section, we add tuition into the equation by reviewing the research on the effect of rising tuition on participation, with particular focus on income equity groups. In examining this literature, we kept in mind that the majority of Canadians (92%) believe that postsecondary costs should not keep qualified and motivated students from participating (CCL, 2006).

A variety of the stakeholders in postsecondary education have strongly emphasized the relationship between tuition and participation. They argue that tuition increases make postsecondary education less affordable, especially for low-income and other disadvantaged groups already under-represented in the system.

From international studies, we know that those from lower education backgrounds are not well represented as postsecondary graduates, even in countries that have no tuition (de Broucker, 2005). An Australia report on the topic finds no evidence that the increase in tuition in Australia discouraged students, including those from low-income backgrounds, from participating in university (Chapman and Ryan, 2003).

In the United States, the evidence confirms that when tuition fees increase, enrolment decreases. Leslie and Brinkman (1987) found that, among 18- to 24-year-olds, every $100 increase in tuition resulted in a 0.7% decrease in enrolment. More recently, Kane (1995) found that with every $1,000 tuition increase, enrolment fell by 1.4%. Heller's (1997) meta-analysis of 20 quantitative studies in the United States revealed that low-income students, black students, and college attendees were more sensitive both to changes in tuition and to changes in student aid; that is, increased costs strongly affected their decision or ability to enrol. More recent studies show a lower degree of price-sensitivity. Long (2003), for instance, found college tuition fees to be less influential in 1992 than in 1972 and 1982, which suggested that the decrease could be due

to the escalating value of postsecondary education over the last 20 years. Heller (1999) found that access is reduced if tuition increases are not offset by financial aid increases.

In Canada, a few recent empirical studies investigate the effect of tuition fees on participation. Much of the earlier research was descriptive, qualitative in nature, or merely observed. Others have examined the relationship between participation and socioeconomic status over periods when tuition fees increased, but without actually accounting for tuition in their models. Although a comprehensive assessment of the methods used in these studies is beyond the scope of this report, we do comment on their relative methodological rigour and data quality. Considering the important contribution that this relationship makes to our understanding of stakeholder debates about affordability, we recommend a more thorough review than we provide in the following sections. We present this body of literature beginning with those showing no relationship between tuition and participation and in order of increasing methodological rigour.

A study often cited for showing that tuition has no effect on participation is that by Swail and Heller (2004), who plotted university tuition and enrolment changes during the 1990s to see if they correlated, but found no relationship. In their examination of 10 jurisdictions (4 in Canada, 3 in the United States, and 1 each, in the United Kingdom, Ireland, and Australia) representing a variety of policy shifts in tuition, the authors conclude that tuition fees have an unpredictable effect on enrolment. The authors further speculate that the apparent price insensitivity among students could be because they did not include other costs that may affect enrolment (such as living costs, travel, book, etc.) or that students may understand that the costs of not going to university are far greater than the costs of going to university (opportunity costs).

Christofides, Cirello, and Hoy (2001) found that tuition did not negatively affect participation for any income groups, including low-income groups. However, their analysis covered 1975 to 1993, a period of relatively little change in tuition. Also, it would be questionable to generalize their findings because their sample was limited to Arts programs in only 10 universities across the country.

Rivard and Raymond (2004) conducted a much more sophisticated analysis in their study among 18- to 20-year-olds in 1999. Notably, in their simple bivariate model, tuition and enrolment are significantly and negatively related; however, once they controlled for family earnings, parental education, and high school GPA, they found that postsecondary enrolment was not sensitive to tuition fees. They found, in fact, that high school GPA had the strongest effect on enrolment.

These three Canadian studies, none of which show a tuition-participation relationship, depict an increasing methodological rigour; the results of Rivard and Raymond's (2004) more thorough study are difficult to ignore. Still, these and other authors (e.g., Rounce, 2004; Corak, Lipps and Zhao, 2003) explain their null findings by pointing out the concurrent increase in student aid that possibly offset the deterrent effects of rising tuition, or by noting perceptions about increased return on education, in terms of both occupation and income. These explanations suggest that any future research must account for changes in student loan amounts. Perceptions of the

financial and career benefits of completing a postsecondary education are examined in Section H.

In contrast, Drewes and O'Heron's (1999) multivariate analysis of the large decline in part-time students between 1992 and 1998 revealed that, if tuition fees had remained constant, the reduction would have been half of what it was. Coelli (2004), Neill (2004), Johnson and Rahman (2004), and Kwong et al. (2002) all found that rising university tuition had a slight but significant detrimental effect on low-income youth. Frenette (2005) found that increasing tuition for professional programs was a deterrent among middle class students. A rise in college tuition, however, was generally not found to correlate negatively with participation.

Specifically, using Labour Force Survey data from 1976 to 2003, Johnson and Rahman (2005) find that higher tuition levels in the 1990s reduced the probability of university participation among 17- to 19-year-olds. Although the authors control for return on education, gender, and geographic region, they do not examine the relationship by family income or high school GPA.

More recently, Coelli (2004) constructed a series of highly sophisticated econometric models examining the tuition-participation relationship (for both university and college) between 1993 and 2001 using Survey of Labour and Income Dynamics (SLID) data. In addition to parental income and education, the study controls for a wide range of other factors including cohort size, gender, Aboriginal status, visible minority status, family structure (parent, single parent), geographic distance, urban/rural location, and jurisdiction. One major contribution of this study is the effort to account for the fact that increased tuition increases the number of places provided by postsecondary institutions, and this increase might offset reductions that would have otherwise occurred in relation to affordability. Coelli measures this effect indirectly by assessing the changes in the provinces' spending on university and college; however, he does not find this to be significantly related to attendance. The main conclusion is that youth from low-income backgrounds are price-sensitive to university (enrolment decreases as tuition increases), but youth from moderate and high income families are not. This conclusion was not applicable to college enrolment, which, as Coelli and others speculate, is because those who cannot afford university enrol in colleges.

The research examining the effects of increasing tuition on enrolment for professional programs suggests a decline in access among disadvantaged students. Kwong et al.'s (2002) examination of medical students revealed a decline in the proportion of students from low-income backgrounds, and King et al. (2004) found similar results with respect to Ontario law schools. Both of these studies, however, examined students currently studying in professional programs, therefore they could not comment on factors affecting students who chose not to apply.

In contrast, Frenette (2005) investigated the relationship between tuition fee increases and participation in professional programs (medicine, dentistry, and law) among recent university graduates, thus incorporating students who are "at risk" of attending. Frenette found that in Ontario, with the largest increase in fees (fees were deregulated in 1998), middle class students

were the least likely to enrol. The effects are not as noticeable in provinces with less dramatic tuition fee increases (Nova Scotia, Manitoba, Saskatchewan, and Alberta) and there are no effects at all in provinces with little increase in fees (Quebec and B.C.). Frenette concludes that under tuition fee deregulation, professional programs are affordable only for those who can finance their education independently (higher income families) or who qualify for financial assistance (lower income but not middle income).[18] In Ontario, for example, part of the deregulation package stipulated that 30% of fee increases had to be returned to the students deemed most in need, which explains the finding that tuition increases did not negatively impact participation among those from lower socioeconomic backgrounds. The findings also suggest that gradual and incremental increases in tuition fees can be accommodated better by students (and their parents) than large and sudden increases. To extrapolate, the recent slowdown in tuition increases may explain the reduced income-participation gap found by Corak et al. (2003).

E.5 Summary and Knowledge Gaps

Our review of education costs in Sections E.2 and E.3 demonstrated that university tuition and ancillary fees increased most dramatically in the first half of the 1990s, but that increases since then have declined to just above inflation. The variations in education costs from province to province are significant enough to conclude that studies on postsecondary affordability must take such provincial variances into account. Similar trend data are not available for colleges, which indicates that colleges and other non-university institutions are not included in affordability studies. We have very little information on how other education-related costs have changed over time, nor on institution-specific costs. As noted by Looker and Lowe (2001) we have little or no information on the costs unique to such specific groups as students with disabilities, single parents, and rural students. Nor do we have any studies that show the costs for foreign students, for whom tuition fees alone are considerably higher and who also incur relocation costs.

The review in Section E.4 of the relationship between rising tuition fees and participation revealed that, with the exception of Rivard and Raymond (2004), the more rigorous methodological studies find a significant although weakening relationship over time, while studies controlling for few or no variables either found no relationship or identified the need for further study.

Furthermore, nearly all researchers, irrespective of their findings, suggest that the simultaneous increases in students taking on loans explains either null or weakening findings. In other words, increases in the borrowing limits for student loans during this time offset the effects of tuition increases. Hence, youth may have adapted to the higher costs of postsecondary education by increasing their debt loads. We look at student loans and other forms of student aid in more detail in Section F. Another common explanation for the increase in participation despite tuition

[18] Note that the study uses data up to 2002 and, as noted by Berger, Motte, and Parkin (2006), Canada's Student Loans policy was recently modified so that middle SES students now have better access.

increases is the increasing awareness of the career and income benefits that flow from attaining a postsecondary education. In either case, most researchers do not conclude that there is no relationship between cost and participation, only that it is hidden behind countervailing (student aid) or confounding (increasing returns on investment in education) influences.[19]

It is important to understand that this review of the cost-participation nexus does not mean that participation among lower-income groups is declining, but that the cost alone does not have as strong an impact on participation as is sometimes believed. In evaluating the findings, moreover, one must compare the results with the goal of making postsecondary education affordable for all. Given that lower-income youth or adults are not accessing postsecondary education at the same rate as others (as shown in Section D) controlling for ability and other factors, we must conclude that, though there has been some improvement, this goal is not being met.

As this review demonstrates, the complexity of the relationship between education costs and equity of access has not yet been fully sorted out. At the very least, we have shown the need to conduct multivariate analyses of "at risk" populations, to include tuition costs and a measure of socioeconomic status (preferably income, but education will also do), and to control for a number of intervening variables. Only in Frenette's (2005) study are the increasing number of provincial variations in tuition and patterns in tuition changes accounted for. Only a few studies control for ability (GPA scores or merit-based awards); only one study attempts to account for the possibility that the supply of spaces increased as a result of the increase in tuition, and only one accounts for the effects of the increasing financial and other returns on education. And, as we have already noted, none of the studies account for the possible countervailing effect of student aid on rising costs. These shortcomings largely reflect the inadequacy in the quality and availability of trend data in the field.

[19] A third possibility is that low-income individuals have different perceptions of the returns on education and of the costs, factors that we examine in Section H.5.

F. PRIVATE AND PUBLIC CONTRIBUTIONS TO POSTSECONDARY EDUCATION COSTS

F.1 Introduction

As noted in a CMEC report (2004), OECD countries are faced with the challenge of increasing the capacity of postsecondary education systems to meet growth in demand, while maintaining affordability for students. Given that public funds are finite, expansion in the postsecondary system requires that a share of the costs be shifted to the private side. However, a balance must be struck so that the costs borne by the student do not become a barrier to postsecondary participation.

In the United States, government student aid was originally meant to help those in the lowest income brackets; as tuition increased, student aid was expanded by the provision of grants designed to help the lowest income groups and by subsidized loans targeted to both low- and middle-income Americans. Recent trends in the United States, however, signal a shift in benefits away from low-income individuals as the nation shifts from grants to loans, and both the federal and state governments increase universal tax benefits and merit-based scholarships (Gladieux, 2003).

Similar shifts have occurred in Canada. In addition to federal and provincial/territorial institution-based aid and privately funded bursaries, the systems of student assistance have seen an increase in students applying for loans and in larger amounts. At the federal level, loan limits rose in the early 1990s and stabilized in the latter half of the decade.

Grant and remission programs in Canada were also cut in the early 1990s, but have since been expanded to cover a larger number of recipients. In 1998, the federal government created Canada Study Grants for students with dependants; in 2000, it set up the Canada Millennium Scholarship Foundation (CMSF), although most of the money goes toward debt containment. Under the CMSF, the government introduced and expanded non-repayable programs providing interest relief, debt reduction in the repayment process, and other forms of debt remission. The Registered Education Savings Plan (RESP) program (introduced in 1998) is complemented by contributions from the Canadian Education Savings Grants (CESG) and the Canada Learning Bond (CLB). As well, universal education-related tax credits were increased between 1996 and 2000 (Junor and Usher, 2006).

As Junor and Usher (2004) point out, Canada's student loan system is complex with "over 40 different student assistance limits . . . more than 100 different loan/grant combinations within these aid limits, and hundreds of thousands of possible aid configurations, once assessed need is

taken into account" (p. 181).

It is within such a changing and intricate framework that we find the public view that government should either assume the major financial responsibility or that government should contribute more. In a random survey of Ontario adults, two-thirds reported that Ontario universities should receive increased government funding (EKOS, 2005). Fifty per cent of a sample of Alberta secondary students indicated that government should be the major contributor, and 32% believed that the government was actually responsible (Ipos-Reid, 2001). Nationally, 60% of both students and their parents felt that government should assume major responsibility for postsecondary funding, with each respectively attributing responsibility for 47% and 44% of postsecondary costs to government (EKOS, 2006). Finally, a CCL (2006) random survey revealed that Canadians believe all governments should pay more of the costs and students should pay less.

Given how important it is to fully understand public versus private contributions to postsecondary education, we have organized the remainder of this section roughly along these lines. Savings, earnings from work and parental/family financial support constitute private financial contributions, and grants, remissions, and tax credits constitute public contributions; but student loans are neither fully private nor fully public. Repayable debt and interest are private contributions; financing the student loan program and providing interest relief and debt reduction are public costs/contributions. Because there is much more information available for student loans than for any other funding source, we look at this form of repayable assistance separately in Section F.4, and return to examine its contribution to postsecondary education affordability in Section F.6.

We begin with an overview of the literature on funding strategies and how they have varied over time.

F.2 Relative Contribution of Each Source of Funding

Students finance their postsecondary education in a number of ways, including savings and other support from parents, employment earnings, private loans from banks, family, or friends, and student loans. Until recently, very little was known about these various funding strategies.

In Canada, compared to 1964 when the student loan program started, there has been a sharp decline in the proportion of income students can obtain through summer employment and parental contributions, but an equally sharp increase in the proportion obtained through part-time work throughout the school year and through loans and grants (Cervenan and Usher, 2004).

According to research on current trends, no single source provides the most funding for the majority of graduates (Ouelette, 2006 and Canada Undergraduate Survey Consortium, 2006). Still, of those receiving loans, Ouellette (2006) found that 60% covered their entire costs with the

loan; the Canadian Undergraduate Survey Consortium (2006) found that student loans comprise the largest dollar amount of all contributions among those receiving them ($8,898 out of a total $12,000 in funding). As expected, the greater the parental support the less likely students are to rely on government loans (EKOS, 2006).

For all current students (not just those receiving student loans), by far the largest portion of their income for a single year comes from employment (both during the summer and throughout the year), which contributes 37% of all their income, followed by student loans (14%), savings (12%), parental support (10%), and private loans (6%) (EKOS, 2006). However, in a different survey when graduates reported on their main sources of funding, the most common response was parents/family/spousal support from 56% of survey participants, followed by personal savings (44%), summer employment earnings (41%), earnings from school-year employment (39%), government loan or bursary (33%), scholarship or other financial rewards (29%), bank loans (14%), and RESPs (5%) (Canada Undergraduate Survey Consortium, 2006).

Among current college students, we see a significant shift in the number who rely on their parents for funding, rising from just 45% in 2002 to 52% in 2004. The proportion using other funding sources changed little between 2002 and 2004. Students in college under the age of 20 are more likely to use employment income, personal savings, academic scholarships, and money from parents/family, whereas older students are less likely to use parental income and more likely to use government assistance, such as employment insurance, money from Indian and Northern Affairs Canada, training programs, and social assistance (Prairie Research Associates, 2005).

We have not located much research on the affordability of apprenticeship programs, but one study conducted in British Columbia found that students in apprenticeship programs were more likely to rely on their own funding and drew very little from government contributions: 72% indicated that they had paid for education-related costs themselves; 30% had received funding from their employers; 12% had funding through employment insurance programs; 7% received other government funding; 6% cited union and other association funding; 1% had bursary or scholarship funding (BC Stats, 2005).

Views on the relative financial contributions of students and their parents showed that, on average, students assigned 24% of costs to their parents, while parents assigned 31% of costs to themselves (EKOS, 2006). Overall, parents who had a child that they expected to participate in postsecondary studies believed that they themselves should bear most of the costs. This figure drops among parents with a lower income (COMPAS Inc., 2005).[20]

Two random surveys of adult Canadians conducted by the Canada Millennium Scholarship Foundation in 2003, revealed differing attitudes about who should pay. A little more than one in

[20] Unfortunately, a percentage for low-income parents was not provided in the report.

four (28%) indicated that parents should be financially responsible for their children's postsecondary education while the same percentage felt parents should not contribute at all because it is the student's own responsibility.

F.3 Private Contributions to Postsecondary Education Costs

F.3a Savings and parental support

Parents can contribute to postsecondary education costs by drawing upon savings to provide loans and monetary gifts to their children throughout the course of participation, by subsidizing living costs, or by providing support such as a car or computer. Eighty-four per cent of parents with children aged 13 to 18 believed they would contribute to their children's postsecondary costs by drawing on their own earnings, 71% said that they would provide room and board, and 86% believed they would contribute through other means. Notably, 28% reported that they would take out personal loans to finance their children's higher education costs (Ouellette and Cartwright, 2003). This compares to one in five parents who actually used debt to finance their children's education (EKOS, 2006)

With more than six in ten 18- to 24-year-olds living with their parents (or guardians) (Barr-Telford et al., 2003), the cost contribution of these parents applies to a large portion of students. Indeed, students report that the decision to live at home was largely driven by financial need, a response that increased with age (91% of students over 29 compared to 64% for total sample) (EKOS, 2006).

Comparable surveys suggest parental savings are increasingly being used as a means of financing education. Of parents surveyed in 2002 who were expecting their children to complete high school, 50% were currently saving for postsecondary compared to 41% in 1999. A further 19% were not and did not plan to save for postsecondary education compared to 28% in 1999 (Shipley et al., 2003). On the other hand, only 38% of parents of current students had savings targeted to postsecondary. Savings are highest among parents with younger children, suggesting that parental savings will continue to increase in the future (EKOS, 2006).

In 1999, among parents who had already saved for children under age 18, 40% of savings were in the form of RESPs (compared to 48% in general savings accounts and 35% in in-trust accounts) (Hemmingway and McMullen, 2004).[21] By 2002, RESPs were cited by 52% of parents as a current or future savings strategy, indicating that the uptake of RESPs may be on the rise. On the other hand, just 12% of parents used RESPs for their children who enrolled during the 2005–06 school year. Otherwise, very little information exists on RESPs, even though the program was introduced in 1998.

[21] RESPs were introduced in 1998 to encourage postsecondary education savings. Up to $400/year may be contributed by Canada Education Savings Grants.

It should be no surprise that one of the most consistent findings in the literature is that the proportion of parents' saving and the amount they save positively correlates with income. Acuman (2006), EKOS (2006), and Hemmingway and McMullen (2004) found this correlation for parents of current postsecondary students, and Shipley et al. (2003) and COMPAS (2005) found it for parents whose children were not yet enrolled in higher education. Academic achievement was found to relate strongly to the amount of parental savings (Lefebvre, 2004). Parents with higher incomes are more likely to report that it is important to save for their children's education. Since the savings increase with the level of importance parents place on postsecondary education (EKOS, 2006) and since the perceived value of higher education increases as income increases (Statistics Canada, 2001), some of the difference in savings by income may be due to different values. Single-income families, both two-parent and single, were below average for current savers, at 47% and 41%, respectively (EKOS, 2006).

Notably, parents of current and future university students are more likely to save than parents of college students (EKOS, 2006; COMPAS, 2005); Shipley et al. (2006) conclude that a larger portion of the parents who want their 13- to 18-year-old children to enter college instead of university will likely have no savings by the time the children are eligible to enrol (40% compared to 25%).

Currently, the highest proportion of savers is found in Saskatchewan and Manitoba. Quebec has the lowest proportion (40%), likely due to the lower cost of CEGEP and university tuition in the province. Prince Edward Island has the highest proportion of non-savers outside of Quebec (Shipley et al., 2003). In addition, Lefebvre (2004) found that the amount saved roughly correlates with provincial tuition costs. Parents who expect their children to receive grants save significantly less than those who do not, an important factor because 29% of parents expect their children to receive grants, but only 15% of 18- to 24-year-olds enrolled in postsecondary educational institutions in 2002 or earlier had received grants (Shipley et al., 2003).

Together, these findings demonstrate that the majority of parents are currently contributing or are planning to contribute to their children's postsecondary costs. Parental contributions are primarily in the form of room and board and savings, both of which appear to be increasing. Savings increase with income and with the value placed on higher education and decrease with age.

F.3b Employment earnings

The American literature shows a growing shift toward students taking on jobs to compensate for decreasing aid and rising tuition (The National Center for Public Policy and Higher Education, 2002). For example, Choy (1999) found that student assistance covered an average of 33% of student costs in 4-year public institutions, and 50% of the students worked to cover the shortfall. In a later study, Choy (2000) found that full-time, low-income students covered 60% of their costs from student aid, and made up the substantial shortfall from part-time work.

In Canada, the evidence is mixed for summer employment versus employment during the

academic year. Since 1964 when the student loan program started, we have seen a sharp decline in the proportion of income obtained through summer employment and an equally sharp increase in income obtained through work during the school year (Cervenan and Usher, 2004). Labour Force Survey data show that 46% of full-time students (aged 18 to 24) worked during the 2003-04 academic year, the highest employment rate in an upward trend since 1976-77.[22] In 2005, the proportion of students working during the summer months was two-thirds compared to nearly three-quarters in 1989. However, they worked slightly longer hours both during the school year and during the summer (Bowlby and Usalcas, 2006).

The increased hours of work may account for the finding that students are earning more; between 2001-02 and 2003-04, income employment during the school year increased by $800 (EKOS, 2006). In 2001-02, income from employment was the second most common source of postsecondary funding for full-time students between the ages of 18 and 24, but it contributed the largest dollar amount according to Bowlby and Uscalca (2006). Even so, they concluded that improvements in the labour market for youth have been insufficient to offset the rising costs of postsecondary education.

Females are more likely to work than males (50.5% compared to 40.7%) (Bowlby and Usalcas, 2006), as are older students who rely less on their parents (EKOS, 2006). University students are more likely than college or technical school students to work while attending school (74% compared to 64%) (Government of Alberta, 2006); those in the social sciences (66%) and in arts and humanities (66%) are most likely to work. Engineering students are least likely (35%) to work during the school year (Canada Undergraduate Survey Consortium, 2006). Student employment rates also vary by province, with the prairies and Quebec having the highest rates during the school year (Bowlby and Usalcas, 2006).

Though no Canadian studies confirm this, increasing student employment may fill the gap left by insufficient alternative sources of funding, as in the United States. Clearly, more research is needed to establish the causes of increasing employment during the school year.

F.3c Total student debt

Before addressing student loans, we look at all sources and amounts of debt accumulated by graduates of postsecondary programs. The literature shows a trend toward both a greater proportion of students with debt and a greater amount of debt. It also shows that private debt is rising more quickly than debt from government loans.

In 1990, 45% of graduates had accumulated debt averaging $11,636. By 2006, 59% had debt averaging $24,047. Although the proportion of graduates with debt changed by only 14

[22] The trend towards increasing employment while studying has been noted as a possible detriment to academic achievement. Seven in ten current working students indicated that their employment had at least some negative impact for their academic performance with 12% reporting that the negative impact was substantial (Canadian Undergraduate Survey Consortium, 2006).

percentage points, their amount of debt more than doubled in this 16-year timeframe. Both the incidence and amount of debt increased most dramatically between 1995 and 2000, but since then have stabilized somewhat (Berger at al., 2006).

A survey of British Columbia graduates shows that students from lower income backgrounds are more likely than others to graduate with some debt. Of the 11% of the sample who had been on income assistance, 64% had debt averaging $9,000 compared to 43% of other respondents with debt averaging $8,000. The survey also found that students who had to relocate to attend their postsecondary institution had higher debt loads. Among graduates who had relocated to attend, 61% had a median debt load of $9,000 compared to $6,000 among those who had not relocated (British Columbia Ministry of Advanced Education, 2002).

Student loans account for 40% of all debt, the largest amount ($20,542), followed by bank loans (20%, an average amount of $12,584), family/friend loans (17% at $14,391), and debt from other sources (6% at $6,652) (Canadian Undergraduate Survey Consortium, 2006).

Recently, the incidence of non-government loans has increased more than government loans, which have largely stabilized in the past three years. The proportion of graduates with non-government loans increased from 31% in 2003 to 39% in 2006. Comparatively, 59% of graduates had government student loans in both 2003 and 2006 (Berger et al., 2006).

Both the proportion of college students with debt and the amount of debt continue to increase. In 2006, 44% of college graduates had accumulated in excess of $10,000 compared with 32% in 2003. In fact, a third of college students are graduating with the amount of debt more typically accumulated by university graduates (Berger et al., 2006). These findings may, in part, reflect recent increases in college tuition although the cost of college is two to three times less than that of university (Rivard and Raymond, 2004).

This review of the literature on private contributions to postsecondary education shows that each form of funding has increased. Parental contributions (whether savings, room and board, or other forms of support), work earnings, and private loans have all increased. Unfortunately, no studies have attempted to answer the important question: to what extent is this increase in public postsecondary contributions a result of escalating costs or a decline in government support?

Additionally, we are left uncertain as to what the implications of increased public contributions are for low-income Canadians. What we do know is that low-income students are less likely to be able to rely on their parents' savings and, though we know that low-income students are more likely to accumulate student loan debt (Section F.4b), we do not know if they are accumulating other types of debt.

F.4 Student Loans

In this review of the literature on student loans, we summarize the proportion of students obtaining loans and the average amount of those loans and review the socio-demographic and economic profile of the borrowers (Sections F.4a and F.4b). Sections F.4c and F.4d provide a more evaluative look at loan availability and amounts, and the effectiveness of repayment terms.

F.4a Student loan uptake and debt loads

Student loans are important in financing postsecondary education: 7 in 10 of those taking out a student loan report that it is their main source of funding (CSLP Annual Report, 2003-04). Internationally, student loan uptake varies depending on whether means-testing is part of qualifying. Among 16 countries, Australia, New Zealand, Sweden, and the United Kingdom offer loans without a means test and have the highest rate of students graduating with student loan debt (over 75%). The United States, which has both a means-tested and a non-means-tested system, has the same proportion (50%) of students as Canada's exclusively means-tested system. Germany, which is also exclusively means-tested, has somewhat lower rates (15% to 20%) (Junor and Usher, 2002).

The average student loan debt is highest in Sweden, even though the country has no tuition fees and all students receive grants. The United States has the next highest amount, followed by the United Kingdom, then Canada ($18,900). Compared to other nations, recent trends show that debt in Canada and the United States is fairly stable or growing only slowly (Usher, 2005c). An examination of student loans within Canada in the last and current decades, however, shows that uptake and debt amounts have noticeably increased; these increases coincide with periods of increases in tuition fees and corresponding increases in loan limits, both resulting from a policy shift from grants to loans. In the early 1990s, just over 300,000 Canadians used the federal and provincial student loans programs, but by the late 1990s, the number had jumped to 500,000 (Junor and Usher, 2002).

More recent trends show that loan uptake has stabilized, but loan amounts continue to climb. While the class of 2000 was almost as likely to borrow as the class of 1995, the most recent cohort owes significantly more at graduation, particularly for university graduates with bachelor's degrees (owing 30% more than the class of 1995 and 76% more than the class of 1990, in 2000 constant dollars). College graduates owed 21% more in 2000 than in 1995 and 76% more than the class of 1990 (Allen and Vaillancourt, 2004). Despite a convergence between university and college graduates from the class of 2000 in the rate of uptake (at 51% and 46%, respectively), university graduates continue to accumulate larger debt amounts ($18,900 compared to $12,500) (Statistics Canada and CMEC, 2005).

F.4b Characteristics of student loan borrowers

Since student loans are disbursed on a needs basis, it is not surprising to find that a larger proportion of low-income graduates have higher debt from student loans. Kopsalis (2006) found that low-income dependent youth are much more likely than high-income dependent youth to

receive student loans; 61% of students whose parental income was below $20,000 received student loans, compared to 6% of those with parental income exceeding $100,000. Ontario was found to have the largest gap between lower-income and higher-income students, indicating that loans are well-targeted to low-income youth in that province.

A British Columbia study shows that student loan usage is also higher among single parents. More than half (51%) had a student loan compared to 31% of single students without dependants, 28% of couples without dependants, and 20% of couples with dependants. Median amounts of student loan debt were higher among single parents ($12,000, compared to the total sample of $8,350) (Government of British Columbia, 2002). In 2005-06, 92.4% of Newfoundland and Labrador's student borrowers were single, 80.1% of whom moved away from home to attend school. Slightly more than half (i.e. 51.7%) of single borrowers were classified as dependent. Of the 9,682 borrowers in 2005-06, 54.5% attended university, 17.1% attended the public college, 13.4% of them attended private colleges, and 15% attended educational institutions outside of the province (Government of Newfoundland & Labrador, 2006).

A national meta-analysis of institutional graduate surveys revealed that respondents from large universities and those offering professional and graduate programs have the highest levels of debt (Lang Research, 2002). Studies in British Columbia and Saskatchewan reveal that student loan users are also more likely to have relocated in order to attend their institution, to be living away from home, to have dependants, to be widowed or divorced, and to be older (BC Stats, 2004; Trimension Group, 1997).

At the provincial level, student loan indebtedness is the highest in the Atlantic provinces, for both university and college graduates (Kopsalis, 2006; Canada Student Loans Program, 2004; Prairie Research Associates, 2005).

Quebec, which has relatively high rates of student employment but low rates of parental savings, also has below average student loan uptake and therefore below average debt amounts for either university (Canada Student Loans Program, 2004) or college (Prairie Research Associates, 2005). Manitoba, which has a high rate of parental savings (Shipley at el, 2006), also has one of the lowest rates of student loan indebtedness (Canada Student Loans Program, 2004). As Vaillancourt (2005) observes, however, higher debt-servicing ratios translate into higher payments in relation to the income of graduates in the province. In addition, Manitoba graduates are as likely as those in other provinces/territories to owe on private loans.

Student loan rates are lower in Alberta and British Columbia (Canada Student Loans Program, 2004), although loan amounts have recently increased in Alberta from a median of $13,000 in 2002 to $15,000 in 2004 (Government of Alberta, 2006).

F.4c Access to sufficient aid

Between 11% and 20% of student loan applicants are rejected (Boothby and McMullen, 2002; Ouellette, 2006). On the national level, 56% of borrowers indicated that they wished they had

received more student loan money (EKOS, 2006), and just 61% of Alberta students were satisfied with the amount of assistance awarded (Ipsos-Reid, 2001).

The literature on postsecondary persistence shows the relationship between student loan sufficiency and completion of studies. Berger et al. (2006) conclude that the amount of the loan affects the student's ability to continue in postsecondary education. Both university and college students planning to further their education after graduation had less debt (including federal and provincial government student loans and private loans) than those planning to pursue other activities. For instance, university graduates planning on furthering their education had roughly $3,200 less debt than those not planning to continue their studies.

Myers and de Broucker (2006) conducted a review of the student loan system. They concluded that, because it is designed for students making a more immediate transition from secondary to postsecondary education, it may pose a significant disincentive to older students. Older adults, who have greater living costs, may be less willing to give up savings and other assets, as required by the student loan system; and in most provinces, expectations of spousal contributions render even some lower-income potential students ineligible for student loans.

Hemmingway (2003) contends that the contributions expected from middle-income parents prohibit their children from gaining access to student loans and the amount of the expected contribution should be decreased. Subsequent increases in the threshold of the income criterion for student loan qualification by CSLP in 2004, however, may have addressed this concern.[23]

F.4d Student loan debt repayment

To ascertain the overall effect of student loans on the goal of equal accessibility to postsecondary education, we must ask whether student loans truly make postsecondary education more affordable or if they result in greater financial hardship, as measured by debt loads and defaults for certain groups of students (Looker and Lowe, 2001).

Usher's (2005c) examination of global debt patterns highlights the importance of taking debt repayment conditions into consideration when evaluating students' ability to pay off debt. Currently, Canada determines the threshold below which loans are not repayable by comparing the amount of debt to the amount of income, that is, debt-to-income-ratio. Usher, however, demonstrates that the most comprehensive measure of debt burden is the debt service ratio since it accounts not just for debt amount and income but also for interest rates and repayment periods (expressed as monthly payments). His comparative review of international debt service ratios shows that high debt loads are more manageable when they are coupled with generous interest rate and repayment policies, as in Sweden.

[23] We have noted several reports that refer to the declining access by middle-income students (e.g., Rounce, 2004), but other than Hemmingway's argument that student loan thresholds serve as a barrier to student loan access among middle-income Canadians and Frenette's (2005b) research showing lower participation rates among middle-income students in professional programs, we have not found any documented evidence to support this contention.

Canada has the fourth highest average student debt level, but also the highest repayment-period interest rates and the shortest amortization period of the 7 countries examined (of 9.5 years). New Zealand and Canada had the highest interest rates at the time of the study. As a result, Canada has the highest average debt service ratio of 6.6%, just a fraction above New Zealand at 6.4%. The author concludes that debt reduction measures may not be the most effective method of reducing the burden of student debt, and that current repayment conditions should be examined. In fact, the author maintains that the American system of allowing students to choose their own repayment period is probably "the most sensible policy in this regard" (Usher, 2005c; p. 20).

Others have commented on the method of determining debt payment amounts without reference to the graduate's current income. Schwartz and Baum (as cited in Berger et al., 2006) maintain that graduates with low incomes and high debt amounts have obvious difficulties making their payments; they suggest that monthly payments should be tied to current income levels. In Ontario, the general public also supports the idea of income-contingent loan repayment as a means of increasing affordability and debt manageability (EKOS, 2005).

Although data show that income after graduation is more important than debt size in successfully repaying a student loan, Usher (2005a) maintains that low-income Canadians would be better served by increasing the amount of student loans and need-based grants to those in most need.[24] We should also note that students themselves report their concern about current and future debt loads, and the concern is highest among students from low-income backgrounds (EKOS, 2006).

Evidence also suggests increasing difficulties with repayment over time. Allen, Harris, and Butlin (2003) found that the 1995 cohort of both college and university graduates had more difficulty paying their student loans than the 1990 cohort. National Graduate Surveys reveal that more graduates report difficulty in repaying loans; 21% of 1995 respondents reported such difficulties, and the figure increased to 27% in 2000 (Berger et al., 2006). A 1997 Saskatchewan survey had similar findings (Trimension Group, 1997).

The debt levels of college graduates are growing faster than those of university graduates. These students often come from lower-income backgrounds, have lower future earnings (roughly $10,000 less than that of university graduates), and, therefore, have high levels of financial concern. In a 2004 survey of nearly 10,000 college students, one-quarter reported that they were "very concerned" (Prairie Research Associates, 2005).

Allen, Harris, and Butlin (2003) found that 1995 university graduates were more likely to have difficulty paying their student loans than were college students (20% compared to 13%). However, in a more recent survey of the class of 2000, 28% of university graduates and 34% of

[24] We do not report for the arguments for (e.g., The Rae Report) and against (e.g., Usher, 2005a) income-contingent loans (e.g., Usher, 2005a) which differ from income-contingent repayment methods in that the former ties the loan amount to income whereas the latter ties the monthly repayment amount to income.

college graduates reported difficulties making payments on the debt remaining two years after graduation (Allen and Vaillancourt, 2004). In British Columbia, single parents, who have higher rates of loan uptake, were found to have the highest rate of difficulty repaying student loans (Government of British Columbia, 2002).

Indeed, within three years of the repayment period, roughly 25% of borrowers defaulted on their student loans, that is, they were in arrears three months or longer. These rates have remained steady since 2002. Nine years after consolidation, 31% of loans were in default, the majority (90% of defaults) having gone into default within the first three years of consolidation. Repayment difficulty is most likely to occur shortly after consolidation (Kopsalis, 2006b).

Among those who use Interest Relief (IR), default rates are significantly lower (6%). However, among a sample of 2002 graduates in Ontario, only one-third of the 47% of graduates eligible for interest relief actually used the program, and one-third of defaulters were not at all aware of the program. Of those who do use the interest relief program, 40% to 50% report that it is hard to use. Recent modifications to the system's communications and administrative processes may have addressed these concerns because there has been a small but significant increase in uptake over a two-year period — from just 16% in 2001–02 to 22% in 2003-04 (Mortimer, J. and P. Codrington, 2006).

Nationally, Situ's (2006) review showed that the absolute number of borrowers on Interest Relief more than doubled between 1994 and 2000, but only a minority of those eligible for IR used the program. Notably, even fewer (36%) of eligible borrowers on social assistance used it. The author suggests that further research be done to determine whether graduates don't use IR because they don't need to, or they don't know about the program, or because they face barriers in applying for it. Future research should also examine the default rates on repaying student loans of eligible individuals who do not make use of the interest relief programs.

Interest Relief is available from provinces, territories, and CSLP to assist students in financial difficulty. These findings highlight the importance of understanding which borrowers utilize the program and which do not, even though they are eligible. Add concern about college students and, as the international data demonstrate, examination of the relationship between repayment terms, default rates, interest relief, and debt reduction is warranted.

F.5 Non-Repayable Public Contributions

F.5a Targeted contributions

Within the past 15 years alone, targeted contributions (grants and remissions) at both the federal level and in most provinces have undergone several up-and-down trends. In the early 1990s, grant and debt remission programs were cut back, increased until 1999, decreased gradually until 2001, and have since slowly increased again (Junor and Usher, 2006). By 2003-04, nearly

375,000 grants/remissions were disbursed across the country compared to 171,000 in 1995-96.[25] Although both levels of government spending on grants increased during this period, a coinciding increase in the student population overall led to a decrease in the per-student amount from $3,655 in 1995–96 to $3,020 in 2003–04 (Usher, 2006).

Provincially, Quebec provides the largest average amount ($4,043), followed by Nova Scotia ($3,622), while the remaining provinces range between $2,100 and $2,800 per year (Usher, 2006a). Between 1995–96 and 2003–04, the average grant/remission amount decreased in all but the Atlantic provinces (Usher, 2006).)

With respect to all government and institutional grants/bursaries, the EKOS (2006) study of 2003-04 students found that 24% received such non-repayable funding in that year, averaging $472 (among only those receiving). Mature students, doctoral students, low-income students, Aboriginal students, and disabled students, as well as those receiving student loans, were more likely to receive these non-repayable forms of funding. An Alberta study of 2006 graduates further reveals that 66% of both graduate and undergraduate former students had received a scholarship, grant, or bursary, with graduates of university and university college most likely to do so (76% and 80%, respectively). The mean amount disbursed was $6,742, with university and university college graduates once again receiving the largest average disbursements of $9,199 and $7,065, respectively (Government of Alberta, 2006).

Though we cannot report comprehensively on institution-specific grants, bursaries, and scholarships, one study calculated that 47% of master's students received such funding in 1995-96, averaging just over $6,000 (Bone, 2002).

F.5b Tax benefits

Another form of non-repayable student aid is tax benefits, the focus of research conducted by Usher (2006a) and Junor and Usher (2006).[26] Education-related tax benefits have been part of the postsecondary funding system for over 40 years, although an expansion of such credits occurred between 1996 and 2000. These credits are available through the Government of Canada and through individual provinces, with Alberta and Ontario providing more than the federal government. Such universally available forms of aid have, according to Junor and Usher (2006), increased more significantly than needs-based aid in the recent past. Finnie, Schwartz and Lascelles (2003) argue that tax credits, which constitute roughly 37% of government spending on student financial aid, do not benefit low-income individuals who tend not to have a tax liability.

[25] As Usher (2006a) notes, however, these data over-state the number of students receiving grants because they include students who have received more than one grant.
[26] Tax benefits include tuition and student loan interest tax credits.

F.6 Overall System Effectiveness

A review of the literature on the effectiveness of the student aid system indicates that the vast majority of Canadians (94%) believe every qualified secondary school graduate should have opportunities for postsecondary education. Only 28%, however, are confident that this is the case (Ipsos Reid, 2004).

Indeed, public concern has been expressed over the affordability of university education for lower- and middle-income families with grant aid perceived as the best method of ensuring equality of access. Some are worried that grant aid is not meeting the needs of middle-income students (EKOS, 2005). Others have suggested that the gap between student financial need and aid should be bridged through increased student loan limits (COMPAS, 2005).

A report for the Canada Millennium Scholarship Foundation by the Institute of Intergovernmental Relations at Queen's University (2003) noted that there are two barriers to access: financial constraint, in which a person is simply unable to pay the cost of attending even though he/she may want to attend, and return on education, in which even when a potential student has access to the required funds, he or she may choose not to attend because the cost is not worth the benefit. While both loans and grants address financial constraints, only grants lower the net cost, thus rendering the return on education more attractive.

American studies generally demonstrate that grants/reductions are effective in increasing participation and retention among low income students. Further, the evidence also suggests that while loans are useful for persistence among middle- and upper-income students, grants are effective for persistence among low-income groups (St. John (2002) as cited in Usher, 2006; and Dowd, 2004). Maag and Fitzpatrick (2004) also find that grant aid has an impact on enrolment, especially among low-income Americans, while loan aid has been shown to have a negligible impact. Hence, grants appear to be most effective both for participation and persistence among low-income individuals. At the same time, however, the movement to merit-based scholarships in the United States has meant that low-income students receive less scholarship money from institutions than do high-income students (Rosenstone, 2005).

While there are no similar studies conducted in Australia, Birrell et al. (2001) discovered that low-income students have begun to delay enrolment by two years so they could qualify for grants as an independent (as cited in Usher, 2006). A German study by Oberg (1997) demonstrates correlation, but not causation, of grant change and participation (as cited in Usher, 2006).

Canadian literature also shows that grants are more effective than student loans in terms of persistence. McElroy (2005), for example, found in her study of six universities that students with both grants and student loans were nearly five times as likely to earn a degree as those who received student loans but not grants (McElroy 2005). Tomkowicz and Bushnik (2003) concluded that after controlling for grade averages, those who did not receive scholarships,

grants, or bursaries were more likely to delay their transition than those who did receive such funding.

As demonstrated by Usher (2002), although low-income students are more likely to receive assistance, over 40% of grant and loan amounts go to students from the two highest income quartiles. Usher further argues that since higher-income students are more likely to attend university than college, universal tax credits benefit higher-income students more than lower-income students. Moreover, the subsidies under the RESP tax exemption benefit wealthier families, insofar as they have a greater ability to contribute to RESP funds.

Others echo the critique that the system is too heavily weighted toward regressive aid such as tax credits and that needs-based aid such as grants is losing ground. De Broucker (2005) notes this problem and points to the flawed needs-determination criteria as a possible underlying cause. Hemmingway (2003), who compares Canadian and American systems, concludes that Canada's system tends to be less effective. Outdated limits on amount of aid, unrealistic contributions expected from parents (especially from middle-income earners), and an overly complex application process all result in insufficient aid. In his review of Canada's loans and grants system, Finnie (2006) concludes that loans are better suited to individuals who have already decided that they want to participate but who face financial constraints, and grants are more effective in encouraging participation among individuals from disadvantaged backgrounds. Educators, policymakers, and government leaders participating in a symposium on Ontario postsecondary concerns, concluded that there was adequate research demonstrating the need for an increase in funding for low-income students and a better balance of grants versus loans (CMSF, 2006).

An Usher (2006a) article in which he examines the effect of grants and tax credits on affordability concludes that "high-need students are seeing faster increases in net costs than low-need or zero-need students." According to Usher, tuition tax credits and education amount tax credits (combined) have doubled in the past 10 years and contribute roughly $2,000/year (over $2,000 in six provinces, and under $1,500 in Newfoundland and Labrador and Quebec). The author demonstrates that tuition has been rising faster among recipients of both tax credits (which are universal) and grants (which are allocated to those deemed most financially in need) than among those receiving only tax credits. The national data show that the offsetting effect of grants (and tax credits) has decreased over time whereas it has increased for those receiving tax credits. At the provincial level, this finding applies to British Columbia, Alberta, Manitoba, Ontario, and Saskatchewan.

Some of the shortcomings revealed with these analyses are already being addressed by the jurisdictions. A quick review of provincial documents shows that most provinces have recently modified or are planning to modify their student aid systems to target a broader range of potential students. These modifications often entail increasing student aid amounts or increasing income thresholds of eligibility for grants and/or loans. Further, the end of the Millennium fund in 2010 may override the benefits of these provincial initiatives. Future research will tell us how

much these changes are contributing to a more equalized system.

F.7 Summary and Knowledge Gaps

Growing demand for postsecondary education has placed increased pressure on public finances and has led to greater cost-sharing with individuals. Increased parental savings, income from part-time work, private debt, and student loan contributions all attest to this shift. Governments have reduced their use of expensive non-repayable programs and increased their use of cheaper loan programs; however, targeted non-repayable aid might be more appropriate than loans if the goal is to make access equitable. Though not as definitive as the American research, existing Canadian studies suggest that grants go further toward ensuring program participation and completion for low-income students than do loans, because they both remove immediate cost barriers and increase returns on investment. There also appears to be agreement in the literature on the logic of increasing targeted grant provision to disadvantaged groups. In contrast, increasing tax credits and encouraging savings are shown to be most helpful for higher-income Canadians.

Though recent surveys contribute to our understanding of how families finance higher education, many of the studies drawn upon in this review do not look at results by income level, perhaps the most important basis upon which to evaluate equity. The extensive EKOS (2006) survey provides a good starting point for better understanding the various strategies used by students and their parents to finance postsecondary education; however, the results presented from this study are mostly descriptive, and the report does not offer interpretation or discussion of the findings. The COMPAS study commissioned by CMSF, which profiled parents' attitudes toward postsecondary education, relates them to participation. Similar types of analyses could be conducted using the EKOS (2006) data. Better longitudinal data would help determine the impact of the available student financial assistance on participation by different groups, especially those from disadvantaged backgrounds, because the amounts are ever-changing. Current information should be provided on a timelier basis (the latest national student loan data are from 2001).

Aside from these data issues, there are several knowledge gaps in postsecondary education funding. Specifically, we need to know the following:

- The combined and separate effects of grants and loans on participation in Canada
- A pan-Canadian examination of jurisdictional differences in costs related to available financial aid programs
- A better understanding of who has applied for but not received a student loan and the resulting postsecondary outcomes (Do they drop out? Do they graduate with greater non-government loans?)
- The frequency and amount of unmet need by socioeconomic status
- An examination of why borrowing from private sources is on the rise. Is it because of not qualifying for student loans or grants or because of unmet need?

- A better understanding of the contribution of scholarship money and how graduate students fund their education

G. RETURNS TO POSTSECONDARY EDUCATION

G.1 Introduction

In this section, we examine the literature pertaining to the benefits of completing a postsecondary program for the individuals who do so (private benefits) and for society at large (public benefits). Private returns include employment benefits (employment rates and job quality) and financial benefits. Because the major focus of this report is on affordability for individuals, we provide a more extensive review of the private benefits. The brevity of the public portion reflects the scarcity of Canadian literature on the return to society from our investments in postsecondary education.

The return on the investment in education can be viewed in two ways: the first is the direct financial and non-financial personal benefits gained from participating in a postsecondary education; the second requires a determination of the difference between the net costs and the financial benefits (cost-benefit analysis).

G.2 Public Benefits

OECD recently initiated a project designed specifically to examine the effects of education on health and civic and social engagement, and has concluded that the evidence for the public benefits of education is mounting (OECD, 2006). This project is still in its infancy, but it has found that the health benefits include a reduced need for healthcare and a reduction in lost earnings and productivity because of healthier behaviours (Feinstein et al., 2006). American research shows public financial benefits include an increased income tax base, increased purchasing of goods and services by graduates with more money, greater productivity from the graduates, and their reduced reliance on social service programs. Other studies have also demonstrated a link between rates of higher education and the creation of new businesses, lower rates of incarceration, higher rates of volunteerism, and greater voter participation (Williams and Swail, 2005). OECD's (2005) review of recent studies on the effects of education on economic growth concludes that a one-year increase in the average level of educational attainment leads to a one percentage point increase in the rate of growth. However, it is possible that the increase is not as strong for countries whose level of educational attainment is already high.

Estimates are that two-thirds of new jobs in Canada require some form of postsecondary education (Zeman et al., 2004). Between 1981and 2001, the number of jobs held by university graduates in the high-knowledge sector rose by 245% compared to just 31% of jobs held by high school graduates (Morissette et al., 2004). In Quebec, employees with postsecondary credentials held 40% of the jobs in 1990 but 58.5% of the jobs by 2003 (Gouvernement du Québec, Ministère de l'Éducation, 2004). In Alberta, predictions are that over the next ten years, nearly

eight in ten new jobs will require a postsecondary education (Calgary Economic Development, 2004). These national and provincial findings underscore the significance of postsecondary education for employers and the economy.

G.3 Private Benefits

The American literature confirms that the non-financial benefits of higher education include increased life expectancy, better health, improved quality of life for self and offspring, and increased social status. The literature is also definitive in illustrating the private return on education as a higher income and a reduced incidence of unemployment (Williams, and Swail, 2005). There is no research on non-economic private benefits in Canada.

G.3a Employment returns

Existing Canadian research on returns from postsecondary education demonstrates that postsecondary credentials make a significant difference in employment and unemployment rates. Allen et al. (2003) found that postsecondary graduates were more likely than secondary school graduates to be employed. In addition, though employment rates for university and college students two years after graduation were the same, higher unemployment rates were observed for college graduates than university graduates five years after graduation. A Newfoundland and Labrador study also found that graduates of two- and three-year college programs (93% versus 83%, respectively) were more likely than graduates of one-year college programs to be employed (Government of Newfoundland and Labrador, 2003).

Hansen's (2006) analysis revealed that the unemployment rate advantage of university over non-university graduates diminished in the 1990s, such that by 2000 the difference all but disappeared. In addition, Hansen found that job satisfaction among female college graduates was actually higher than among female university graduates. Male university graduates were more satisfied with their jobs than were male college graduates in 1995, but this difference diminished by 2002.

With the exception of Hansen's (2006) examination of job satisfaction, the research on returns is lacking in the area of job quality. Future research should examine improvements in the quality of work such as a better work climate, better job stability, more autonomy, more interesting work, better advancement opportunities, better benefit packages, and more flexible hours.

G.3b Earnings returns

The pursuit of higher levels of education can be viewed as an investment in human capital. Human capital includes the skills that individuals acquire through education, training, or experience. The higher the human capital, the greater the earnings in the labour market. The gap in earnings in favour of university or college graduates in comparison to secondary school graduates is called an "education premium." The education premium from a university education is observable in all OECD countries, with the premium in Canada ranking in 10th spot

among the 19 countries reporting on the earnings advantage of education (OECD, 2006b).

The education premium from a university or college education is consistently observable across studies (Warren, 2003; McMullen, 2005; Hansen, 2006, Statistics Canada, 2006), although, as noted by Hansen, returns are highest in Quebec and lowest in the Western provinces. Financial rewards from a university education are found to benefit females more than males in 10 OECD countries (CMEC, 2006a).[27] This gender gap has also been observed in Canada for both university (Hansen, 2006) and college (Allen et al., 2003), though there is some evidence that the gender gap is closing (Boothby and Drewes, 2006).

University returns are also found to be higher than college returns (Allen et al., 2003) and higher among those graduating from a 3-year college program than a 2- or 1-year program (Government of Ontario, Ministry of Training, Colleges and Universities, 2005). Although the research on the return on trade school education is less abundant, Boothby and Drewes (2006) found the earnings premium among those with a trade certificate to be only marginally higher than those with a secondary school diploma.[28] Curiously, the same authors also discovered (as did Ferrer and Riddell, 2002) that the earnings premium from the combination of college and university is lower than from a university degree alone.

A study of the education premium among adult graduates (defined as those who had worked for at least one year prior to participation) showed significant gains from obtaining a postsecondary certificate.

We need to remember that these findings report averages and that not all postsecondary graduates benefit equally. For instance, one study reviewed by de Broucker (2005b) found that one-third of college and university graduates worked in low-skilled occupations. Other research has documented the significant differences by program of study. Generally, this body of work shows that the education premium is highest for health, engineering, law, computer science, math, physics, and business/commerce and lowest for arts, humanities, agriculture, and biology (Gouvernement du Québec, 2005; Hanson, 2006; Finnie and Frenette, 2003). Finnie and Frenette (2003) find these differences in fields of study to hold even after controlling for work experience. Boothby and Rowe (2002) find that the differences in education premiums within fields of study were greater than those found between fields of study. The authors thus conclude that postsecondary education is not a guarantee of a successful outcome for all programs. Such variability in outcomes also has implications for the ability of graduates from different programs to pay off student loans.

In fact, for the most part, it appears that the education premium in Canada decreased in the 1990s

[27] It should be understood that this does not mean that female graduates earn more than male graduates, but that the difference in earnings between female postsecondary graduates and female high school graduates is greater than the difference between male postsecondary graduates and male high school graduates.

[28] According to the authors, the negligible earnings premium among trade school completers may explain the low rates of participation in these fields and the subsequent and widely acknowledged reported skill shortages in the trades.

(Gouvernement du Québec, 2000; Hansen, 2006; Burbridge et al., 2003 (as cited in Hansen); Emery, 2004).[29] This finding is in sharp contrast to trends in the United States in which the education premium was found to increase during the same period (Burbidge et al., 2002). As noted by Morissette et al. (2004), the American university/non-university weekly earnings ratio increased from 1.3 in 1981 to almost 1.8 in 1999 for men. From 1981 to 2000, the corresponding ratio remained almost unchanged in Canada. And while the education premium for American female university graduates increased, it has actually fallen in Canada.

Morissette et al.'s (2004) examination of education returns in the high-knowledge industries found that an increase in the university premium in this industry was not because of increases in earnings among university graduates but because of a drop in real earnings of 20% among secondary school graduates. Therefore, the increase in the size of the earnings gap between young male university graduates and secondary school graduates working in the same industry cannot be attributed to an increase among university graduate earnings, but to the bottom dropping out of earnings for young male high school graduates.

As for changes in the earnings premium across disciplines, Hansen (2006) found the university earnings premium increased in most fields in the 1990s, except in engineering and fine arts. The author suggests that since the timeperiod coincides with an increase in university graduates from these two disciplines, the university earnings premium follows the laws of supply and demand. Others have also drawn upon basic economic supply-demand theory to explain the diminishing education premium. [30]

G.4 Return on Investment (Cost benefit analyses)

Returns on investment to private participants in Canada are calculated to be the third lowest among the OECD countries reporting (CMEC, 2006). Within Canada, we located few studies on the topic. For public returns on investment, a Quebec study found that graduates contribute a much higher amount of taxes than do non-graduates; during his lifetime, a male with a bachelor's degree might pay $770,000 more in taxes than a male who graduated from secondary school. The authors conclude that a bachelor's degree is profitable for both the state and the individual, and that public investment in postsecondary education is worthwhile (Gouvernement du Québec, 2005).

G.5 Summary and Knowledge Gaps

Canadian research shows a wide range of benefits, notably in earning power, accruing from

[29] In a later Quebec study, however, a small upward and recent trend in the rate of return was detected (Government du Quebec, 2005).
[30] See Burbidge et al (2002) for a more thorough discussion of the various explanations of why financial returns for university have decreased.

higher education, which would justify both individual and public investment. This earning power does not hold for all disciplines or for those working in all industries. It is possible that diminishing returns have occurred because of an increase in the supply of graduates. However, we have very little information on the cause of this change, partly because existing models of research rely primarily upon snapshot data and give no basis for establishing cause.

A more definitive model of the benefits of higher education would involve the examination of how much of the difference in earnings between degree and non-degree earners is a result of education and not other factors such as what made graduates pursue postsecondary studies in the first place or whether students from low-income backgrounds gain the same earnings premium as those from other backgrounds. This would entail the use of longitudinal data such as that from the Youth in Transition Survey.

Other gaps in this area of research include determining whether financial returns hold equally across all provinces and an examination of returns from earning a professional or graduate degree.

H. PERCEPTIONS OF BARRIERS, COSTS, AND POSTSECONDARY RETURNS

H.1 Introduction

This review of postsecondary affordability has so far covered actual costs (Section E), actual funding (Section F), and actual returns (Section G). In this section we take a look at each of these components from the perspective of the public. It's important to understand the public's perceptions of the cost of postsecondary education, the benefits that accrue from completing a program, and the availability of financial support because these views inform their decisions to attend or not attend. The following material reveals a substantial gap between these perceptions and reality and suggests how misperceptions can be a barrier to participation.

H.2 Perceived Financial Barriers to Participation

A review of the literature shows that while financial barriers prevent some students from even beginning to participate in postsecondary education, these barriers are less important in the decision to drop out.

When looking at recent secondary school graduates, we find that finances are either the most often cited barrier or the main perceived barrier to participation. Ipsos-Reid (2001) found that 44% indicated that high tuition fees and other costs prevented them from attending; Foley (2001) found that the main reason cited by the largest proportion of recent secondary school graduates for not embarking on postsecondary programs was that "they did not have enough money;" Barr-Telford et al. (2003) also found that finances were the most common reason for not going on to postsecondary education (39%). In a survey of 2002 New Brunswick high school graduates, financial reasons were cited by 58% of non-attenders; 51% specified they were unable to get enough money to attend, and 39% noted that the program they wanted was too expensive (Market Quest Research, 2005).

When examining the perceptions of dropouts from postsecondary education, financial barriers had less influence. Lambert et al. (2004) found that, although financial considerations played a role in their decision to drop out, the primary reasons provided for non-completion were problems with program- or person-fit. Results from a survey conducted by the Government of Newfoundland and Labrador (2003) showed that just 10% left primarily because of finances; in the aforementioned New Brunswick survey, no financial reasons at all were provided (Market Quest Research, 2005). Folley (2001) also found that while 26% of those who did not participate in postsecondary education gave finances as the reason, only 9% of those not completing postsecondary education gave the same reason.

Lambert et al. (2004) found that youth who reported their financial situation as the main barrier to pursuing higher education in 1999 were slightly more likely to have dropped out by 2001 than youth who did not cite financial barriers (34% compared to 29%).

Although we do not have an explanation for the different perceptions between non-attenders and leavers of their financial barriers, it may be that the decisions of the leavers are based on actual costs while the former are based on perceived costs; as shown in the Section H.5, some students' perception is that the costs are much higher than they actually are.

It is reasonable to assume that financial considerations are more significant barriers to participation in postsecondary education among low-income individuals. We do not, however, have any direct evidence of this since none of these studies looked at their results by income levels. Findings from a 2004 Ontario university applicant survey suggest that the decision to live at home while attending postsecondary programs is partly rooted in financial concerns and is also related to income. As family income declines, the number of respondents who plan to live at home increases because they could not otherwise afford a postsecondary education (Acumen Research, 2006).

H.3 Student Aid Awareness

For the Canadian system to be effective in making postsecondary education more affordable, students and parents must be knowledgeable about what is available. Most of the evidence suggests that there is considerable room for improvement on this front.

First, research shows that parents tend to overestimate non-payable contributions and underestimate repayable contributions. Although 29% of parents with children who plan to attend postsecondary programs expected them to receive grants or bursaries, just 15% of respondents in the Postsecondary Education Participation Survey (PEPS) actually received such funding. A further 40% expected their children to receive a merit-based award, although only 15% actually received one. In contrast, only 11% expected to use repayable loans from banks, family, or friends, but 27% did so (Shipley, 2006). Other surveys show that the discrepancy between expectations and reality may be even higher. A CMSF (2006a) national telephone survey of parents of secondary school students conducted in 2003 found that 66% expected their children to receive scholarships and 64% expected them to receive government loans or grants. The students also overestimated to a significant degree their chances of obtaining financial support; 73% expected scholarships and 59% expected to receive government loans/grants (CMSF, 2006a)

These discrepancies reveal a lack of knowledge about the student aid system. The 2004 Ontario University Applicant Survey found that over half of the respondents knew little or nothing about financial aid programs. Most were familiar with provincial student loans and scholarships, but only 40% were somewhat knowledgeable about federal student loans. Fully one-third had no

knowledge of the Canada Millennium Scholarship Foundation's programs. Still, knowledge of student loans increased with the age of the respondents, and was highest among those whose family incomes were more than $90,000 (Acuman, 2006). Similarly, an Ipsos Reid (2001) study of secondary school graduates in 2000 found that 1 in 5 respondents could not identify any type of government financial assistance. And only 54% of secondary school students who planned to apply for a student loan reported that they knew something about student loans, and 14% said they knew a fair amount.

Parents of future students were also unaware of certain aspects of student aid. The COMPAS (2005) survey revealed that only 31% of parents knew that the interest paid on a student loan was tax deductible; the majority (77%) said that they had not received any information from the government regarding student financial aid.

Lack of information about student aid may be viewed as a barrier to access, especially when we consider that knowledge about forms of student aid is lowest among low-income families (COMPAS, 2005). Yet, we have not yet established with empirical evidence the extent to which this lack of knowledge deters participation.

H.4 Debt Aversion and Participation

Debt aversion can be viewed as a type of financial barrier. To the extent that potential students are interested in attending postsecondary, but are averse to accumulating debt through student loans, this primary form of student assistance will have little effect in making postsecondary education affordable among those who most need assistance.

Several recent British studies support the view that debt aversion is a deterrent to attendance.[31] Callender and Jackson's (2005) analysis found that low-income respondents from a survey of prospective students were not only more debt averse than others, but this aversion was a greater deterrent for the low-income group than for other groups. Another British, study found that nearly three times as many non-entrants as entrants thought it was not worthwhile getting into debt to earn a degree. Another group of British researchers who conducted a series of focus groups found clear evidence of such debt aversion particularly among young people who were unsure or undecided about going to university, but this finding did not emerge among middle income and upper income groups (Foskett, Roberts, and Maringe, 2005).

Though the concept of debt aversion is often raised in policy and research papers on postsecondary education affordability, supporting evidence that it deters participation is fairly thin in Canada. Much of the evidence confirms the presence of debt aversion among some individuals; however, without comparing debt perceptions between attenders and non-attenders,

[31] In the United Kingdom., student loans are now the main source of funding, coinciding with the phasing out of grants.

we cannot establish it as a causal factor in the decision to not attend. The research tends to look at debt aversion among participants only or among non-participants only, but not both in the same study. For instance, a 2004 Ontario University Applicant Survey Report found that 53% of the total sample of future students indicated that they were "very concerned" about the amount of debt they would incur over the course of attaining their degree, and their concern increases as their expected debt load increases. A study by the Government of Newfoundland and Labrador (2002) found that female graduates of secondary school were more concerned with debt than were male graduates.

Fear of debt was also more of a perceived barrier among those (72%) whose parents had attained less than secondary school education compared to those (47%) whose parents had some postsecondary education. Of those citing financial barriers to participation, about two-thirds reported a lack of financial resources and a fear of debt as barriers. The 2001 Ipsos-Reid Survey found that among recent secondary school graduates not attending postsecondary education, 29% were concerned about their ability to repay a student loan. A Market Quest Research Group study found that, of those citing financial reasons as having a major or minor impact, 70% indicated fear of debt as an influence on their decision. Similarly, 49% of secondary school seniors cited fears about going into debt (CMSF, 2006a).

Being concerned about debt is understandable, but concern alone isn't necessarily a barrier to attendance. Perhaps the most direct evidence of the null effects of debt aversion on participation was found by Finnie and Laporte (2003), in which only 6.6% of non-attenders said they did not go because they were not willing to take out a student loan. While these studies suggest that some individuals are worried about accumulating debt, they tell us little about the causal relationship between debt aversion and non-attendance. A more complex study using field experimental methods from 900 adults aged between 18 and 55, however, concluded that "debt aversion is not a barrier to investing in higher education" (Eckel et al., 2006).

More research on this topic is required, and since lower-income students are more likely to accumulate debt, it is important to make them the focus of any future research.

H.5 Perceptions of Cost

Even when there is financial aid available, the cost of higher education is believed to deter some low-income individuals from participating. To what extent do their perceptions of costs resemble the actual costs?

The American research shows that most Americans overestimate the cost of tuition (Ikenberry and Hartle, 2001 and Chapman 2003). Horn, Chen, and Chapman (2003) found that potential students and their parents, both overestimated the cost by roughly 70% (as cited in Usher, 2006a).

Canadian data bear out these findings. In two studies commissioned by CMSF, both parents and

prospective students overestimated tuition costs (CMSF, 2006a); 60% of prospective students said it would be over $8,000 a year — about twice the actual cost (CMSF, 2006a); parents also overestimated the cost by about double the actual cost (estimating $7,717 compared to the actual $3,737 in that year). Notably, tuition estimates were found to be highest among parents having less education and among those earning lower incomes (COMPAS Inc. 2005).

Two Ipsos-Reid surveys also demonstrate that both secondary school graduates and the general public overestimate the costs. A 2001 study of Alberta secondary school graduates found that respondents overestimated the costs of university by 49% and the costs of college by 88%. Respondents also expressed concern about their inability to attend because of escalating costs; 68% agreed that tuition levels made them concerned about their ability to afford postsecondary education and 63% thought that postsecondary education was getting too expensive for "people like me." This research suggests that perceptions of inflated costs deter postsecondary participation.

Using data from the latter 2003 Ipsos-Reid survey of the general Canadian public, Usher (2005b) shows that low-income earners were the most likely to overestimate the costs; whereas those earning $30,000 or less estimated the average cost at $6,834, the rest of the respondents provided estimates much closer to the actual costs, that is, roughly $4,900 compared to the actual cost of $3,749. Interestingly, respondents in Ontario, where average tuition fees are relatively high, tended to overestimate the costs more than other Canadians. This suggests that the higher the costs the greater the likelihood of overestimating them. Females and older respondents (over 55) also tended to overestimate the costs the most, on average.

Results from the Ontario University Applicant Survey show large differences in total cost estimates for the first year of university between those intending to live at home and those not intending to do so; $8,891 among those planning to live at home compared to $14,612 among those planning to live elsewhere. Estimated costs rose gradually as household income increased, although the difference between the top and bottom income quartiles was not great (approximately a 10% spread) (Acumen Research, 2006). In contrast, both Usher (2005b) and a CCL (2006) Canada-wide public opinion poll found that overestimates of costs increased as family income decreased. Hence, the most cost-sensitive individuals are precisely the same individuals who believe the costs to be higher than they actually are.

Given the congruency between estimated and actual costs, it is not surprising to find that many individuals report not knowing much about the costs nor do they tend to make a concerted effort to find out. For instance, Brunson et al.'s (2002) qualitative discussion with 23- to 26-year-olds revealed that none of the 62 participants had researched the costs nor the financial aid programs. One third of students in their final year of secondary school who were planning on continuing their studies reported not knowing at all how much tuition would cost (CMSF, 2006a). The 2001 Ipsos-Reid Alberta survey also found that secondary school graduates were generally not very aware of financing options, especially those provided by government.

It should follow that parents who overestimated the costs before their children attended postsecondary would report on subsequent surveys that they had indeed overestimated the costs because they would be using actual costs in their responses. The results of the EKOS (2006) survey of parents are somewhat surprising in this regard. One-third of the parents found that their children's expenses were actually higher than they anticipated, and only 3% said they were less than expected. We have no explanation for this contradictory finding.

The gap between estimated and actual costs suggests the importance of ensuring that prospective students and their parents better understand the elements of financing postsecondary education or training (CMSF, 2006a). An overestimation of the costs represents a hidden barrier to postsecondary education, most notably if it correlates with other social or economic background characteristics.

H.6 Perceptions of the Returns on Investing in Education

Most Canadians from all types of backgrounds underestimate the return for investing in a university degree or a college diploma. As Usher (2005b) concludes, although Canadians may not grasp the full extent of the economic benefits, they do grasp the career and other social benefits.

The parents of prospective students also underestimate the potential earnings of a university graduate (by an average of $25,000 per year), with a notable 21% reporting that a university graduate will earn less than a graduate from secondary school while 2% state that university graduates earn in excess of $150,000 more than secondary school graduates. Excluding these two extreme groups, the financial advantage estimated by parents averaged just over $14,000. Though still far from the actual returns of $27,000, this is somewhat higher than that found in the 2003 Ipsos-Reid public poll, suggesting that parents of prospective students have a somewhat better grasp of the financial returns on a university education than does the general public, (COMPAS, 2005).

Women, who have a greater return on postsecondary education than do men (see Section G.3b), also participate in postsecondary education at higher rates than do men. Between 1994 and 1998, enrolment of males decreased by 3.5% and enrolment of females increased by 3.3% (Hansen, 2006). We explore more fully in the next section just how the estimated rates of return for the investment affect decisions to participate in postsecondary education.

H.7 Cost-Benefit Analysis (Perceived and Actual)

In this section, we look at price constraints, also referred to as return on investment or cost-benefit analysis. Do Canadians weigh the costs against the returns when making postsecondary education choices? Are the perceived costs worth the perceived benefits of attending? How do prospective students make their decisions about postsecondary education? In making such decisions, let's assume that individuals also consider what they will lose by attending. "Opportunity costs" refer to the dollar value of income foregone while attending. As the returns from postsecondary education increase, it stands to reason that the "opportunity costs" will matter less in the decision making. Hence, the benefits of attending must outweigh both the perceived real costs and the perceived opportunity costs. Although we have no direct information on what prospective students believe their opportunity costs to be, we do know that youth often state "the need to earn money" as a reason for not attending, and we know also that this need increases with age (Myers and de Broucker, 2006). O'Heron (1997) suggests that lower-income youth may be more sensitive to shifts in the job market, preferring employment earnings in the short term when job opportunities are abundant over investing in a postsecondary education. Hence, for attendance to be attractive, both adults and lower-income youth need to have higher perceptions of the returns to offset the higher opportunity costs.

In Canada, Brunson et al.'s (2002) in-depth interviews with 62 young adults across the country revealed two main sets of attitudes toward the costs and benefits of postsecondary education. There were those who felt they could not afford to attend and those who felt real costs (tuition, living expenses, and debt accumulation) and opportunity costs (lost income while attending) were not worth the benefits of attending (returns). In other words, while some individuals simply felt that postsecondary education was too cost prohibitive, others chose not to attend based on their full cost-benefit analysis. These findings suggest that at least some individuals conduct an analysis based on education costs, opportunity costs, and returns when making postsecondary education decisions.

Results from the COMPAS (2005) survey also indicate that at least some parents make participation decisions for their children by performing a cost-benefit analysis. A factor analysis of decision-making patterns revealed that parents either viewed higher education as an expensive investment with uncertain benefits (cost-benefit) or as a necessity with inherent value. The former group tended to focus on the notion that their children would have to work hard and take out student loans in order to pursue postsecondary education. Education was viewed as valuable only if their child chose a field that would lead to a good job with a good salary. Those parents who saw higher education as a necessity tended to view it as worth the time and money because it was necessary in today's economy. The results also show that more parents viewed postsecondary education as inherently worthwhile, though low-income individuals were more highly represented among the group viewing education by comparing the costs with the returns. This same group of parents, moreover, were less likely to have children who were planning to attend university. Hence, the cost-benefit analysis of lower-income parents is more likely to not result in participation.

Since real and perceived costs and returns differ significantly, Usher (2005b) argues that one needs to conduct a cost-benefit analysis using perceptions rather than reality in order to gain insight into the higher education decision-making process. Usher calculates the actual cost-benefit over a 35-year period to be nearly $2.5 million (financial benefits minus actual costs minus opportunity costs), whereas he calculates the perceived cost-benefit to be less than $500,000. Thus, Canadians underestimate the lifetime returns from university attendance by a full $2 million. The author further finds that since more lower-income Canadians tend to overestimate the costs and underestimate the returns, their cost-benefit analysis actually results in a negative number. Although not accounted for in the model, the cost-benefit analysis conducted by Usher (2005b) shows that low-income individuals are making rational decisions not to attend postsecondary education.

Given the COMPAS (2005) findings that low-income parents are more likely than others to make their decisions using a cost-benefit analysis (rather than a social benefit analysis), the combined results suggest that perceived education costs and returns are more important for low-income individuals, not just because they overestimate costs and underestimate returns but because they are more likely to consider both financial factors when making postsecondary education choices. The studies again reinforce the importance of widely disseminating accurate information on the costs and benefits of a postsecondary education.

One alternative view is that parents' limited knowledge of tuition costs, the student aid system, and the return on education is precisely because they are not making postsecondary education decisions based on these considerations. The COMPAS (2005) finding that many parents evaluate the worth of postsecondary education based on its intrinsic merits helps make a case for a non-economic decision-making model. Hence, while the economic studies contribute significantly to our understanding of the many ways that finances play into how individuals perceive the affordability of postsecondary education, we are far from having a full understanding of the relative influence of any one financial variable, whether it be costs or returns, nor do we know to what extent a cost-benefit equation plays into people's decisions. As noted by Looker and Lowe (2001), the pervasiveness of the price-response economic decision-making model has perhaps taken us as far as it can and it is time to draw upon social-psychological theories to study financial barriers.

H.8 Summary and Knowledge Gaps

Perceived financial barriers deter participation and influence the decision to attend college over university. We have no direct evidence, however, that such perceptions are a greater deterrence among lower-income families. Though debt aversion has been established in the United Kingdom, our understanding of the causal role of debt aversion on participation in Canada is weak, especially in how it may affect lower-income and older individuals. This research area would benefit from longitudinal data.

Public misconceptions about the costs, returns, and availability of financial aid for higher education is a well-established finding that may have strongest implications for access among low-income groups. Whether accurate or not, perceptions play a role in postsecondary decision making. Students in the greatest need are the most likely to overestimate the costs and underestimate the returns, and they tend to have the least information about available funding support. Marketing research may be the most beneficial at this point to determine the best methods of disseminating accurate information to the public, whether through various media formats to career counsellors, teachers, secondary school students, or parents.

The education planning process is also a bit of a black box. Though rational economic models further emphasize the existence of a reality-perception gap, they do not account for the constraints of individual circumstances or the effects of conditioned belief systems on the decision-making process. Nor do we have an understanding of the relative weight attached to each component of a cost-benefit analysis. How much do future earnings versus costs versus opportunity costs versus debt aversion bear on the decision to attend? Is enrolment more strongly affected by the labour market than by costs?

The few qualitative studies shed some light on the planning process, but the precise role of perceptions in postsecondary planning is still unclear. How, and at what stage, do perceptions and knowledge about costs, returns, and financial aid influence decision making? Why, exactly, do lower-income individuals estimate costs and returns differently from others? And why are they more likely to use a cost-benefit analysis and undervalue the necessity of participating while adhering to a strong education ethic? How, exactly, do socioeconomic differences in educational values play into the planning process?

I. POSTSECONDARY ACCESS AND AFFORDABILITY FOR UNDER-REPRESENTED GROUPS

I.1 Introduction

An increasingly diverse school-age population (CMEC, 2005) combined with the growing demand for a skilled labour force have raised awareness among researchers and policy makers of the importance of understanding access and affordability issues for traditionally under-represented populations. Although the literature has increased on the barriers to participation that rural Canadians and Aboriginal Canadians face, surprisingly little research touches on the barriers experienced by single parents, persons with disabilities, first-generation students, and visible minority youth. The main research findings for each of these groups are summarized in the following sections.

I.2 Rural Canadians

The extent to which geographical location poses a significant barrier to postsecondary participation varies by region. The barriers facing residents in the three northern territories are geographical as well as cultural, social, and economic, and the rate of participation in postsecondary studies by youth from these areas is far below the national norm (Yukon Government, 1998). In fact, the low levels of elementary–secondary education attained by the majority of northern residents in small, isolated, and Aboriginal communities is of great concern (Government of Northwest Territories. 2005).

Students in Saskatchewan, Nova Scotia, and New Brunswick are the most likely to relocate in order to attend a postsecondary institution (EKOS, 2006). However, the financial burdens of relocating are compounded by inadequate financial aid to rural students; both issues are also identified as significant barriers for rural youth in Manitoba (Council on Post-secondary Education, Manitoba, 2002). In contrast, in Alberta and British Columbia, rural students are the least likely to relocate (EKOS, 2006) because there are more community colleges in rural areas and they are highly integrated into the university transfer system (Krahn and Hudson, 2006; Andres and Looker, 2001).

The research is in general agreement that youth from rural regions are under-represented at the university level but not at the college level (Frenette, 2002; Rahman, Situ and Jimmo, 2005; Looker, 2002; Government of Newfoundland and Labrador, 2003; Bustling, 1999 cited in Hemingway, 2001). The reasons for disparity at the university level include socioeconomic status, parental attitudes and expectations, the availability of colleges in rural areas and the influence of community norms and the requirements of the local labour market.

Looking at socioeconomic status, Frenette (2002) demonstrates that youth living beyond commuting distance to a university are 58% as likely as urban youth to enrol in postsecondary education, and that youth living beyond commuting distance but with higher-income background are 5.6 times more likely to participate than their lower-income counterparts. Frenette's overall conclusion is that the higher costs associated with relocation and independent living, which can average an additional $5,400 per year (Barr-Telford et al., cited in Frenette, 2007), constitute the most significant barrier preventing rural youth from enrolling in university(Frenette, 2002, 2003, 2007).

Cultural attitudes and parental expectations are also strong predictors of postsecondary participation among rural youth (Anisef et al., 2003; Foley, 2001). Controlling for income, the data from the Survey of Approaches to Educational Planning (SAEP) [Statistics Canada, 1999] reveal that rural parents are less likely than urban parents to expect their children to participate in postsecondary education; 57.5% of rural parents expect their children to attend university (compared to 75.4% of urban parents), and 29.7% expect their children to attend a community college, a CEGEP or training in one of the trades (compared to 19.1% of urban parents; Anisef et al., 2003). In addition, the aspirations of rural youth are found to be influenced by the educational requirements and earnings capacity of the local job market (de Broucker, 2005). American and Australian researchers also show that family attitudes toward higher education are as important as financial considerations in influencing youth from rural communities to participate in postsecondary education (Hu, 2003; James, 2002a, 200b, 1999).

The decreased likelihood of parental savings combined with the costs of relocation and living away from home contribute to the increased uptake of government student loans by youth from rural locations (BC Stats, 2004; Government of Newfoundland and Labrador, 2003; Kirby and Conlon, 2005; EKOS, 2006); other factors are their lower socioeconomic backgrounds and an older age demographic. Another finding is that rural youth have lower levels of parental support. In Newfoundland and Labrador, for example, just 37% of rural students among the high school graduates of 2001 who went on to postsecondary studies reported financial support from their parents, compared to 50% of urban students (Government of Newfoundland and Labrador, 2003). Lower use of parental support may be due in part to lower average household incomes in rural areas (Anisef et al., 2003). It has been shown that rural parents save less for their children's education, which some suggest is associated with lower parental expectations (Anisef et al., 2003).

To the extent that rural youth tend to have lower-income backgrounds, we can rely on the broader literature examining the influence of family income on participation (see Section D.3). What remains relatively unclear, however, are the combined effects of low-income, high costs of relocation and independent living, and familial and community/cultural attitudes toward the costs and benefits of postsecondary education for rural youth.

Jurisdictional initiatives to increase delivery options in rural communities through increased

funding of institutions of higher education (e.g., Government of Saskatchewan, 2001; Government of Ontario, 2006b, 2006c) will clearly reduce access barriers for those youth who want postsecondary education and/or training at a community college or community-based technical or vocational institute.

I.3 Aboriginal Status

The rates of participation by Aboriginal youth in postsecondary education have increased over time from 33% in 1981 to 38% in 2001 (Clark, 2003) but remain substantially below the national average (Clark, 2003; O'Donnell and Tait, 2003, Government of British Columbia, 2002b). Disparities are most evident in college and university enrolments. Aboriginal youth are more likely than non-Aboriginals to have attained a trade certificate (16% compared to 13% in 2001), 15% of Aboriginals compared to 18% of non-Aboriginals had attained a college credential and 8% of Aboriginals compared to 23% of non-Aboriginals had attained a university credential in 2001 (Clark, 2003). Although Aboriginals constitute only 3.3% of the total Canadian population, in Manitoba, they make up 13.6% of the province's population and 17% of college graduates and 9% of graduates with a bachelor's degree (Vaillancourt, 2005). A study (Heslop, 2006) of British Columbia's secondary school graduates of 2003-04 found that only 4% of Aboriginal students transitioned to university studies after high school, compared to 18% of non-Aboriginal high school graduates.

According to the literature, poverty and a high rate of failure to complete secondary school are the main barriers to participation by Aboriginal youth in postsecondary education (CPRN, 2002; R.A. Malatest and Associates Ltd., 2002; Mendelson, 2006; O'Donnell and Ballardin, 2006). Although for all Aboriginals the rate of failure to complete secondary school declined between 1996 and 2001, this was found to be primarily among Inuit and Métis populations; the rate for the North American Indian population remained unchanged (O'Donnell and Tait, 2003). Most Aboriginal males cite the need or desire to work, and most Aboriginal females cite the need to care for dependent children as their main reasons for not completing secondary school (O'Donnell and Tait, 2003).

In the 2001 Aboriginal Peoples Survey, the main reasons provided for not participating in postsecondary education were family obligations (24%) and financial considerations (22%) (O'Donnell and Tait, 2003). In addition, barriers to postsecondary participation for Aboriginals include their legacy of distrust of mainstream institutions, reluctance to leave the home community, and a lack of relevant programming (CPRN, 2002).

When Aboriginal Canadians do participate in postsecondary education, they are much more likely than non-Aboriginals to delay their transition after high school (Holmes, 2005; Government of British Columbia, 2002b; O'Donnell and Tait, 2003; Vaillancourt, 2005; Heslop, 2006; CPRN, 2002). Of the 2003-04 secondary school graduates in British Columbia, only 40% of Aboriginal graduates compared to 51% of non-Aboriginal graduates transitioned immediately

to postsecondary education (Heslop, 2006). As a result, Aboriginal postsecondary students are more likely to be older than the average student, to have spent time in the labour force, to have dependent children, and to be in spousal relationships (R.A. Malatest and Associates Ltd., 2002, 2004; Holmes, 2005; Vaillancourt, 2005). As with older students generally, the persistence rates of Aboriginal students are lower than average (CPRN, 2002; Holmes, 2005).

Aboriginal postsecondary students are also more likely than non-Aboriginal students to have to relocate from rural or remote areas, which necessitates additional costs. Aboriginal postsecondary students are also more likely to be single parents, to have disabilities, and to have low-income backgrounds (Holmes, 2005).

Inadequacies and inefficiencies in student financial assistance programs also contribute to the disparity in Aboriginal postsecondary participation. Research by R.A. Malatest and Associates (2002) suggests that other factors contribute to lower participation rates: first, Métis, non-Status Indians, and Bill C-31 Aboriginal individuals[32] are excluded from the federal Post-Secondary Student Support Program (PSSSP) funding[33]; second, one-year programs, training in one of the trades, computer studies, and upgrading are excluded; third, there are restrictions on the choice of institution and the age of the student. Indeed, when PSSSP funding is the main source of income, research shows that it covers only 48% of students' financial needs per academic year, and yet, these recipients of PSSSP funding are not eligible to obtain government student loans (R.A. Malatest and Associates, 2002).

The distribution of PSSSP funding through Indian bands may cause problems because funding is competitive and at the discretion of the band. Individuals such as Bill C-31 Indians who lack strong ties to a band are seldom selected. Band-distributed funding is unpredictable because it is not guaranteed for the length of the program or may be delayed; students may run out of money either part way through their program or even at the beginning when start-up costs are high. Some bands require students to participate in a minimum number of courses or hours per week, or they terminate funding when the student takes a leave of absence. Both scenarios are common among older students. Those students ineligible for PSSSP funding can apply for government-funded student loans, though this money may not to cover the costs of relocation, family housing, and child care. The literature does not document whether Canada Study Grants compensate for insufficient funding in the form of student loans.

The non-Aboriginal student population relies rather significantly on familial financial support, but few Aboriginal students can rely on parental financial support (Government of British Columbia, 2002b) because of the prevalence of low-income families, and the older age demographic. This lack of familial support combined with the inadequacies and inefficiencies identified in the system of student financial aid pose significant barriers to Aboriginal

[32] Those achieving Indian Status through changes to the Indian Act of 1985

[33] Note that postsecondary education is fully funded for residents of the Northwest Territories and partially funded for residents of the Yukon.

postsecondary participation, and may also lead to greater reliance on non-government loans. Comparing the sources of funding for Aboriginal and non-Aboriginal students with data from the 2002 Canadian Undergraduate Student Survey and the 2002 Canadian College Student Survey, Holmes (2005) found 63% of Aboriginal students accumulated debt to support their university studies, and that they were more likely than non-Aboriginal students to obtain loans from financial institutions.

A review of jurisdictional initiatives reveals an awareness of the disparities in, and barriers to, Aboriginal postsecondary participation, for example: Manitoba's 2004 Aboriginal Education Action Plan (Government of Manitoba, 2005); Learning Alberta's Aboriginal Learning Subcommittee[34] (Government of Alberta, 2006a, 2006h); and British Columbia's 2005 Memorandum of Understanding for Aboriginal Post-secondary Education and Training (Government of British Columbia, 2006a). In Ontario, Aboriginal learners can obtain increased funding through Ontario's Reaching Higher plan (Government of Ontario, 2006b). In Saskatchewan, a recent partnership between Saskatchewan Learning and the Canada Millennium Scholarship Foundation launched a four-year pilot project to provide Aboriginal low-income earners with non-repayable financial assistance (Government of Saskatchewan, 2006).

Research is still needed, however, to fully understand the cultural and economic reasons that Aboriginal youth do not complete secondary school. Little is known about what influences Aboriginal families in their decision making and financial planning for postsecondary education. The employment income and debt loads of Aboriginal postsecondary graduates do not differ substantially from those of non-Aboriginal graduates (Vaillancourt, 2005; Mendelson, 2006; Government of British Columbia, 2002a and 2002b; Holmes, 2005); and the postsecondary wage premium among Aboriginal Canadians is higher than for non-Aboriginals (Howe, 2002). However, little research is available on the perceptions among Aboriginal families of the costs and benefits of postsecondary education. Finally, further research is required to investigate the inadequacies of the student financial aid system in meeting the actual levels of need.

I.4 Single Parents

Having dependent children is a significant predictor of failure to complete postsecondary education (Tomokowicz and Bushnik, 2003; Lambert, Zeman, Allen and Bussière, 2004). When individuals with dependent children do participate in postsecondary education, they are more likely to enrol in college than in university, to study part-time, and to disrupt their studies for financial reasons (Holmes, 2005; Government of British Columbia, 2002a; Corrigan, 2003; Lambert et al., 2004). Students with dependants are less likely to rely on financial support from their own parents, and they graduate with higher-than-average debt loads and disproportionately

[34] Recommendations include increasing community-based learning opportunities, creating new Aboriginal partnerships, increasing capacity in Aboriginal colleges, and increasing grants and bursaries for status and non-status First Nations, Métis, and Inuit students.

high private debt loads in particular (Holmes, 2005; Government of British Columbia, 2002a; BC Stats, 2004).

Single parents comprised a greater share of the Canadian population in 2001 than in 1981 (16% compared to 11%, respectively); they had fewer children, higher levels of educational attainment, higher incomes, and full-time employment rates. Yet, single-parent educational attainment continues to lag behind married-parent attainment (6% of single mothers had attained a university degree, compared to 18% of partnered parents) (Galarneau, 2006). Factors in the lower rates of participation are a) higher-than-average rates of failure to complete secondary school (in 2001, more than 25% of single mothers aged 25 to 34 did not have a secondary school diploma; Galarneau, 2006) and b) the older age demographic that means these single parents are less likely than average to have access to financial support from their own parents (Holmes, 2005).

When single parents do participate, they tend to have above-average living costs, which financial assistance programs underestimate, and they cannot rely on financial support from family and friends (Butterwick and White, 2006; Reed, 2005). Their high levels of unmet financial need likely explain the lower than average persistence rates of single parents. The burden of student debt is particularly significant among single parents. Of former college students interviewed in British Columbia in 2001, single parents were the most likely graduates to report difficulties in repaying student loans (Government of British Columbia, 2002a). In their analysis of 2002 National Graduates Survey data, Allen and Vaillancourt (2004) found that graduates with dependants were less likely to have paid off their student loans.

I.5 Disability Status

Individuals with disabilities are under-represented in university and over-represented in college enrolments (Holmes, 2005; Government of New Brunswick, 2000). There is little empirical evidence of participation barriers for individuals with disabilities, although research shows that postsecondary students with disabilities tend to be older, to be female, to be in spousal relationships, and to have dependent children (Holmes, 2005: Government of British Columbia, 2002a). They are also more likely than average to use government student loans and to rely on loans from private sources (Holmes, 2005; Government of British Columbia, 2002a), a finding likely associated with their older age demographic and higher probability of having dependent children. Satisfaction with student aid appears to be somewhat lower than average; former college students with disabilities were less likely than non-disabled former students to report being satisfied with the financial aid services they received (68% compared to 75% of non-disabled former students; Government of British Columbia, 2001). Of respondents who indicated that student loan aid was “somewhat important” or “very important” to them, those with disabilities were less likely than average to indicate that their total income was sufficient to cover their education and living expenses (47% compared to 62% of the total sample). Employment and income of students with disabilities are not well documented, though a survey of former college students in British Columbia found that those with disabilities were less likely

to be employed upon graduation (54% versus 72% of non-disabled former students; Government of British Columbia, 2001).

While only a handful of studies have focused on barriers to access and affordability for persons with disabilities, most jurisdictions have developed initiatives to increase their participation, including dedicated funding to reduce access barriers (Government of Ontario, 2006a, 2006b; Government of New Brunswick, 2006); government and institutional partnership initiatives (Government of Nova Scotia, 2006); and policy and program reviews and research (Government of Alberta, 2006a, 2006b; Government of Saskatchewan, 2006).

I.6 First-Generation Students

Our understanding of first-generation student participation is garnered primarily from research on the influence of the level of parents' education more generally, discussed in sections of this report.[35] The level of education attained by one or both parents is a significant predictor of their children's participation in university, but is less a determinant of their children's participation in college (Rahman, Situ and Jimmo, 2005); as well, parents' level of education influences their expectations and their savings behaviour (de Broucker, 2005). Few research studies have examined the unique characteristics of first-generation students. In an unpublished paper presented at a Canada Millennium Scholarship Foundation symposium in June 2006, Dr. Andrew Parkin drew on data form the Survey of Secondary School Students, the High School Follow-up Survey, and the College and University Applicant Survey to identify poor academic achievement, goal fluctuation, and a lack of funding, including lack of parental savings, as the most common reasons provided by first-generation youth for non-participation in postsecondary education (Canada Millennium Scholarship Foundation, 2006b).

I.7 Visible Minority Status

Finally, although visible minority youth (excluding Aboriginal youth) are under-represented in postsecondary education, research shows that visible minority status significantly increases the odds of postsecondary enrolment (Tomokowicz and Bushnik, 2003), particularly at the university level (Frenette, 2005; Taylor and Krahn, 2005; Lambert et al., 2004). This contrasts with American data, in which visible minority youth are less likely than average to enrol in university bachelor's degree programs and persist to graduate, due mainly to disadvantages related to socioeconomic status (Swail, Redd and Perna, 2003; Coelli, 2004; St. John, 2005). In a recent Canadian study, disadvantages related to parental education and household income were found to have a much weaker impact than parental attitudes and expectations on the educational aspirations of visible minority first- or second-generation immigrant youth (Taylor and Krahn, 2005).

[35] For the purpose of this review, first generation students are defined as individuals whose parents do not have a postsecondary education.

I.8 Summary and Knowledge Gaps

The bulk of the literature on under-represented populations suggests that they tend to delay transitions to postsecondary education, enrolling at an older age. Older students in general are more likely to have dependants, to attend non-traditional institutions, and to work during the academic year (Shaienks, Eisl-Culkin and Bussière, 2006; Zeman, Knighton and Bussière, 2004). They are also more likely to experience periods of disruption and to withdraw from their program prior to completion (Zeman, Knighton and Bussière, 2004; Government of Alberta, 2006g). Older students experience higher-than-average living costs, averaging $2,000/month compared to the average of about $650 for younger students (EKOS, 2006), are less likely to rely on financial support from family (38% of students aged 26 and older receive parental support, compared to 83% of 20- and 21-year-olds; EKOS, 2006) and are more likely to finance their education through private bank loans and lines of credit (Myers and de Broucker, 2006).

Research also suggests that cultural and community norms and attitudes strongly influence postsecondary aspirations, expectations, and participation (Tomokowicz and Bushnik, 2003; Barr-Telford, Cartwright, Prasil and Shimmons, 2003; Lambert et al., 2004; Shipley, Ouellette and Cartwright, 2003; de Broucker, 2005). Existing survey data, however, are limited in explaining the importance of cultural and community influences. Given that under-represented groups cite non-financial reasons more than financial reasons for non-participation in postsecondary studies (Foley, 2001), it becomes even more important to understand attitudes and cultural forces.

The review of Aboriginal postsecondary participation revealed that funding aid is limited, but whether recent provincial initiatives will be sufficient to offset financial barriers to access, especially in accessing university, is yet to be seen.

Lastly, we have not included gender in this discussion because it is no longer on the research agenda. Female participation in postsecondary education now outpaces that of males. Indeed, the trend toward higher rates of participation by females is evident in most OECD countries. Canada's gap in favour of women, however, is one of the largest, just behind that of Norway and Sweden (de Broucker, 2005). The increase in female participation may be because women expect greater returns (as noted in Section G.3b). Hence, although males have not been viewed in the past as an under-represented group, this current discrepancy may warrant further research, especially as it relates to the benefits of participating.

J. SUMMARY OF KNOWLEDGE GAPS AND RECOMMENDED FUTURE RESEARCH

Our overall impression of the existing Canadian literature on affordability is that much progress has been made within the last 5 to 10 years. Research in the 1990s was sparse when contrasted with the literature produced by American researchers. Our review of 1990s literature revealed a number of gaps that have since been addressed (e.g., Looker and Lowe, 2001). For instance, recent research on family funding strategies has focused on the need to better understand the relative contributions of savings, work earnings, student aid, and private loans. We now have solid evidence that public perceptions deviate considerably from the facts. Also, thanks to researchers using YITS data, we have a clearer picture of the different pathways that youth choose and some of the influences on the decisions among at-risk groups either to not attend or to drop out of postsecondary education. Macro-level studies by international, national, and provincial groups examining the costs and net return on investment (perceived and actual) in postsecondary education have provided a better schematic of the relative influence of each economic component of affordability.

Still, several knowledge gaps in the literature have been noted throughout this report and summarized at the end of each major section. The primary focus of this section is to identify these gaps.

Nearly all the elements reviewed are potential barriers to participation, but we do not yet understand which are the most significant for disadvantaged groups contemplating postsecondary education. Other than debt aversion (for which we find little conclusive empirical support), unequal access to postsecondary might stem from income differences, rising costs (or overestimation of the costs), diminishing return in particular sectors of the labour market from investments in higher levels of education — or an underestimation of the return on investment in education, insufficient non-repayable student aid — or a lack of knowledge about the available student aid.

De Broucker (2005) suggests that researchers must pay more attention to all the financial factors involved in participation in postsecondary education. Addressing this knowledge gap would require survey questions designed to measure the relative weight that individuals attach in their planning process to their perception of the costs and benefits, and of the student aid available versus their aversion to taking on debt. This research could be complemented by in-depth qualitative studies to determine when the individuals begin the planning process for higher education and precisely what factors are involved. All data-gathering techniques would have to be linked also to background characteristics, among these, socioeconomic status, Aboriginal status, visible minority status, age, and other factors.

There are also knowledge gaps about some types of education, some groups, and some geographic regions. Though the research on access to college studies is increasing, we have limited information on such specifics as changes in college tuition fees over time. This information would be particularly important given the increase in the levels of debt that college students have assumed. We need to monitor more closely the escalating cost of what has been considered a less expensive postsecondary education. There is little research on the affordability of education and training in the trades and vocational institutions. Workers in the skilled trades are in short supply in the economic growth regions of the country, which suggests that this area should be placed on the research agenda.

We have also noted the growing body of literature on participation barriers facing rural and Aboriginal Canadians, but surprisingly, there is little research on the barriers experienced by single parents, by persons with disabilities, by first-generation postsecondary students, and by youth from visible minorities. Another omission in the literature is the affordability of postsecondary education for adults. Most of the data covers youth only. Although we know that adults have higher living costs, lower family support, and greater reliance on private loans, little is known about how the economic status of adults affects their participation. The implications for lifelong learning are clearly apparent in this oversight.

Additionally, graduate students, who are usually older, are virtually absent in the literature. We have no data on how the tuition costs of graduate programs have changed at a pan-Canadian or provincial level or how these costs are offset by scholarship funding, teaching, and research assistantships.[36] Although we have American data examining the return on investment for each additional year of participation, their research does not distinguish between undergraduate and graduate education. Lastly, we know that foreign students pay much higher tuition rates than Canadian citizens or permanent residents, and that foreign students comprise a significant minority of graduate students; however, we have not found any material on this group's perception of the affordability of postsecondary or graduate studies in Canada.

As for geographical coverage, studies tend to exclude the three territories altogether, presumably because each has only one college and the cost of conducting research is high in remote locations. Each province has an established practice of conducting research on subjects of current relevance in its own jurisdiction. The provinces would benefit from a national forum or data bank to share the results of their respective studies.[37] Cooperative and coordinated new research across jurisdictions is recommended. Meta-analyses of existing provincial research would help to develop a national picture and further our understanding of the unique

[36] Beginning in 2003, Statistics Canada began conducting an annual survey of doctoral graduates (Survey of Earned Doctorates; SEDS) asking about their labour market outcomes and postsecondary funding strategies. As far as we are aware, only one report has yet been published that utilizes these data. The report (Gluszynski and Peters, 2005) revealed that teaching assistantships and scholarships provided by institutions were the most common sources of funding and that 56% of respondents graduated without any education-related debt.

[37] It is our understanding that the Canadian Council for Learning, in collaboration with Statistics Canada, Edudata Canada, and Education Policy Institute, is currently compiling a catalogue of provincial and territorial education-related data sets

circumstances in each province.[38] Such a pan-Canadian compilation was carried out by Lang Research on behalf of the Canada Millennium Scholarship Foundation in 2002. This document provides a good base of comparative data. Unfortunately, the next step of using the data for analytical purposes was not taken.

Indeed, our overall perception is that many of the survey and reporting data sets have not been fully explored or exploited. Numerous provincial and pan-Canadian reports present simple results without interpretation or analysis. We have already mentioned the great potential of the data within the recent 2006 EKOS survey from which others have presented only descriptive findings.

While it is beyond the scope of this review to evaluate the quality of data, we should mention some concerns. The first is the timeliness of basic data.[39] Data for national enrolments and student loans are often outdated by the time they are released. Indeed, the delay in releasing census data is a perennial frustration for social science researchers, although they understand that the sheer volume of the data and the importance of performing a multitude of quality checks requires time.

More longitudinal data is required on the causal factors related to affordability. Researchers have already drawn heavily upon the aforementioned YITS (and PISA) data and, with the release of the third wave of YITS data, there will be greater opportunities to establish more solid cause and effect relationships.

The research covered in this literature review, however, draws primarily upon single or snapshot surveys to describe characteristics and patterns, or it employs retrospective questions to impute temporal causation. Longitudinal data on the returns from postsecondary education would permit the researchers to establish the causal effect of higher education on outcomes for the learner, by comparing the characteristics of students before and after their program, and comparing them with those who do not go on to postsecondary studies (to control for the possibility of bias in selection). Such data sets would allow researchers to gain unique insights into the effects of student aid and tuition policies that vary significantly across provinces and across time. Admittedly, the development of longitudinal data sets would be time-consuming and costly, necessitating long-term commitments of infrastructure and human resources. For these reasons, longitudinal data are rare in Canada.[40]

Lastly, two additional and much-needed research agendas are implied by this literature review. First, to our knowledge, no existing pan-Canadian body of work examines affordability from the

[38] This is not a new idea and has likely not been carried out because of the difficulties associated with assembling "apples to oranges" data which is a function of vast interprovincial differences in reporting practices.
[39] Usher has addressed some of the data gaps, and we have drawn upon his extensive data collection efforts in many sections of this report.
[40] At the time of this writing, Statistics Canada is in the early stages of developing its Canadian Household Panel Survey (CHPS), which is designed to cover a wide range of topics, including education that might address the data gaps described. Obviously such a series of surveys will provide useful data over time, but not for years to come.

perspective of government. Yet, questions relating to the costs of providing higher education and to the costs of providing student aid are clearly integral to the issue of affordability for the public and to policy and program development. For example, though policy decisions have been made with respect to the use of remission programs in favour of upfront grants -- perhaps partly based on the assumption that the former are more cost-effective – there are no existing studies examining the relative costs of these two forms of student aid.

Second, the implications of maintaining quality education under mass expansion of the system should be explored. Debates about how to measure quality notwithstanding, we know very little about the relationship between increased access and the quality of the learning experience, let alone whether quality is necessarily compromised with greater access. The CPRN has recently placed education quality on their research agenda, which is thus far an attempt to develop a conceptual framework for examining quality by delineating comprehensive measurements that will be meaningful for prospective students, institutions of higher learning, and government. We recommend that others begin to build upon the work of the CPRN.

ANNOTATED BIBLIOGRAPHY

Aboriginal Apprenticeship Projects Steering Committee. 1999. *Aboriginal participation in Apprenticeship: Making it work!* Ottawa: Canadian Labour Force Development Board. http://www.education.gov.yk.ca/pdf/aboriginalapprenticeship.pdf

This is the final report of the Aboriginal Apprenticeship Projects Steering Committee, established in 1998 and comprised of representatives from the National Apprenticeship Committee (NAC) of the Canadian Labour Force Development Board, the Canadian Council of Directors of Apprenticeship, Human Resources Development Canada, the Interprovincial Alliance of Apprenticeship Board Chairs, and the members of Canada's Aboriginal peoples.

Acumen Research Group. 2006. *Funding university education in Ontario: Ontario university applicant survey report.* Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/ouas-report_en.pdf

This report presents the descriptive findings of the 2004 Ontario University Applicant Survey. Key findings related to postsecondary affordability include financial considerations as a reason for living at home during the study period, a lack of familiarity with student financial assistance programs, and hesitation about accumulating debt.

Allen, Mary, and Chantal Vaillancourt. 2004. *Class of 2000: Profile of postsecondary graduates and student debt.* Ottawa: Statistics Canada, 81-595-MIE2004016. http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2004016.pdf

Findings from the 2002 National Graduates Survey (NGS) are presented including graduates' characteristics and backgrounds, education and employment outcomes, and management of student loan debt. Findings reveal that the class of 2000 was as likely as the class of 1995 to graduate with student loan debt, but the more recent graduates, and bachelor degree graduates in particular, owed significantly more at time of graduation.

Allen, Mary, Shelley Harris, and George Butlin. 2003. *Finding their way: A profile of young Canadian graduates.* Ottawa: Statistics Canada, 81-595-MIE2003003. http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2003003.pdf

This research uses three cycles of the National Graduates Survey (NGS) to identify the labour market outcomes and debt loads of Canadian graduates. While college graduates were more likely than university graduates to have found employment soon after graduating, a larger proportion of them were unemployed five years after graduation. Student loan debt levels were higher among university graduates than among college graduates. However, five years later, university graduates were as likely as college graduates to have repaid their debt. Overall, the percentage of both groups reporting difficulties increased between 1990 and 1995.

Andres, L., and Dianne E. Looker. 2001. "Rurality and capital: Educational expectations and attainment of rural and urban youth." *Canadian Journal of Higher Education*, 31(2): 1-45.

This study tests the effectiveness of two postsecondary systems for facilitating participation and success among rural youth. It compares enrolment and completion of studies by youth with rural backgrounds in British Columbia, where a university transfer system is intended to enhance rural participation, and in Nova Scotia, where non-urban universities are the norm.

Anisef, Paul, Robert Sweet, Gabrielle Plickert, and Denise Tom-Kun. 2003. *The effects of region and gender on educational planning in Canadian families.* Laidlaw Foundation. http://206.191.51.193/files/Effects_of_Region_and_Gender.pdf

The authors of this final report submitted to the Laidlaw Foundation used data from the *Survey of Approaches to Educational Planning* (Sweet et al. 2000) to identify rural/urban differences in parental expectations and savings behaviour. The study finds a significant positive relationship between educational expectations and saving behaviour.

Barr-Telford, Lynn, Fernando Cartwright, Sandrine Prasil, and Kristina Shimmons. 2003. *Access, persistence and financing: First results from the Postsecondary Education Participation Survey (PEPS).* Ottawa: Statistics Canada, 81-595-MIE2003007.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2003007.pdf
This article presents findings from the Postsecondary Education Participation Survey as they relate to postsecondary access, persistence, and financing. Postsecondary participation is shown to correlate positively with parental expectations, education, occupation, and savings. Non-attendees cited financial reasons and lack of fit with available programs as top reasons for not participating in postsecondary education.

Barrow, Lisa, and Cecilia Elena Rouse. 2006. "The economic value of education by race and ethnicity." *Economic Perspectives.* 2Q 2006.
http://www.chicagofed.org/publications/economicperspectives/ep_2qtr2006_part2_barrow_rouse.pdf
Data from the United States Census and the National Longitudinal Study are analyzed to determine variations in the economic benefits of returning to school by race and ethnicity, controlling for ability. The findings reveal no evidence that returns to school are lower for African Americans and Hispanics.

BC Stats and British Columbia Ministry of Advanced Education. 2005. *2005 Apprenticeship Survey: Summary Report.* Victoria: BC Stats and Ministry of Advanced Education.
http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/Apprenticeship.pdf
This report presents findings from a 2005 survey of former British Columbia apprenticeship students. Although the majority of the findings do not provide insight into the affordability of apprenticeship training, they do suggest that a significant minority of apprenticeship students relocate to take their training, and that the majority pay for their education costs out-of-pocket.

BC Stats. 2004. "Meeting the costs: Post-secondary student funding and debt." *Information Paper*. Vol. 2(2). Summer 2004. ISSN 1708-0657.
http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/issue_Finances.pdf
Findings of the 2001 and 2003 BC College and Institute Student Outcomes Surveys are compared, with an emphasis on shifts in funding sources and in student loan usage in particular following the elimination of the tuition freeze in 2002. The analysis reveals a greater prevalence of student loan usage in the 2003 sample, though future longitudinal studies are required to determine whether this is a trend over time. The findings also demonstrate greater reliance on student loans, in both survey years, among single parents and students who had relocated to attend college.

Berger, Joseph, Anne Motte, and Andrew Parkin. 2006. "Student debt: Trends and consequences." Chapter 5 of *The price of knowledge*. Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/POK_III-ch5_EN.pdf
A review of recent research reveals that debt aversion generally does not deter postsecondary participation, though a positive relationship is confirmed between size of debt load and incompletion. The majority of borrowers do not report repayment difficulties, although default rates are increasing over time. Interest relief programs are found to be greatly underutilized. The affordability of college education is called into question; compared to university students, college students are more likely to have a low-income background and lower future earnings and their debt loads are increasing at a comparatively fast rate.

Bone, Allison. 2002. "Pursuing a master's degree: Opportunity costs and benefits." *Education Quarterly Review*. Vol. 8(4): 16–27.
The report presents tuition fee changes in master's level programs between 1990–91 and 1999-2000 provided by Statistics Canada's Centre for Education Statistics. Newfoundland and Labrador, Ontario, and Nova Scotia had the largest master's level tuition increases during this 10-year period. In 1999–2000, Nova Scotia, Ontario, and Alberta had the highest tuition fees.

Boothby, Daniel, and Torben Drewes. 2006. "Postsecondary education in Canada: Returns to university, college, and trades education." *Canadian Public Policy*. 32(1): 1–22.

Using Canada Census data from 1981 to 2001, the authors compare earnings premiums between different levels of postsecondary education among Canadians between the ages of 21 and 30. Their main findings replicate most other research: university degree-holders earn more than college certificate or diploma earners, and the latter earn more than those who have completed a trade program. These gains in earnings have increased over time for all levels of postsecondary completion. The earnings premiums among those with a trade certificate are only marginally higher than those with just a secondary school diploma.

Boothby, Daniel, and Geoff Rowe. 2002. *Rate of return to education: A distributional analysis using the LifePaths model.* Ottawa: Human Resources Development Canada.
http://www11.hrsdc.gc.ca/en/cs/sp/hrsdc/arb/publications/research/2002-002365/SP-527-11-02.pdf

Using 1991 Census data, this study calculates the private rates of return to undergraduate and college education by field of study and by gender, and compares median lifetime earnings of postsecondary graduates with high school graduates. Results reveal a wide range of rates of return across fields and levels of study, with greater variation at the college than university level.

Bowlby, Jeffrey W., and Kathryn McMullen. 2002. *At a crossroads: First results from the 18- to 20-year-old cohort of the Youth in Transition Survey.* Ottawa: Human Resources Development Canada and Statistics Canada, 81-591-XPE.
http://www.statcan.ca/bsolc/english/bsolc?catno=81-591-X

The authors use data from the Youth in Transition Survey (YITS) to examine postsecondary access, persistence, and financing among Canadian youth aged 18 to 20. While parental education correlates with postsecondary participation, only parental attainment of a university degree significantly predicted participation; no positive effect was found for youth whose parent(s) had a college diploma or certificate. Youth who left their studies prior to completion were slightly less likely than those who persisted to have received parental financial support, and were less likely to have used personal savings and non-repayable financial aid.

Bragg, Debra D., Kim Eunyoung, and Melanie B. Rubin. 2005. "Academic pathways to college: Policies and practices of the fifty states to reach underserved students." Paper presented at the annual meeting of the Association for the Study of Higher Education, Philadelphia, PA, November 19, 2005.
http://www.apass.uiuc.edu/publications/ASHE2005%20APASS%20paper.pdf

This American conference paper analyzes the various ways secondary and postsecondary institutions collaborate to facilitate the transition of under-served youth to higher education. Building on the work of Eaton (1994), the authors propose five tenets of access: academic, financial, personal, cultural, and political. *Academic access* refers to high school preparation; *financial access* refers to economic circumstances; *personal access* refers to individual, family, and peer group influence; *cultural access* refers to ethnic/racial origin, religion, and language as they influence commitment to higher education; and *political access* refers to the effects of federal, state, and local government legislation, administrative rules and mandates, and funding.

Brunson, Liesette, Kerry Butt, and Yves Déziel. 2002. *Deciding about post-secondary education: Hearing the voices of non-attendees.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/cogem_en.pdf

Data from interviews with 62 young adults from six Canadian cities are analyzed for self-reported reasons for postsecondary non-participation. Of those citing financial concerns, participants tended either to view the cost of higher education as prohibitive or to perceive the returns on their investment as not justifying the cost. None of the participants had done research to obtain actual costs or find out about available financial assistance programs; many assumed that financial aid would not cover all their costs.

Burbidge, J.B., L. Magee, and A.L. Robb. 2002. "The education premium in Canada and the United States." *Canadian Public Policy*. 28(2): 203-217.
http://economics.ca/cgi/jab?journal=cpp&view=v28n2/CPPv28n2p203.pdf

Using data from the Survey of Consumer Finances (1981 to 1997), this study examines whether the education premium, defined as the ratio of university graduate earnings to secondary school graduate earnings, has

increased in Canada over the past two decades to the extent observed in the United States. Results show that the Canadian education premium has, in fact, remained constant or declined in some cases.

Butterwick, Shauna, and Caroline White. 2006. *A path out of poverty: Helping BC income assistance recipients upgrade their education.* Canadian Centre for Policy Alternatives, BC Office. http://www.policyalternatives.ca/documents/BC_Office_Pubs/bc_2006/path_out_of_poverty.pdf

Interviews with British Columbia college administrative and support staff were conducted to investigate the impact of a provincial government policy (2002) eliminating low-income students' eligibility for Income Assistance (IA) benefits and targeted funding to institutions to assist IA recipient students. The data suggest that the elimination of IA benefits resulted in reduced services for low-income students. Respondents believed that the changes had a negative impact on female students with dependent children in particular.

Callender, Claire, and Jonathan Jackson. 2005. "Does the fear of debt deter students from higher education?" *Journal of Social Policy*. 34(4): 509–540. Cambridge University Press. http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=341687

This U.K. analysis uses results from a survey of prospective students, revealing that those from lower-income backgrounds are more debt-averse, and that they are more likely than those from other income brackets to not attend university because of debt aversion.

Canada Millennium Scholarship Foundation. 2006a. *Closing the access gap: Does information matter?* Millennium Research Note #3. Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/Closing_the_Access_Gap.pdf

This paper summarizes recent research on the perceptions that secondary school seniors and their parents have about the costs of postsecondary education and the availability of financial assistance. Overall, high school seniors and their parents tend to overestimate both the cost of tuition and the availability of financial support.

Canada Millennium Scholarship Foundation. 2006b. *Seamless pathways: A symposium on improving transitions from high school to college.* Conference Report, Summer 2006. Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/seamless_2006_en.pdf

This report summarizes the outcomes of a symposium in which Ontario educators, policymakers, and government officials shared successful initiatives for facilitating secondary to postsecondary transitions, reviewed the outcomes of recent research, identified systemic issues, and developed policy advice for enhancing postsecondary participation and success.

Canada Millennium Scholarship Foundation. 2006c. *The impact of bursaries: Debt and student persistence.* Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/MRN04_Persistence_EN.pdf

This paper summarizes the findings of three studies on the impact of student financial aid on persistence (McElroy 2004, 2005a, 2005b). McElroy (2005a) tracked student aid recipients at six universities for five years and found a negative correlation between the amount of student aid received and persistence. McElroy (2005b) examined the effect of loan remission programs on student success, and found greater rates of completion among students who received loan remission than those who did not. The third study (McElroy, 2004) examined the impact of the Millennium Bursary on student persistence in British Columbia.

Canada Millennium Scholarship Foundation. 2004a. *Is university education in Canada more affordable than in the United States?* Millennium Research Note No. 1. Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/millennium_research_n1-en.pdf

This research reviews the argument presented in *The Affordability of University Education: A Perspective From Both Sides of the 49th Parallel* by Watson Scott Swail, and published by the Educational Policy Institute, Washington, DC, in 2004. The CMSF recognizes the value of including both costs and resources in Swail's analysis, but cites a lack of interpretation of the implications that greater reliance upon student loan funding has

for American students. In short, CMSF suggests that the reason American university is more affordable is in large part because lower-income students are willing to take on the debt necessary to pay the higher cost of tuition.

Canada Millennium Scholarship Foundation. 2004b. *Does money matter? II, 2003–2004.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/dmm_ii_en.pdf
This is an update on the research agenda of the Canada Millennium Scholarship Foundation. As of 2003–04, guiding research themes included student finance and retention and the effects of finances on particular student sub-populations (e.g., students with disabilities and Aboriginal students); and postsecondary decision making, including how social and cultural differences among families of various income brackets affect postsecondary education planning and access.

Canada Millennium Scholarship Foundation. 2001. *Does money matter?* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/money.pdf
This paper presents the research agenda of the Canada Millennium Scholarship Foundation as of 2001, focusing on the extent to which socioeconomic factors influence postsecondary participation decisions, and the impact of student financial assistance. It also describes then-current and planned research projects.

Canada Undergraduate Survey Consortium. 2006. *Graduating students survey.* Winnipeg: University of Winnipeg
This report presents the findings of the 12th Consortium survey of graduating students from 25 Canadian universities. With respect to financing of university education, results show that nearly 60 per cent of final-year students had education-related debt, owing an average amount of $24,000. While student loans were the most common source of repayable aid, 20 per cent of students with debt had private bank loans.

Canadian Association of University Teachers. 2006a. "The economics of access: The fiscal reality of PSE costs for low-income families." *CAUT Education Review.* Vol. 8(2).
http://www.caut.ca/en/publications/educationreview/educationreview8-2.pdf
CAUT argues that measures of the affordability of postsecondary education should exclude student loans, given that loans defer, but do not reduce, the burden of tuition fees. The percentage of after-tax income required by low-income earners to pay tuition is compared over time and between provinces.

Canadian Association of University Teachers. 2006b. "Income contingent loan repayment plans: The false promise of fairness." *CAUT Education Review*. Vol. 8(3). December.
http://www.caut.ca/en/publications/educationreview/educationreview8-3.pdf
In this article, CAUT responds to Bob Rae's (2005) recommendation in favour of income contingent loan repayment plans. In principle, this format is intended to reduce the burden of the cost of education for the student, by spreading the time for loan repayment over a longer portion of the graduate's employment career, and by making repayment contingent on the graduate's income. However, CAUT argues that this method simply allows for tuition hikes and the full deregulation of tuition fees, and substantially shifts the cost of education from the government to the student.

Canadian Association of University Teachers. 2005a. "Financing Canada's universities and colleges: How Ottawa & the provinces can fix the funding gap." *CAUT Education Review.* Vol. 7(2).
http://www.caut.ca/en/publications/educationreview/education-review-7-2.pdf
Using data from Statistics Canada's University and College Revenue and Expenditures and the Department of Finance's Fiscal Reference Tables, CAUT illustrates the decline in government spending on postsecondary education since the beginning of the 1990s.

Canadian Association of University Teachers. 2005b. "Paying the price: The case for lowering tuition fees in Canada." *CAUT Education Review*. Vol. 7(1).

http://www.caut.ca/en/publications/educationreview/educationreview7-1.pdf
CAUT argues that the debate over whether students are paying enough for their postsecondary education is misguided, and suggests the debate focus instead on whether students are paying their share through tuition or through the tax system.

See also: Canadian Association of University Teachers. 2004a. "The funding shortfall: Government expenditures on post-secondary education, 2002–03." *CAUT Education Review*. Vol. 6(1). March. http://www.caut.ca/en/publications/educationreview/educationreview6-1.pdf

See also: Canadian Association of University Teachers. 2001a. "The growing funding gap: Government expenditures on post-secondary education, 2000–01." *CAUT Education Review*. Vol. 3(3). August. http://www.caut.ca/en/publications/educationreview/educationreview3-3.pdf

See also: Canadian Association of University Teachers. 1999. "Risking our future: How government cuts are undermining post-secondary education." *CAUT Education Review*. May. http://www.caut.ca/en/publications/educationreview/educationreview1-1.pdf

Canadian Association of University Teachers. 2004b. "Public or private? University finances, 2002-2003." *CAUT Education Review*. Vol. 6(3). October. http://www.caut.ca/en/publications/educationreview/educationreview6-3.pdf
In this paper, CAUT presents data from 2001–03 by province, showing the percentage change in university revenues; the share of total university revenues by all sources; the share of operating revenues by source; and the change in university expenditures. The paper shows a trend toward the privatization of postsecondary education, in which universities rely increasingly upon private fees and contracts and less on public funding.

See also: Canadian Association of University Teachers. 2001b. "Creeping privatization: University finances, 1998–1999." *CAUT Education Review*. Vol. 3(1). February. http://www.caut.ca/en/publications/educationreview/educationreview3-1.pdf

Canadian Association of University Teachers. 2003. "University tuition fees in Canada, 2003: The declining affordability of higher education." *CAUT Education Review*. Vol. 5(1). September. http://www.caut.ca/en/publications/educationreview/educationreview5-1.pdf
CAUT argues that postsecondary education in Canada became more accessible during the 1970s when tuition fees decreased, but became less accessible in the 1990s when tuition fees increased as a result of public funding cuts.

See also: Canadian Association of University Teachers. 2001c. "University and college affordability: How and why have fees increased?" *CAUT Education Review*. Vol. 3(2). May. http://www.caut.ca/en/publications/educationreview/educationreview3-2.pdf

See also: Canadian Association of University Teachers. 2000. "Out of reach: Trends in household spending on education in Canada." *CAUT Education Review*. Vol. 2(1). January. http://www.caut.ca/en/publications/educationreview/educationreview2-1.pdf

Canadian Council on Learning. 2006. *Canadian post-secondary education: A positive record – An uncertain future.* Report on learning in Canada 2006. Ottawa: Canadian Council on Learning. http://www.ccl-cca.ca/NR/rdonlyres/BD46F091-D856-4EEB-B361-D83780BFE78C/0/PSEReport2006EN.pdf
This report is an assessment of the contribution of postsecondary education to Canada's social and economic objectives. The conclusion is that our system is doing well in some areas (e.g., high levels of participation), but there is considerable room for improvement in other areas (e.g., unequal access, inadequate literacy levels for the knowledge economy, and a deficiency in meeting the needs of adult learners). The report concludes with a

series of recommendations to address these shortcomings.

Canadian Federation of Students. "Prying open the privatisation door: The Rae report on post-secondary education." Ottawa: The Canadian Federation of Students.
http://www.utoronto.ca/~gsunion/fees/RaeAnalysis.pdf
The Canadian Federation of Students (CFS) expresses concerns over Bob Rae's recommendations for de-regulation of tuition fees, increased privatization as a remedy for revenue shortfalls, grant reductions for low- and middle-income students, redefinition of "dependent" student status, the eventual elimination of the Ontario Student Opportunity Grant, and Rae's equality-of-access policy recommendations.

Cervenan, Amy, and Alex Usher. 2004. *The more things change: Undergraduate student living standards after 40 years of the Canada Student Loan Program.* Toronto, ON: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/40Years.pdf
Shifts in the composition and living standards of university students since the inception of the Canada Student Loans Program in 1965 are identified. Main findings include a narrowing of the participation gap between youth originating from the highest- and lowest-income quartiles, a sharp decline in reliance on family financial support, and an increase in the share of student income comprised of student loans, grants, and bursaries. Overall, the authors attribute the expansion of educational opportunity in large part to the student assistance programs, but note that this has been accompanied by, and may be in part responsible for, a major decrease in parental contribution.

Choy, Susan P., Ali M. Berker, and C. Dennis Carroll. 2003. *How families of low- and middle-income undergraduates pay for college: Full-time dependent students in 1999–2000.* U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.
http://nces.ed.gov/pubs2003/2003162.pdf
While American government student aid was originally meant to assist low-income youth, tuition increases in the 1990s necessitated the expansion of assistance to middle-income youth. This study draws on data from the 1999–2000 National Postsecondary Student Aid Survey to determine whether the financial aid system effectively meets the needs of low-income students.

Choy, Susan P. 1998. "College access and affordability." *Education Statistics Quarterly*. Vol. 1(2).
http://nces.ed.gov/programs/quarterly/Vol_1/1_2/4-esq12-b.asp
This paper was produced by the National Center for Education Statistics (NCES) to determine the effectiveness of the American financial aid system in equalizing income differences among students. Analyses of NCES data reveal that despite available student financial assistance programs, postsecondary education remains less affordable for low-income youth than for their higher-income counterparts. Increases in family income have not kept pace with increases in tuition.

Christofides, L., J. Cirello, and M. Hoy. 2001. "Family income and postsecondary education in Canada." *The Canadian Journal of Higher Education.* 31(1): 177–208.
Using data from the Surveys of Consumer Finance from 1975 to 1993, the authors found that although income is a significant determinant of participation, it does not explain the increase in participation rates for low-income youth. Parental education, proximity to a postsecondary institution, and the province concerned were found to have a significant relationship to participation, but tuition fees did not. However, the analysis covered a period of little change in tuition and included tuition rates from undergraduate Arts programs in only 10 universities across the country.

Clark, Warren. 2003. "Update on education." *Canadian Social Trends*. Winter 2003–71. Ottawa: Statistics Canada, 11-008-XIE.
http://www.statcan.ca/english/freepub/11-008-XIE/0030311-008-XIE.pdf
Various national survey data and 2001 and 1991 Census data are analyzed to demonstrate national increases over time in postsecondary enrolment, graduation rates, and student loan indebtedness. Trends in Aboriginal postsecondary participation are identified, including a slight narrowing over time in the gap between Aboriginal and non-Aboriginal participation. Finally, Canada's performance in postsecondary education is briefly compared

to that of other OECD countries.

Coelli, Michael. 2004. "Tuition increases and inequality in post-secondary education attendance." Paper presented at the Canadian Economics Association meetings in Toronto, ON.
http://economics.ca/2004/papers/0065.pdf

Data from SLID are analyzed to determine whether tuition increases of the 1990s influenced enrolment among youth from lower socioeconomic backgrounds. The main conclusion is that youth from low-income backgrounds are price-sensitive while their higher-income counterparts are not.

COMPAS Inc. 2005. *Post-secondary education: Cultural, scholastic and economic drivers.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/PSE_Drivers-en.pdf

This survey covers the attitudes of Canadian parents toward education, expectations for their children, and anticipated methods of paying for their children's postsecondary education. From the findings, the author identifies two dominant attitudes: the view that it is an expensive investment with uncertain benefits, more common among low-income parents, and the view that it is a necessary investment with inherent value.

Conway, Chris. 2001. *The 2000 British Columbia universities early leavers survey.* Prepared for the University Presidents' Council of British Columbia." Co-published by the British Columbia Ministry of Advanced Education, Training and Technology and the Centre for Education Information.
http://www.tupc.bc.ca/student_outcomes/publications/early_leavers/uel_report2000.pdf

This paper examines data from a 2000 survey of former British Columbia university students who left their program prior to completion. Of the total sample, 59% were true leavers with unplanned and permanent departures from their institution. Compared to the total sample, true leavers were less likely to cite financial circumstances as their main reason for leaving.

Conway, John B. 2004. *Improving access to affordable university education in Saskatchewan.* Canadian Centre for Policy Alternatives, Saskatchewan. Prepared for the student unions at the University of Saskatchewan, University of Regina. Nov. 16.
http://www.bibliotheque.assnat.qc.ca/01/mono/2005/03/801956.pdf

Secondary research data is used to investigate reasons for the 2% decrease in Saskatchewan enrolment between 1999–2000 and 2003–04, in contrast to a national enrolment increase of 20%. The author concludes that contributing factors include higher than average tuition fees, greater than average proportions of youth living beyond commuting distance to university, and inadequacies in student financial aid.

Corak, Miles, Garth Lipps, and John Zhao. 2003. *Family income and participation in post-secondary education.* Ottawa: Statistics Canada, 11F0019-MIE2003210.
http://dissemination.statcan.ca/english/research/11F0019MIE/11F0019MIE2003210.pdf

This study examines the impact of tuition increases in the 1990s on postsecondary participation by income, choice of institution, student persistence, and student borrowing. A strong correlation is found between family income and university participation until the mid-1990s, when the participation gap between income brackets narrowed. This narrowing corresponds with tuition increases, but also with increases in the maximum amount that students could borrow. No significant changes over time were observed for college or vocational program participation by income, nor for the rate of postsecondary incompletion over the 1990s. However, the absolute number and the average amount of student loans did increase substantially in the latter half of the 1990s.

Corrigan, Melanie E. 2003. "Beyond access: Persistence challenges and the diversity of low-income students." *New Directions for Higher Education*. No. 121, Spring.

In response to Choy's (2000) finding of lower postsecondary persistence rates among low-income students than middle- and upper-income students, this American study draws on existing analyses of survey data to suggest reasons for the disparity. Differences in academic background, family circumstances, institutional choice, attendance patterns, and employment among low-income and higher-income students and between dependent and independent low-income students are identified and suggested as possibly influencing persistence.

Council of Ministers of Education, Canada. 2004. "Student assistance: Eliminating financial barriers to postsecondary education." A foundation paper produced for the CMEC–OECD–Canada seminar on Student financial assistance for tertiary education: Strategies in the age of universal access. Toronto: Council of Ministers of Education, Canada.
http://www.cmec.ca/stats/quebec2004/FoundationPaper.en.pdf

This paper articulates the challenge that OECD countries face to increase postsecondary capacity while maintaining affordability for students. It examines the role of student financial aid in meeting this objective, and makes the projection that the growing demand for postsecondary education will render non-repayable forms of assistance unsustainable as the dominant form of assistance.

Council of Ministers of Education, Canada. 2006a. *Education at a Glance 2006: Country Profile for Canada*. Toronto: Council of Ministers of Education, Canada.
http://www.cmec.ca/publications/EAG2006.en.pdf

This annual publication provides Canadian postsecondary education statistics, including comparisons of participation rates and education expenditures relative to other OECD countries. As of 2004, Canada had the highest proportion of its population completing postsecondary studies. This is largely due to participation at the college level; Canada ranked sixth in university completion. With the United States, Canada ranked among the highest of OECD countries in terms of per-student expenditures; private funds accounted for approximately one-quarter of those expenditures, as it did in Australia, Japan, and the United States. Canada also had among the highest level of increases in private investment between 1995 and 2003. In 2002, Canada ranked sixth among OECD countries in terms of support for students through public subsides.

Council of Ministers of Education, Canada. 2005b. *Education Indicators in Canada: Report of the Pan-Canadian Education Indicators Program*. Ottawa: Statistics Canada, 81582XIE.

This most recent edition provides a statistical summary of Canadian postsecondary expenditures, tuition fees, student debt, and enrolment. Trends emerging in the late 1990s and early 2000s include increased government expenditures, higher tuition fees, and increased student loan borrowing. Enrolment increases occurred among full-time and apprenticeship students. Enrolment of males and part-time students declined.

Council of Ministers of Education, Canada. 2003. "Access, inclusion and achievement: Closing the gap." Canada's response to the theme of the Fifteenth Commonwealth Conference of Education Ministers, Scotland, October 2003. Toronto: Council of Ministers of Education, Canada.
http://www.cmec.ca/international/commonwealth/15CCEM.countryreport.en.pdf

This conference paper summarizes the challenges facing Canada's postsecondary education system. Main challenges include below-average enrolment among youth whose parents have low levels of educational attainment, negative attitudes toward higher education among youth with lower levels of academic achievement, and the cost of postsecondary education to the extent that it functions as a barrier to participation.

Council of Ministers of Education, Canada. 2002. *Best practices in increasing Aboriginal postsecondary enrolment rates.* Prepared by R.A. Malatest & Associates. Toronto: Council of Ministers of Education, Canada.
http://www.cmec.ca/postsec/malatest.en.pdf

A review of the literature on Aboriginal postsecondary participation reveals that Aboriginal postsecondary students face financial burdens associated with an older age demographic, greater likelihood of being female and having dependent children, and of relocating from a rural or remote location. Because Métis, non-Status Indians, and Bill C-31 Aboriginal individuals are ineligible for funding from the Post-Secondary Student Support Program, and because Indian band funding can reportedly be overly restrictive, Aboriginal individuals are more likely to rely on student loans to finance their postsecondary studies and to have higher levels of unmet need and of debt upon graduation. Financial barriers are compounded by above-average unemployment, poverty and single-parent family structure.

Council on Post-Secondary Education, Manitoba. 2002. *Forum on accessibility to post-secondary*

education, Final report. Winnipeg: Ministry of Advanced Education and Training and the Council on Post-secondary Education.
http://www.copse.mb.ca/en/documents/reports/access_forum_rpt_en.pdf
In 2002, Manitoba's Council on Post-Secondary Education in collaboration with the Ministry of Advanced Education and Training held a forum for all stakeholders to discuss current initiatives and explore ideas for increasing accessibility to postsecondary education in the province.

De Broucker, Patrice. 2005. "Getting there and staying there: Low-income students and post-secondary education." Research Report W/27, Canadian Policy Research Networks, Ottawa.
http://www.cprn.org/en/doc.cfm?doc=1198
A review of recent research on postsecondary participation by low-income Canadian youth confirms that low-income youth are less likely to participate in university education, but are as likely as others to participate in college education. Tuition increases of the 1990s are found to have had an impact on the participation rates of low-income youth. Research on retention reveals that the majority of early-leavers do not attribute their departure to financial factors. Canadians as a whole overestimate the costs of and underestimate the financial returns on postsecondary education, and low-income Canadians are the most likely to do so. The impact of labour market trends on postsecondary participation is not well understood, although existing research suggests that low-income youth may be more sensitive to shifts in the labour market, preferring employment over postsecondary education when jobs are plentiful.

De La Rosa, Mari Luna. 2005. "Is opportunity knocking? Low-income students' perceptions of college and financial aid." *American Behavioral Scientist*. Vol. 49(12): 1670-1685.
Building on prior research findings that low-income individuals are the most likely to overestimate postsecondary costs and underestimate the availability of student financial aid, this American study looks at how grade 11 and 12 students in low-income high schools in California access, interpret, and use student financial aid information. The authors conclude that financial aid information is not as effective in enhancing postsecondary participation as it could be.

Dowd, Alicia C. 2004. "Income and financial aid effects on persistence and degree attainment in public colleges." *Education Policy Analysis Archives*. Vol. 12(21).
http://epaa.asu.edu/epaa/v12n21/
This American study examines the distribution of financial aid among four-year college students who were financially dependent, and the effectiveness of various types of financial aid in promotion persistence and completion. Specifically, it examines whether parental income is a determinant of persistence despite student financial aid. The author concludes that grade point average and living on campus are the most important predictors of timely degree completion, and that subsidized loans in the first year of studies have a positive effect on persistence.

Drolet, Marie. 2005. *Participation in post-secondary education in Canada: Has the role of parental income and education changed over the 1990s?* Ottawa: Statistics Canada, 11F0019MIE2005243.
http://www.statcan.ca/english/research/11F0019MIE/11F0019MIE2005243.pdf
Updating the findings of two earlier research studies on the impact of parental income and education on postsecondary participation, data from SLID are analyzed to show that, overall, youth from a high-income background and parents with a high level of education continue to be the most likely to participate in university education. However, little difference in participation is observed between low-income and middle-income youth, and university participation rates are found to correlate more strongly with parental education than with parental income.

Dumaresq, Cheryl, and Walter Sudmant. 2003. *The class of 1998: Five years after graduation.* Report of findings from the BC University Baccalaureate Graduate Survey. Victoria: The University Presidents' Council of British Columbia and the Ministry of Advanced Education.
http://www.tupc.bc.ca/student_outcomes/publications/graduate_outcomes/graduate_followup_survey_2003/1998_report_of_findings.pdf

Graduates of one of five British Columbia universities were surveyed at the time of graduation (1998) and again five years later. In addition to employment and education outcomes, data are presented on how former students financed their education.

Eckel, Catherine, Cathleen Johnson, Claude Montmarquette, and Christian Rojas. 2006. "Debt aversion and the demand for loans for post-secondary education." *Public Finance Review*. 35(2): 233-262. Sage Publications.

Using results from 102 field experiments of subjects (aged between 18 and 55) across the country who were presented with a series of choices involving trade-offs between cash and grants or loans earmarked for postsecondary education, the authors find that subjects are more likely to take up grants than loans. The authors conclude that debt aversion has little influence on the demand for education.

EKOS Research Associates. 2006. *Investing in their future: A survey of student and parental support for learning.* Prepared for the Canada Millennium Scholarship Foundation, Human Resources and Social Development Canada, and the Council of Ministers of Education, Canada. Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/investing_Aug17-06_EN.pdf

This report presents the findings from the Canadian Post-Secondary Student Financial Survey conducted initially on university and college students in October 2003, with two subsequent follow-up surveys throughout the school year. A final follow-up survey was conducted in February 2005. Parents of the surveyed students also completed a survey. This report contains an enormous amount of data on education-related costs, on how students and parents finance their postsecondary education, on how postsecondary choices are influenced by costs and debt, and on perceptions of who should pay. One of their most consistent findings was that age (and its association with marital status and dependent status) makes a significant difference in expenses and in how postsecondary education is funded through employment, parental support, access to loans, or level of income.

EKOS Research Associates. 2005. *Ontario universities: Public perceptions of tuition and funding*. Prepared for the Council of Ontario Universities. Toronto.
http://www.cou.on.ca/content/objects/COU%20Tuition%20Final%20Report%20(Final).pdf

This paper presents the findings of a 2005 telephone survey on public perceptions of the affordability of university education in Ontario. Areas of inquiry include perceptions of the fairness of tuition levels, changes in levels of public funding, student assistance, affordability, debt burden, earnings potential, and changes in quality.

EKOS Research Associates. 2003. *Making ends meet: The 2001–2002 student financial survey*. Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/making_ends_meet_en.pdf

This paper presents the findings of the national Student Financial Survey as they relate to student debt load, debt composition, student expenditures, and unmet need. The survey was conducted in eight waves over the course of the 2001 academic year. A number of limitations are identified by the author and a more recent study is available (see EKOS 2006).

Finnie, Ross, Christine Laporte, and Eric Lascelles. 2004. *Family background and access to post-secondary education: What happened over the 1990*s? Ottawa: Statistics Canada, 11F0019MIE2004226.

This study examines the impact of the tuition rate increases of the 1990s on postsecondary participation. The authors conclude that overall participation rates increased despite increases in tuition. Moreover, provincial enrolment increases did not appear to correspond with changes in tuition; in some cases, provinces with high tuition increases exhibited greater enrolment increases than did provinces with comparatively small tuition increases. The data did show, however, that enrolment increases were less pronounced among youth whose background included low parental education and single-parent family composition.

Finnie, R. and M. Frenette. 2003. "Earning differences by major field of study: Evidence from three cohorts of recent Canadian graduates." *Economics of Education Review,* 22(2): 179–192.

This paper presents the results of an analysis of earnings differences by field of study using data from three

cohorts of the National Graduates Survey (NGS) two and five years after graduation. Field of study differences are found after controlling on a number of variables and consistently across cohorts and time. Perhaps the most interesting finding was the low and moderately declining earnings of science and technology graduates, thus calling into question the emergence of the knowledge-based economy.

Foley, Kelly. 2001. "*Why stop after high school? A descriptive analysis of the most important reasons that high school graduates do not continue to PSE."* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/foley_en.pdf

Data from the 1991 School Leavers Survey (SLS) and the 1995 School Leavers Follow-up Survey (SLF) are analyzed to identify the main reasons high school graduates provide for not transitioning to postsecondary education. While the largest proportion of SLS respondents cited a lack of money as their main reason for not participating in postsecondary education, taken together, non-financial reasons accounted for a greater share of responses. Respondents living in regions with high tuition fees were no more likely to attribute their non-participation to financial barriers than those living in low-tuition regions, and no correlations were found between lack of money as a main reason and language, gender, or parental education.

Frenette, Marc. 2007a. *Why are youth from lower-income families less likely to attend university? Evidence from academic abilities, parental influences, and financial constraints*. Ottawa: Statistics Canada, 11-F0019 MIE.

Frenette attempts to account for each factor explaining the lower rates of participation among low-income 19-year-olds. Among the variables examined in addition to income quartile are academic ability, non-cognitive ability, peer influence, perception of returns, perceptions of financial constraint, family structure, and parental education. Consistent with other research, parental education accounts for the largest portion of the gap. The results also suggest that academic ability (especially reading ability) is a significant determining factor in participation.

Frenette, Marc. 2007b. *Do universities benefit local youth? Evidence from university and college participation, and graduate earnings following the creation of a new university.* Ottawa: Statistics Canada, 11F0019MIE – No. 283.
http://www.statcan.ca/english/research/11F0019MIE/11F0019MIE2006283.pdf

Frenette attributes lower rates of university participation among youth living beyond commuting distance to a university to the costs associated with moving away from home, as opposed to family income, parental education, and academic achievement.

Frenette, Marc. 2005a. I*s post-secondary access more equitable in Canada or the United States?* Ottawa: Statistics Canada, 11F0019MIE 2005244.

This study draws on the National Longitudinal Survey of Youth and SLID data to conclude that Canadian students are slightly more likely to originate from low-income and low parental education households than their American counterparts. Greater variation by parental income and education is observed in university than in college attendance in both countries.

Frenette, Marc. 2005b. *The impact of tuition fees on university access: Evidence from large-scale price deregulation in professional programs.* Ottawa: Statistics Canada, No. 11F0019MIE 2005263.

Using data from the National Graduates Survey (NGS), Frenette examines professional program enrolment between 1995–96 and 2001–02 to demonstrate that in the province with the largest increase in fees (Ontario), middle-income students were the least likely to enrol. The effects are less noticeable in provinces with less dramatic tuition fee increases, and no effects are evident in provinces with little increase in fees. Readers should note that the study was conducted prior to the recent modifications to student assistance meant to enhance access to financial assistance among middle-income students.

Frenette, Marc. 2003. *Access to college and university: Does distance matter?* Ottawa: Statistics Canada, 11F0019MIE2003201.

http://www.statcan.ca/english/research/11F0019MIE/11F0019MIE2003201.pdf
In this study, Frenette uses SLID data to determine whether students living beyond university commuting distance are more likely to attend college if one is nearby and, if so, whether college participation varies by income. The data reveal that those beyond university commuting distance are more likely to attend college, although overall postsecondary participation rates are similar. Moreover, low- and middle-income youth are significantly more likely to attend a nearby college than are their higher-income rural counterparts.

Frenette, Marc. 2002. *Too far to go on? Distance to school and university participation.* Ottawa: Statistics Canada, 11F0019MIE2002191.
http://www.statcan.ca/english/research/11F0019MIE/11F0019MIE2002191.pdf
The objective of this study was to determine the impact of university proximity on university participation. The study was inspired in part by the large proportion (35%) of Canadian secondary school students living beyond commuting distance to a university.

Galarneau, Diane. 2006. "Education and income of lone parents." *Perspectives on Labour and Income*. Vol. 18(1). Spring. Ottawa: Statistics Canada..
http://www.statcan.ca/english/freepub/75-001-XIE/1120575-001-XIE.pdf
This research study uses 1981 and 2001 Census data to assess changes over time in the financial well-being and educational attainment of Canadian single parents. Single parents comprised a larger share of the Canadian population in 2001 than in 1981 and, as a group, were older, had fewer children, had higher levels of educational attainment, were more likely to be employed and to work full-time, and had higher average employment incomes.

Georgian College Institute of Applied Research and Innovation. 2005. *Students with dependants: Common practices in post-secondary education institutions in Canada and the United States.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/news-may5-2005.pdf
This is a compilation of current practices for assisting students with dependants in 38 Canadian and 6 American postsecondary institutions, and is intended to identify strategies to better enhance participation and completion rates among this population.

Gervais, Michel et al. 2005. "L'éducation: L'avenir du Québec." Rapport sur l'accès à l'éducation. Ministère de l'éducation, du loisir et du sport. *Education: The future of Quebec*. Report on access to education, presented to the Minister of Education, Recreation, and Sports. October 2005.
http://www.mels.gouv.qc.ca/lancement/Acces_education/index.htm
The focus of this report is on access to primary, secondary, and postsecondary education in the province of Quebec. The report's key purpose is to examine problems with participation in education, which are seen not only as financial but also as cultural and a matter for prioritizing.

Gladieux, Lawrence E. 2003. *Student assistance the American way*. Washington, DC.: Educational Policy Institute,
http://www.educationalpolicy.org/pdf/Student_Assistance.pdf
Trends in the American system of student financial assistance and possible outcomes for affordability of and access to postsecondary education for low-income American youth are examined. Key trends include a shift in the balance of student financial aid from grants to repayable loans, increased student loan eligibility among youth from middle-income backgrounds, and an increase in tuition tax benefits and a surge in education savings incentives as forms of education subsidies.

Gouvernement du Québec, Ministère de l'Éducation, du Loisir et du Sport. 2005. "The return on a bachelor's degree." *Education Statistics Bulletin*. No. 32, September.
http://www.mels.gouv.qc.ca/stat/bulletin/Bulletin_32an.pdf
Public and private rates of return on a bachelor's degree in Quebec are calculated using 2001 Census data and are compared by gender, field of study, and returns on a secondary school diploma. Private rates of return are

found to be slightly higher for females while the public rate of return for a male attaining a degree is slightly higher. Public benefits of degree-attainment include a decreased burden on public services because of better health and lower unemployment rates, and private benefits include increased job stability, autonomy, and advancement opportunity.

Gouvernement du Québec, Ministère de l'Éducation. 2004. *Education Indicators, 2004 edition*. http://www.mels.gouv.qc.ca/STAT/indic04/education_indicators_ed2004.pdf

This document presents 2004 data on provincial education expenditures, student financial aid expenditures, and changes over time. The data reveal that between 1990-91 and 1999-00 the mix of student financial aid favoured repayable student loans. A reversal in this trend occurred in 2002/03, due to a reduction in the maximum student loan amount with the implementation of the Millennium Bursaries. This also resulted in lower student loan debt levels in 2002-03 than two years earlier. Student retention data is also presented.

Government of Alberta, Advanced Education. 2006a. *A learning Alberta: Final report of the steering committee.* Edmonton: Alberta Advanced Education. http://www.advancededucation.gov.ab.ca/alearningalberta/Steering_Committee_Final_Report.pdf

This report summarizes the results of a review of Alberta's postsecondary education system, including consultations with over 3,000 Albertans. It examines the challenges arising from having the highest workforce participation rate in the country, but one of the lowest postsecondary participation rates, particularly among traditionally under-represented groups.

Government of Alberta, Advanced Education. 2006c. *Recommendations from Transforming the Advanced Education System Subcommittee.* Edmonton: Alberta Advanced Education. http://www.advancededucation.gov.ab.ca/alearningalberta/Transforming_the_Advanced_Education_System.pdf

This committee report recommends the capping of tuition fees at the 2004 level and restricting future increases to the rate of inflation. The committee also recommends increasing postsecondary capacity, expanding non-repayable financial assistance for under-represented groups, prioritizing non-repayable student financial aid over measures that benefit students with repayable aid (e.g., remission), and partnering with school jurisdictions to develop grant programs for disadvantaged secondary students.

Government of Alberta, Advanced Education. 2006g. *Alberta post-secondary early leavers study.* Edmonton: Alberta Advanced Education. http://www.advancededucation.gov.ab.ca/pubstats/early_leavers_final_report.pdf

Findings of a survey of former Albertan college and university students who discontinued their studies prior to completion of a credential are examined. Two-thirds of early leavers reported having worked during the academic year, 44% had acquired a student loan, and an additional 30% had loans from non-government sources. Just over half (53%) felt the benefits of their education were worth the financial cost. Older and separated or divorced early leavers were the most likely to attribute their early departure at least in part to financial reasons.

Government of Alberta, Advanced Education. 2005. *Advanced education: A cross-jurisdictional overview of accessibility, affordability and quality.*

This report presents Canadian and international examples of programs and policies meant to enhance postsecondary accessibility, affordability and quality. The paper concludes with a brief overview of the relationship between affordability and accessibility.

Government of Alberta, Advanced Education. 2006h. *Setting the direction: Partners in action — First Nations, Métis, and Inuit; Learning access and success.* May. http://www.advancededucation.gov.ab.ca/alearningalberta/Supporting_Aboriginal_Learning.pdf

This document, produced by the Aboriginal Learning Subcommittee of the provincial review of postsecondary education, articulates draft policy actions accumulating from consultations with Aboriginal stakeholders.

Government of Alberta, Advanced Education. 2006i. *Alberta post-secondary graduate outcomes survey: Class of 2003–04.*
http://www.advancededucation.gov.ab.ca/pubstats/Grad_Outcomes_Survey_2003_04.pdf
Findings from the survey of the Alberta postsecondary class of 2003–04 are presented and compared to the class of 2001–02. Graduates of the current class were less likely than prior graduates to have financed their education with government student loans, although median student loan amounts were higher. While they were less likely to rely on government loans, current graduates were more likely to borrow, and borrow more, from private sources.

Government of Alberta, Alberta Learning. 2002a. *Alberta's post-secondary education system: Developing the blueprint for change.*
http://www.advancededucation.gov.ab.ca/pubstats/PostSec/Jan2002_Blueprint.pdf
During the development of the ministry's Blueprint for Change, this discussion paper was circulated to stakeholders for feedback on strategies to improve Alberta's postsecondary education system. The paper outlines three broad challenges — rethinking the roles and responsibilities of stakeholders; accessibility and affordability; and the impact of globalization, technology, and the knowledge-based economy. Of particular interest are stakeholders' views on the appropriate distribution of educational costs between students and the government. A brief history of the province's tuition fee policy and financial assistance program is included.

Government of Alberta, Alberta Learning. 2002b. *Profile of Alberta's adult learning system: A context for discussion.* January.
http://www.advancededucation.gov.ab.ca/pubstats/PostSec/Jan2002_Profile.pdf
This paper identifies trends in postsecondary enrolment in Alberta over the latter half of the 1990s, and summarizes the findings from the Post-Secondary Accessibility Study. Perhaps the most notable finding is that postsecondary participation correlates with household income only when individuals not academically qualified for postsecondary studies are included in the sample.

Government of British Columbia, Advanced Education. 2006a. *Proposed Aboriginal post-secondary education strategy: Discussion draft.*
http://www.aved.gov.bc.ca/aboriginal/draft_aboriginal_post_secondary_education_strategy.pdf
This discussion paper summarizes Aboriginal population and labour market trends, identifies barriers to Aboriginal postsecondary participation, and proposes a strategy for reducing barriers. The main challenges include not completing secondary school, geographic barriers, cultural insensitivity, discrimination, a lack of relevant postsecondary programming, and inadequate student and institutional funding systems. Recommendations include increased and less restrictive federal funding (noting that there has been no increase in federal funding for Aboriginal postsecondary education since 1994), Aboriginal involvement in governance, and improved data tracking systems and performance measures.

Government of British Columbia, Advanced Education. 2005. *College and institute student outcomes: The 2005 highlights.*
http://outcomes.bcstats.gov.bc.ca/Publications/2005_highlights.pdf
This report presents highlights of the most recent annual survey of former college and institute students. In addition to employment and education outcomes, the report presents information on the ways that students financed their education.

Government of British Columbia, Advanced Education. 2003. *Short stay summary report, Spring*
http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/Short_Stay.pdf
This is a summary report from a follow-up survey of former college, university college, and institute students who completed 9–23 credits. The survey of former British Columbia college students who left their program prior to completion investigates their reasons for choosing their institution, their reasons for leaving prior to program completion, and their education and employment outcomes.

Government of British Columbia, Advanced Education. 2002a. *How former students financed their*

college, university college, and institute programs.
http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/2001StudentFinancesReport.pdf
This is a special report on student finances from the 2001 BC College and Institute Student Outcomes Survey. The data were analyzed to determine how students paid for their college education. Students' use of loans and the amount of debt students accumulated was disproportionately high among single parents. Single parents were also the most likely to report student loan repayment difficulties, to borrow from non-government sources, and to interrupt their studies, or to study part-time for financial reasons. Higher than average debt loads were observed among former students with a disability and former students who had received Income Assistance benefits prior to enrolling. The debt level of Aboriginal former students did not differ significantly from that of non-Aboriginal former students, although most were older, female, single parents, or had a disability; almost one-third, however, used funding from their Indian Band.

Government of British Columbia, Advanced Education. 2002b. *2001 BC College and Institute Aboriginal Former Student Outcomes.*
http://www.aved.gov.bc.ca/aboriginal/documents/01outcomes.pdf
This special report on Aboriginal former students from the 1995, 1997, 1999, and 2001 BC College and Institute Student Outcomes surveys compares their demographic characteristics and their education and employment outcomes with their non-Aboriginal counterparts. The report also looks at the financial circumstances and postsecondary funding choices of the two cohorts.

Government of British Columbia, Advanced Education. 2001. *Evaluation of services and facilities by former college, university college, and institute students.* Outcomes Working Group and the Centre for Education Information.
http://outcomes.bcstats.gov.bc.ca/Publications/collegereports/1999_Services.pdf
The findings in this special report on services and facilities from the 1999 BC College and Institute Student Outcomes Survey provide some insight into the financial circumstances of college students with disabilities in the province of British Columbia.

Government of New Brunswick, Department of Education. 2001. *Government response to the report of the working group on accessibility to post-secondary education in New Brunswick.*
http://www.gnb.ca/0000/publications/postsec/englishresponsereport.pdf
This paper articulates the ministry's response to recommendations produced by a 2000 stakeholder working group on postsecondary accessibility. Recommendations include a re-investment in the non-repayable student financial assistance program; an examination of the current needs-assessment criteria and formulas for student financial assistance to ensure they accurately reflect the true costs of postsecondary education; an examination of the efficacy of student assistance programs, of matching funds for institutional need-based bursaries, and a partial loan forgiveness program for students electing to work in the province for the duration of their loan repayment period.

Government of New Brunswick, Department of Education. 2000. *Report of the working group on accessibility to post-secondary education in New Brunswick.*
http://www.gnb.ca/0000/publications/postsec/finalreporte.pdf
This report articulates barriers to accessing postsecondary education, recommendations for the reduction of barriers, and trends in postsecondary education in the province. Trends include increasing enrolment in private training institutions, a widening of the participation gap by socioeconomic status, rising personal financial burdens attributed to tuition increases, and a shift in the mix of financial aid favouring loans over bursaries. Other trends include low participation among persons with disabilities, a projected decline in high school graduates due to low birth rates and negative net migration patterns, and growing demand for postsecondary study beyond the first degree.

Government of Newfoundland and Labrador, Department of Youth Services and Post-Secondary Education. 2003. *Fast-Forward: 5-Year post-secondary graduate follow-up study.*
http://www.ed.gov.nl.ca/edu/pub/fiveyear/pdf/full.pdf
Individuals graduating from postsecondary institutions in 1995 were surveyed 18 months after graduation and

again five to six years after that. Comparative findings are presented for employment outcomes and sources of postsecondary education funding.

Government of Newfoundland and Labrador, Department of Youth Services and Post-Secondary Education. 2003. *Beyond high school: Follow-up study of June 2001 high school graduates.* http://www.ed.gov.nl.ca/edu/pub/followup/2001.htm

Results of this survey of high school graduates provide insight into factors influencing choice of institution, rural-urban differences in type of institution and methods of funding, reasons for leaving postsecondary studies prior to completion, and reasons for non-participation. Key findings include proximity as the most frequently cited reason for choice of institution (just 6% of postsecondary students cited tuition cost as influencing their choice), under-representation of rural youth in university enrolment, and greater reliance of rural youth on government student loans.

Government of Newfoundland and Labrador, Division of Student Financial Services, Department of Education, 2005-06 Annual Report (unpublished draft).

Government of Ontario, Ministry of Education and Training. 1996. *Future goals for Ontario colleges and universities, Discussion paper.* http://www.edu.gov.on.ca/eng/document/discussi/postdeng.pdf

As part of the provincial review of postsecondary education policy, this paper examines the balance of responsibility between students, the private sector, institutions, and governments in the funding of postsecondary education in light of budget cuts and growth in demand. To determine an appropriate level of student contribution, the ministry suggests taking into account the extent to which postsecondary education meets society's need for a trained workforce, as well as the students' increased earning power. Fees could be based on expected earnings, or on the level students are willing to pay. Alternatively, estimates of the proportional benefit to society and to the individual could be used to determine the share of total costs each stakeholder should pay.

Government of Prince Edward Island, Department of Education. 2003. *Expectations of high school graduates, 2003.* http://www.gov.pe.ca/photos/original/ed_Exp_HS_03.pdf

Since 1998, the Prince Edward Island Department of Education has conducted an annual survey of grade 12 students to gather information on students' expectations following secondary school. Of the current sample, nearly three-quarters indicated plans to continue their education, a considerable increase from the 1998 cohort survey. One-half planned to attend university and of those, one in five planned to enrol in out-of-province institutions. Out-migration for postsecondary education is of concern for the province, given that students, upon obtaining their postsecondary credentials, are unlikely to return and work in the province.

Government of Saskatchewan, Post-Secondary Education and Training. 2005. *Accessibility and student financial assistance review: Stakeholder consultation report.* http://www.aee.gov.sk.ca/aar/docs/consultation_report.pdf

This report summarizes stakeholder consultation aimed at identifying barriers to access as they relate, in particular, to the student financial assistance program. Several knowledge gaps were identified, including variance in affordability by year of study; the extent to which up-front costs pose a barrier, particularly among low-income and rural/remote individuals, and the extent to which student financial assistance programs address those costs, particularly in cases where students do not have access to familial support or savings; the extent to which credit-related issues or previous student loan defaults create barriers to access; outcomes for applicants denied student loan financing; outcomes for students with unmet parental contributions; the effectiveness of tuition interventions for various socioeconomic groups, including the debt-averse; and the demographic and socioeconomic characteristics of graduates who default on student loans.

Grayson, J. Paul, and Kyle Grayson. 2003. Research on retention and attrition. Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/retention_final.pdf

This study examines research on student retention and attrition in North American. It finds that about one-quarter

of first-year postsecondary students do not proceed to their second year of studies, and an additional 20-30% leave a year later. Factors affecting retention and attrition tend to be institution-specific, making results difficult to generalize. Still, American research generally concludes that academic integration is an important predictor of attrition and that intention to persist is the best predictor of actual persistence. Few Canadian studies have focused on attrition. Findings from three institution-specific Canadian studies reveal a weak relationship between financial circumstances and attrition.

Hansen, Jorgen. 2006. *Returns to university level education: Variations within disciplines, occupations and employment sectors.* Learning Policy Directorate, Human Resources and Social Development Canada.
http://www.hrsdc.gc.ca/en/cs/sp/hrsdc/lp/publications/sp-662-09-06/SP-662-09-06E.pdf
The purpose of this study was to gauge the individual return on investment in postsecondary education, to identify trends over time, and to compare returns by field of study, industry and occupation, gender, and province. Overall, university education was found to be most profitable for females and for graduates in Quebec and least profitable for graduates in Western provinces. Between 1992 and 2001, returns for males declined, but they increased for females. Over the 1990s, the earnings gap between university and college graduates narrowed, but between secondary school and university graduates the earnings gap increased. The author concludes that although the increased cost of education over the 1990s reduced the overall economic benefit of a university education, earnings differences between university and secondary school graduates increased sufficiently to fully compensate for the cost increase.

Hauserman, Calvin P., and Sheldon L. Stick. 2005. "The history of post-secondary finance in Alberta: An analysis." *Canadian Journal of Educational Administration and Policy*. Issue 42. June.
http://www.umanitoba.ca/publications/cjeap/articles/stickhauserman.html
An overview of federal and provincial funding arrangements and policies from 1951 to the present are presented, highlighting the decline in federal and provincial funding over time. Implications in the national context for the quality of education, growth in enrolment, increased student diversity, and the general expansion of university programs to meet student needs are discussed. The paper concludes with an analysis of university funding in Alberta.

Hemingway, Fred, and Kathryn McMullen. 2004. *A family affair: The impact of paying for college or university.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/family_e.pdf
This document provides a literature review and gap analysis of American and Canadian research on practices employed by students and their parents to pay for postsecondary education. The authors identify numerous research gaps as well as limitations of existing data sets. Areas requiring further research include the influence of socioeconomic variables on parental savings behaviour, the impact of student employment on program completion, implications of the inability or unwillingness of parents to provide the contributions required by the Canada Student Loans Program, variation in affordability over the course of a student's program, and graduate and parental education-related debt. Evaluative research on the effectiveness of student financial aid programs is also lacking. Limitations of existing data sets include a lack of data on the characteristics of postsecondary non-attenders by socioeconomic status and reasons for non-participation, on reasons for choice of institution, on reasons for borrowing from private sources, on actual versus expected parental contributions, and on graduate debt, including public and private composition of debt load and debt load manageability.

Hemingway, Fred. 2003. *Assessing Canada's student aid need assessment policies.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/assessing_en.pdf
This study explores the effectiveness of student aid needs-assessment procedures by comparing Canadian and American procedures. The American system is described as having greater flexibility in setting allowance levels and greater variety in funding options. The Canadian system is found to be somewhat effective in targeting aid toward those with greatest need, but limitations include conditions of unmet need, exclusion of some unavoidable education-related expenses, such as computers, inadequate tax exemptions for student employment, prohibitively large expectations of parental contributions for middle-income students, and the complexity of

needs-assessment criteria and application procedures.

Hemingway, Fred. 2001. "Report on financial barriers to post-secondary education." Toronto: Council of Ministers of Education, Canada.
http://scholar.google.com/scholar?hl=en&lr=&q=cache:tRbuERfPavgJ:www.copse.mb.ca/en/documents/reports/CMEC_Final.doc+postsecondary+affordability+rural

This report summarizes the available literature on participation demographics, the impact of increased costs on accessibility and persistence, and discussions on whether postsecondary education is less affordable than in the past and on whether postsecondary education continues to be a good investment; also it explores the effectiveness of programs that promote access and affordability. The report's limitations include its incomplete jurisdictional data and its exclusion of married, single parent, and disabled students.

Heslop, Joanne. 2006. *Student transitions project highlights.* Victoria: Government of British Columbia, Ministry of Advanced Education.
http://www.aved.gov.bc.ca/student_transitions/STP_Highlights06.pdf

Administrative data are used to respond to the project's question — When do secondary school graduates go on to post-secondary education? — in order to determine the characteristics of individuals from the secondary school graduating classes of 2001–02 to 2003–04 who made immediate or delayed transitions to postsecondary education in the province of British Columbia. While the study contributes little direct knowledge about affordability, it does shed light on the trends in participation by under-represented groups.

Holmes, David. 2005. *Embracing differences: Post-secondary education among Aboriginal students, students with children, and students with disabilities.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/embracing_en.pdf

This article provides a detailed summary of the participation rates and challenges, methods of funding, and outcomes of postsecondary education among Aboriginal students, students with dependants, and students with disabilities. Members of these groups are more likely than the general student population to enrol in college, to be older, and to reside in spousal relationships. Students with dependent children are much more likely to study part-time. Aboriginal students and students with dependants are more likely to have delayed transition to postsecondary education after secondary school. Aboriginal students and students with disabilities are more likely to have government loans or bursaries, and students with dependants were less likely.

Hu, Shouping. 2003. "Educational aspirations and postsecondary access and choice: Students in urban, suburban, and rural schools compared." *Education Policy Analysis Archives.* Vol. 11(4).
http://epaa.asu.edu/epaa/v11n14/

This American report reveals lower educational aspirations and lower enrolment rates among rural youth. Rural youth who do participate in postsecondary education are more likely than urban youth to enrol in a public institution, and less likely to enrol in a four-year program.

Immerwahr, John. 2002. *The affordability of higher education: A review of recent survey research*. Prepared by Public Agenda for The National Center for Public Policy and Higher Education.
http://www.highereducation.org/reports/affordability_pa/MIS11819.pdf

This review identifies four main findings in the American literature on public perceptions of the affordability of postsecondary education: postsecondary education is highly valued by the American public; the majority of Americans are concerned about the affordability of postsecondary education, but also believe that qualified and motivated individuals will find a way to participate; Americans are divided on whether the government has a responsibility for ensuring affordable postsecondary education; and Americans are opposed to higher tuition fees and enrolment restrictions. Contradictions in these findings are explored.

Ipsos-Reid. 2004. *Canadians' attitudes towards financing postsecondary education: Who should pay and how?* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/factum_en.pdf

This paper presents the results of two polls intended to measure public opinion on the financing of postsecondary education, and conducted by Ipsos-Reid in 2003. Not surprisingly, the vast majority of respondents believe that postsecondary education is a good investment. Asked what would constitute reasonable student debt, given the average starting salary of $30,400 for a university graduate, the most common response fell between $10,000 and $20,000; 10 per cent believed that debt of $30,000 to $40,000 was reasonable, while 11 per cent believed that students should graduate with no debt at all. One-third of respondents believed that subsidized government loans should be available to all students; another 25 per cent believed that non-repayable grants should be available for low-income students, while 20 per cent believed that subsidized loans should be available only to low-income students. The majority (64 per cent) agreed that gaps between need and available aid should be bridged by increasing the limit for student loans.

Ipsos-Reid. 2001. *Post-secondary accessibility study.* Edmonton: Alberta Advanced Education. http://www.advancededucation.gov.ab.ca/news/2001/May/Summary_Report.pdf

Data from focus groups (with secondary school students, postsecondary students, graduates, apprenticeship employers, school counsellors, financial aid administrators, parents, youth not enrolled in postsecondary education, and adults considering postsecondary education) and a telephone survey of the 1999–2000 secondary school graduating class, are analyzed for factors influencing postsecondary participation and non-participation, and financial and non-financial barriers to participation.

James, Richard. 2002a. *TAFE, university or work? The early preferences and choices of students in years 10, 11 and 12.* National Centre for Vocational Education Research. Australian National Training Authority.
http://www.ncver.edu.au/research/proj/nr9030.pdf

This Australian study used data from a 1998 survey of high school students to examine the influence of socioeconomic variables on students' aspirations and expectations. Parental education, used as a proxy for socioeconomic status, was found to have the strongest effect on students' intentions, though rural location also correlated strongly with aspirations for Technical and Further Education (TAFE) and with decisions to work after high school. Students aspiring to university were more likely to view university as affordable and a degree as a good investment. Students aspiring to TAFE, like students planning to work after high school, were less likely to view higher education as personally relevant and less likely to believe their parents could afford a university education.

James, Richard. 2002b. *Socioeconomic background and higher education participation: An analysis of school students' aspirations and expectations.* Centre for the Study of Higher Education, University of Melbourne, Australia.
http://www.dest.gov.au/archive/highered/eippubs/eip02_5/eip02_5.pdf

This study uses survey data to examine the attitudes of senior high school students toward higher education, including their aspirations and expectations. Low-income youth were found to have lower expectations and aspirations and a greater prevalence of negative attitudes toward the value of postsecondary education, and they were the least likely to believe that their parents wanted them to enrol in university and the most likely to perceive cost as a barrier.

See also: James, Richard, et al. 1999. *Rural and isolated school students and their higher education choices: A re-examination of student location, socioeconomic background, and educational advantage and disadvantage.* Centre for the Study of Higher Education and the Youth Research Centre, University of Melbourne, Australia.
http://www.dest.gov.au/archive/nbeet/publications/pdf/99_11.pdf

Johnson, David R., and Fiona Rahman. 2005. "The role of economic factors, including the level of tuition, in individual university participation decisions in Canada." Working paper, Department of Economics, Wilfrid Laurier University, Waterloo, Ontario.

Using a sample of respondents aged between 17 and 24 from Canadian Labour Force Survey data for 1976 to

2003, the authors find that increasing tuition levels during the 1990s reduced the probability of youth attending in all but Quebec, and that higher female participation is a function of higher returns to university.

Junor, Sean, and Alex Usher. 2006. *Student aid time-bomb: The coming crisis in Canada's financial aid system.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/timebomb.pdf
This paper identifies four factors predicted to compromise the availability of financial assistance for low-income students in Canada's postsecondary system: a movement toward universal financial assistance policies; rising costs in the student loan system; the phasing out of the CMSF in 2010; and the suggestion that the federal government might turn student financial aid over to the provinces and territories. Research on the impact of grant aid is also examined, leading the authors to conclude that because low-income students are more price-sensitive, policies that reduce net cost for low-income students are preferred over universal financial assistance.

Kapsalis, Constantine. 2006a. "Who gets student loans?" *Perspectives on Labour and Income*. Vol. 7(3). March. Ottawa: Statistics Canada, 75-001-XIE.
http://www.statcan.ca/english/freepub/75-001-XIE/1030675-001-XIE.pdf
The purpose of this study was to evaluate the effectiveness of the Canada Student Loans Program for enhancing access to postsecondary education among low-income Canadians. Specifically, it examines the extent to which student loans are targeted to low-income youth, the extent to which loan amounts cover actual financial need, and the implications of basing funding decisions for dependent students, in part, on parental income. Students from Quebec, Northwest Territories, and Nunavut do not participate in the Canada Student Loans Program and are thus excluded from the study.

Kapsalis, Constantine. 2006b. *Factors affecting the repayment of student loans.* Ottawa: Statistics Canada, 81-595-MIE2006039.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2006039.pdf
This study examines the student loan repayment status, as of 2003, of 128,000 former students who consolidated their student loans in 1994–95. Nine years after consolidation, 31% of the loans were in default. That the vast majority of defaults occurred within three years of consolidation suggests that repayment difficulty is most acute shortly after graduation. Income after graduation, rather than debt size, is found to be the most important determinant of a graduate's ability to repay the loan.

Kirby, Dale, and Michael Conlon. 2005. "Comparing the economic experiences of rural and urban university students." *The Alberta Journal of Educational Research*. Vol. 51(1). Spring.
Survey data are analyzed to identify differences in the experiences of university students from rural origins and those from urban origins. Findings reveal that students relocating from rural areas experience higher living costs because they are living away from the parental home and they are more likely than their urban counterparts to use scholarships, grants, bursaries, and student loans. At the same time, the proportion of rural-originating students who indicated concern about the cost of attending university was only slightly higher than that of urban-originating students.

Knighton, Tamara. 2002. "Postsecondary participation: The effects of parents' education and household income." *Education Quarterly Review*. Vol. 8(3).
http://www.statcan.ca/english/freepub/81-003-XIE/0030181-003-XIE.pdf
The separate and combined effects of household income and parental education on postsecondary participation are measured using data from 1,640 SLID respondents aged between 18 and 21 in1998. The study found that parents' education remained a strong predictor of their children's participation in postsecondary education. Interestingly, 68% of youth in the lowest-income quartile whose parents also had postsecondary education participated in postsecondary themselves, whereas just 56% of youth in the highest-income quartile whose parents did not have a postsecondary education participated.

Krahn, Harvey, and Julie Hudson, 2006. *Pathways of Alberta youth through the post-secondary system into the labour market, 1996–2003.* Ottawa: Canadian Policy Research Networks.
http://www.cprn.org/en/doc.cfm?doc=1568

Of the students surveyed five years after high school graduation in 1996, 60 per cent had graduated from a postsecondary institution. The educational achievement of their parents and their parents' income level are found to strongly predict their children's persistence in obtaining a postsecondary credential, particularly a university credential. Aboriginal youth exhibit lower rates of credential attainment. Community size was not a significant predictor, which may reflect the provision of community colleges in non-urban areas of the province. Youth who had discontinued postsecondary studies by 2003 cited lack of interest (37%) and unmet expectations (20%) as their reasons.

Lambert, Mylène, Klarka Zeman, Mary Allen, and Patrick Bussière. 2004. *Who pursues postsecondary education, who leaves, and why: Results from the Youth in Transition Survey.* Ottawa: Statistics Canada, 81595MIE2004026.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2004026.pdf

This study identifies socio-demographic characteristics of postsecondary non-attendees, non-completers, and completers as well as their reasons for not completing postsecondary studies. Individuals who leave postsecondary studies prior to completion are found to share more socio-demographic traits with non-attendees than with completers. Top reasons for program incompletion include lack of fit with program, lack of confidence in skills, and difficulty keeping up with workload. Just 11 per cent cited financial considerations as their main reason for leaving. Respondents who cited financial barriers to participation in 1999, but subsequently enrolled, were more likely to drop out of their program than those who had not cited financial barriers.

Lang Research. 2002. *Report on the meta-analysis of post-secondary institutional graduate surveys.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/lang_en.pdf

This report presents the results of a meta-analysis of graduate surveys conducted between 1994 and 2001, representing 47 universities and 106 colleges across Canada. The research reveals findings similar to other studies covering similar periods of time. University students rely most heavily on employment income to fund their education, and half of the sample graduated with debt averaging $21,200. One notable finding is that the graduates of the universities that have the largest proportion of their students carrying loans report the lowest starting salary of $24,900.

Lefebvre, Sophie. 2004. "Saving for postsecondary education." *Perspectives on Labour and Income*. Vol. 5(7). July. Ottawa: Statistics Canada.
http://www.statcan.ca/english/freepub/75-001-XIE/1070475-001-XIE.pdf

In this study, parental income, education, and expectations were found to be positive and significant predictors of saving behaviour, both in terms of the likelihood of saving and the amounts saved. Parents expecting their children to receive grant aid saved significantly lower amounts. Savings behaviour by province was found to correlate with tuition fees.

Livingstone, D.W., and Susan Stowe. 2001. *Class and university education: Inter-generational patterns in Canada.* NALL Working Paper No. 36. Toronto: Centre for the Study of Education and Work, Ontario Institute for Studies in Education of the University of Toronto.
http://www.oise.utoronto.ca/depts/sese/csew/nall/res/36classanduniversity.pdf

This study draws on secondary data to examine university participation by class and finds higher rates of participation among youth of professional/managerial families than working class families.

Looker, E. Dianne, and Graham S. Lowe. 2001. *Post-secondary access and student financial aid in Canada: Current knowledge and research gaps.* Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/cprn-bkgnd.pdf

This article presents findings from a review of the literature on postsecondary costs and sources of student financial aid, and summarizes areas for further research. Because the report, produced in 2001, is based on literature from the 1990s, it does not address research findings and gaps identified over the past six years.

Looker, E. Dianne. 2002. *Why don't they go on? Factors affecting the decisions of Canadian youth not to*

pursue post-secondary education. Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/looker_en.pdf

This article reviews the literature on postsecondary non-participation, and finds lower participation among youth with low-income background and/or low parental education background, youth with rural, Aboriginal, or single-parent origins, individuals with physical and/or learning disabilities, and youth with negative attitudes toward education or in a non-academic secondary school stream.

Maag, Elaine M., and Katie Fitzpatrick. 2004. *Federal financial aid for higher education: Programs and prospects.* Washington D.C.: Urban Institute, Tax Policy Center. http://www.taxpolicycenter.org/UploadedPDF/410996_federal_financial_aid.pdf

This article summarizes the types of student financial aid currently available in the United States, presents recent research findings on their effectiveness in enhancing access, and discusses implications for policy. Research is presented confirming that, unlike grant aid, the availability of student loan aid has little impact on the enrolment of low-income American youth.

Malatest, R.A., and Associates. 2004. *Aboriginal peoples and post-secondary education: What educators have learned.* Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/aboriginal_en.pdf

This report summarizes the current literature on barriers to postsecondary participation and retention experienced by Aboriginal Canadians with a particular focus on funding sources, funding policies and their shortcomings. Findings are supplemented with stakeholder interviews.

Malcolmson, John, and Marc Lee. 2004. *Financing higher learning: Post-secondary education funding in B.C.* B.C. Office, Canadian Centre for Policy Alternatives. http://www.policyalternatives.ca/documents/BC_Office_Pubs/financing_higher_learning.pdf

Current operating funding of British Columbia colleges and universities is compared to the funding necessary to accommodate the increase in capacity desired by the provincial ministry. It presents an overview of historical funding trends, emphasizing that per-student funding decreased steadily over the 1990s, and concludes that expanding capacity without sufficient operating funds may result in higher tuition fees, which in turn may compromise the affordability of postsecondary education for low-income youth.

Market Quest Research Group. 2005. *Survey of 2002 New Brunswick high school graduates.* Fredericton: Department of Training and Employment Development and the Department of Education. http://www.gnb.ca/0000/publications/polplan/TRfeb15.pdf

The findings of this survey are described as they relate to postsecondary motivations, choices, and financing. Of current postsecondary students (56% of the sample), top motivations included personal interest, improved employment opportunities, and expectation of financial benefits. The most common methods of funding their education were government student loans, familial support, and personal savings. Non-attendees ranked nine potential barriers to postsecondary participation. Financial reasons were cited as having a major impact by 37% of the sample, topped only by "career undecided" (38%). Just over 50% cited financial considerations as a major or minor barrier and of those, 70% indicated fear of debt as influential in their decision.

McElroy, Lori. 2005. *Student aid and university persistence: Does debt matter?* Montreal: Canada Millennium Scholarship Foundation. http://www.millenniumscholarships.ca/images/Publications/Student_Aid_eng.pdf

First-year university student data (1997–98) is compared to data collected from the same sample five years later. Among students receiving grant aid but not loan aid, the amount of grant aid did not significantly influence persistence. However, students with loan aid but not grant aid were significantly less likely to persist than were students with a mix of loan and grant aid, leading the author to conclude that persistence declines as debt increases. Possible explanations for lower persistence among students with loan aid include debt aversion and unmet need. Students in the study were from six universities in three Canadian provinces — Ontario, Quebec and British Columbia.

McMullen, Kathryn. 2005a. "Earnings trends in the knowledge-based economy." *Education Matters: Insights on Education, Learning and Training in Canada*. Vol. 2(1). Ottawa: Statistics Canada. 81-004-XIE 2005-001.
http://www.statcan.ca/english/freepub/81-004-XIE/2005001/earn.htm
This article examines the earnings gap between individuals with university credentials and those with secondary school as their highest level of education. Between 1981 and 2001, employment of university graduates in high-knowledge industries rose by 245%, compared to 31% for secondary school graduates. However, relative to other sectors, rapid growth in the high-knowledge sector has not been accompanied by an overall increase in the real or relative earnings of university graduates. Overall, while there may be specific labour shortages in some sectors, the wage patterns of highly educated workers do not suggest a widespread shortage of highly skilled workers in Canada.

McMullen, Kathryn. 2005b. "Aboriginal peoples in Canada's urban area: Narrowing the education gap." *Education Matters: Insights on Education, Learning and Training in Canada*. Vol. 2(3). Ottawa: Statistics Canada, 81-004-XIE 2005-003.
http://www.statcan.ca/english/freepub/81-004-XIE/2005003/aborig.htm
This study summarizes trends in the educational attainment of urban Aboriginal individuals in select Canadian cities between 1981 and 2001. During this period, urban Aboriginal secondary school completion and postsecondary participation rates increased. However, gaps in educational attainment remain. Given the relative youthfulness of the Aboriginal population, educational attainment issues will become increasingly important as Aboriginal children mature and become eligible for postsecondary education.

McMullen, Kathryn. 2004a. "Distance as a postsecondary access issue." *Education Matters: Insights on Education, Learning and Training in Canada*. April 30. Ottawa: Statistics Canada, 81-004-XIE 2004-04.
http://www.statcan.ca/english/freepub/81-004-XIE/200404/dist.htm
This article summarizes the findings of research by Frenette (2002, 2003) on the impact of proximity to postsecondary institutions on participation rates of Canadian youth. It emphasizes that geographical barriers must be considered an important factor in postsecondary participation, because, for many Canadians, the decision to participate in postsecondary education requires that they also make the decision to live away from home.

McMullen, Kathryn. 2004b. "Paying for higher education." *Education Matters: Insights on Education, Learning and Training in Canada*. Sept. 9. Ottawa: Statistics Canada.
http://www.statcan.ca/english/freepub/81-004-XIE/200409/peps.htm
This publication summarizes the analysis by Barr-Telford et al. (2003) of the Postsecondary Education Participation Survey data. Main findings in the areas of demographics, prior postsecondary experience, parental expectation, education and income, provincial location, field of study, and tuition fee data considered over time, student spending, financing, and barriers to participation are presented.

Mendelson, Michael. 2006. *Aboriginal peoples and postsecondary education in Canada.* Ottawa: Caledon Institute of Social Policy.
http://www.caledoninst.org/Publications/PDF/595ENG.pdf
Data from the 2001 Census and the 2001 Aboriginal Peoples Survey are used to determine deterrents to postsecondary participation. The author concludes that not completing secondary school is an important deterrent. The report includes a review of the available sources of data on Aboriginal postsecondary participation, leading the author to conclude that there is lack of Aboriginal-specific data in general postsecondary participation studies, a bias in Indian and Northern Affairs Canada data toward on-reserve Status Indians, and a lack of qualitative research on Aboriginal postsecondary participation. Limitations of the census data are presented in an appendix, as is a compilation of Statistics Canada surveys pertaining to Aboriginal education.

Métis Nation of Alberta Association. 2000. *Final report: Native education policy review.* Edmonton: Alberta Learning.

http://www.education.gov.ab.ca/nativeed/nativepolicy/MetisNation.pdf
This review of Alberta's Native Education Policy includes a list of factors compromising access by Métis Albertans to postsecondary education, including a prevalence of poverty, higher-than-average incidence of single-parent family structure, and exemption of Métis individuals from federal Aboriginal postsecondary funding.

Morissette, Rene, Yuri Ostrovsky, and Garnett Picot. 2004. *Relative wage patterns among the highly educated knowledge-based economy.* Ottawa: Statistics Canada, 11F0019MIE2004232
http://www.statcan.ca/bsolc/english/bsolc?catno=11F0019M2004232
This study tests the assumption that increased demand for high-skilled labour in a knowledge economy leads to wage increases among university graduates. The authors find that changes in the education premium between 1980 and 2000 were similar across all knowledge sectors. Thus, the authors conclude that the emergence of a knowledge-based economy has not, so far, resulted in a significant increase in the education premium.

Myers, Karen, and Patrice de Broucker. 2006. "Too many left behind: Canada's adult education and training system." CPRN Research Report W|34. Ottawa: Canadian Policy Research Networks.
http://www.cprn.org/en/doc.cfm?doc=1479
Descriptive data, derived from the Adult Education and Training Survey, illustrate the demographic characteristics of working-age adults who return to postsecondary education in five Canadian provinces. A review of the literature reveals that older students have greater financial needs, resulting from higher living costs, less reliance on familial financial support, and greater levels of accumulated debt. Older adults are also found to be more likely to finance higher education through private bank loans and lines of credit, leading the authors to suggest that expected spousal contributions and the requirement of exhausting accumulated assets are potential disincentives to student loan usage.

O'Donnell, Vivian, and Adriana Ballardin. 2006. *2001Aboriginal peoples survey. Provincial and territorial reports: Off-reserve Aboriginal population.* Ottawa: Statistics Canada, 89-618-XIE.
http://www.statcan.ca/english/freepub/89-618-XIE/89-618-XIE2006001.pdf
The 2001 Aboriginal Peoples Survey includes data on the health, language, employment, income, schooling, housing, and mobility of Canada's Aboriginal population. This report also presents provincial and territorial data on the off-reserve Aboriginal population as a whole and by sub-population (North American Indian, Métis, and Inuit). Comparative data from the 2001 Census and the 1991 Aboriginal Peoples Survey are also provided. The report does not address the affordability of postsecondary education for this population, but documents income and education disparity as well as reasons for leaving high school, with the most common self-reported reasons for high school incompletion being a desire or a need to work.

O'Donnell, Vivian, and Heather Tait. 2003. *2001 Aboriginal Peoples Survey. Initial findings: Well-being of the non-reserve Aboriginal population.* Ottawa: Statistics Canada, 89-589-XIE.
http://prod.library.utoronto.ca:8090/datalib/codebooks/cstdli/aps/2001/89-589-xie2003001.pdf
Included in this report are data on rates of and reasons for high school incompletion, postsecondary participation rates, and barriers to postsecondary participation of Canada's Aboriginal population. Comparisons are also made to Canada's non-Aboriginal population.

Ouellette, Sylvie. 2006. *How students fund their postsecondary education: Findings from the Postsecondary Education Participation Survey.* Ottawa: Statistics Canada, 81-595-MIE–No. 042.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2006042.pdf
Data from the 2002 Postsecondary Education Participation Survey are analyzed to determine methods used by students to finance their postsecondary education.

Palameta, Boris, and Xuelin Zhang. 2006. *Does it pay to go back to school? Perspectives on Labour and Income*. Vol. 7(3). March. Ottawa: Statistics Canada, 75-001-XIE.
http://www.statcan.ca/english/freepub/75-001-XIE/1030675-001-XIE.pdf
In response to a growing trend of adults returning to postsecondary education from the labour force, and a

corresponding lack of data on the economic benefits of doing so, this study draws on the 1993–96 and 1996–2001 SLID data to calculate and compare the earnings of adults who returned to school with that of the ones who did not.

Paulsen, Michael B. 1998. "Recent research on the economics of attending college: Returns on investment and responsiveness to price." *Research in Higher Education*. Vol. 39(4): 471–89.

This American study draws on secondary research to determine that the private returns on an investment in higher education are similar across race and gender groups, but vary considerably by field of study.

Prairie Research Associates. 2005. *Canadian college student finances: Third edition.* with the participation of the Canadian College Student Survey Consortium. Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/colleges-2004_en.pdf

Since 2002, the Canadian College Student Survey Consortium has conducted an annual survey of college student finances. This report summarizes the findings of the 2004 survey of students from 25 colleges. The report provides an overview of the Canadian college student body, including demographic characteristics, prior postsecondary experience, and methods used to pay for college. For some variables, data are presented by province and type of institution.

Rae, Bob. 2005. *Ontario: A leader in learning. Report and recommendations, February 2005.* Toronto: Ontario Ministry of Training, Colleges and Universities.
http://www.edu.gov.on.ca/eng/document/reports/postsec.pdf

This report, based on stakeholder consultations and evidence-gathering, provides recommendations to the ministry on issues of accessibility, quality, system design, funding and accountability. The report describes recent trends in postsecondary funding, including assumptions of cost-sharing by stakeholders. Rae concludes that, although overall institutional revenue has increased, it has failed to keep pace with growing enrolment and costs. In this context, a number of recommendations are provided, including increased federal funding and the use of multi-year funding commitments to facilitate institutional planning, greater reliance on private-sector funding, greater emphasis on non-repayable financial aid for students in high need, and higher student loan limits and income-sensitive repayment terms.

Rahman, Atiq, Jerry Situ, and Vicki Jimmo. 2005. *Participation in postsecondary education: Evidence from the Survey of Labour and Income Dynamics.* Ottawa: Statistics Canada, 81595MIE2005036.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2005036.pdf

Data from the 1998 and 2001 SLID are used to determine the effects of parental income, parental education, family structure, and rural or urban origins on postsecondary participation. Findings confirm that the participation rate is lowest for youth in the bottom income quartile and that this difference is largely explained by variance in university, rather than college, attendance. Unique to this study, however, is the finding that variance in participation rates among the top three income quartiles is not statistically significant. The findings also confirm that parental education is a significant predictor of university participation but, unlike previous research, this study finds that parental education significantly predicts college participation as well. Finally, the study confirms that university, but not college participation is higher among youth from two-parent than single-parent families, and that urban youth are more likely than rural youth to attend university, but are equally likely to attend college.

Reed, Katherine. 2005. *Fairness in education for single parents in Nova Scotia.* Canadian Centre for Policy Alternatives.
http://www.policyalternatives.ca/documents/Nova_Scotia_Pubs/2005/Fairness_in_Education.pdf

This paper addresses the 2000 policy that reduced the eligibility of Employment Support and Income Assistance (ESIA) recipients to continue qualifying for benefits when enrolling in postsecondary programs exceeding two years in duration. The author uses budget calculations of four hypothetical single-parent university students to illustrate that, without social assistance benefits, annual student loan debt would increase.

Riddell, W. Craig. 2003. *The role of government in post-secondary education in Ontario (background paper)*. Background paper for the Panel on the Role of Government in Ontario. http://www.law-lib.utoronto.ca/investing/reports/rp29.pdf

This paper argues for government involvement in postsecondary education, addressing private and social returns to education, innovation, knowledge creation and economic growth, and such non-market benefits of education as intergenerational effects, health, criminal activity, and civic participation, as well as tax and transfer effects.

Rivard, Maud, and Mélanie Raymond. 2004. "The effect of tuition fees on post-secondary education in Canada in the late 1990s." Working Paper 2004–09. Ottawa: Department of Finance.

This paper explores sensitivity to tuition changes by family earnings, controlling for academic preparation and opportunity cost. YITS data reveals that family earnings do not predict enrolment, leading the authors to conclude that participation is inelastic to price and income.

Robertson, Todd. 2003. "Changing patterns of university finance." *Education Quarterly Review*. Vol. 9(2).

This article summarizes trends in Canadian university funding with an emphasis on the introduction of a "user pay" philosophy in the 1990s. Changes in university operating revenues, the share of revenue from government, private, and tuition fee sources, and shifts in operating expenditures are documented. On a per-student basis, government contributions are shown to have fallen significantly between 1986–87 and 2000–01. To compensate, private revenue increased substantially, with tuition accounting for the majority of the increase.

Rounce, Andrea. 2004. *Access to post-secondary education: Does class still matter?* Saskatoon: Canadian Centre for Policy Alternatives. http://www.policyalternatives.ca/documents/Saskatchewan_Pubs/pse.pdf

This literature review examines recent research on relationships between socioeconomic status and postsecondary participation. The author identifies a lack of research on non-university and part-time postsecondary participation, and the impact of background factors on choice of institution and field of study. The challenges of measuring socioeconomic status are also discussed.

Rouse, Cecilia Elena. 2004. "Low-income students and college attendance: An exploration of income expectations." *Social Science Quarterly*. Vol. 85(5): 1299–1317.

This American study examines earnings expectations and college enrolment by income class, to determine whether lower earnings expectations of low-income youth contribute to their lower levels of postsecondary enrolment. Results show no significant difference in earnings expectations between the two groups, leading the author to conclude that variables other than earnings expectations account for variation in participation.

Shaienks, Danielle, Judy Eisl-Culkin, and Patrick Bussière. 2006. *Follow-up on education and labour market pathways of young Canadians aged 18 to 20: Results from YITS Cycle 3.* Ottawa: Statistics Canada, 81-595-MIE2006045. http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2006045.pdf

The characteristics of Canadians who delay transitions to postsecondary education are explored using 1999 and 2003 YITS. The likelihood of transitioning to postsecondary education is found to decline with age. Those making the transition at an older age are more likely to work during the academic year, and more likely to enrol in non-traditional institutions. The authors conclude that transitions become more difficult as one ages, marries, and has children.

Shipley, Lisa, Sylvie Ouellette, and Fernando Cartwright. 2003. *Planning and preparation: First results from the Survey of Approaches to Educational Planning (SAEP) 2002.* Ottawa: Statistics Canada, 81595MIE010. http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2003010.pdf

The extent to which parental savings behaviour correlates with parental attitudes, education and income, actual savings behaviour, and reasons for not saving are explored through an analysis of data from the 2002 Survey of Approaches to Educational Planning. Results show a positive correlation between savings behaviour and positive

parental attitudes toward higher education, parental income, and parental education. Savings are also more likely in households with two working parents. A greater proportion of parents were saving for their child's postsecondary education in 2002 than in 1999. Parents were found to overestimate the likelihood that their children would receive funding from other sources.

Situ, Jerry. 2006. *Canadian student loans repayment assistance: Who does and does not use interest relief?* Ottawa: Statistics Canada, 81-595-MIE2006047.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2006047.pdf

This study sought to identify the characteristics of borrowers who qualify for, but do not use, the interest relief programs. The findings reveal higher program use among borrowers who live in Atlantic and northern Canada, who are in their first two years of repayment, and in older age categories; and lower program use among borrowers who are in the lowest debt quartile upon entering repayment, borrowers who are four or more years into repayment, and borrowers who receive social assistance benefits, who live in rural areas, and whose parents are in the highest income quartile. The data did not permit an analysis of reasons for lower uptake among individuals intuitively more likely to use interest relief programs.

Snowdon, Ken. 2005. *Without a roadmap: Government funding and regulation of Canada's universities and colleges.* CPRN Research Report W|31. Ottawa: Canadian Policy Research Network.
http://www.cprn.org/en/doc.cfm?doc=1355

Changes in government funding and regulation policies over the past fifteen years have resulted in a number of challenges for Canadian postsecondary institutions. The author draws on secondary data to show that once enrolment is taken into account, per student funding provided to colleges and universities in 2004–05 was below the 1992–93 levels in six of the ten Canadian provinces. Additional cost pressures for institutions come from expanded research mandates and increased emphasis on tuition and private funding as sources of revenue.

St. John, Edward P. 2005. *Affordability of postsecondary education: Equity and adequacy across the 50 states*. Prepared for "Renewing our Schools, Securing our Future," A National Task Force on Public Education.
http://www.ecs.org/html/offsite.asp?document=http%3A%2F%2Fwww%2Eamericanprogress%2Eorg%2Fatf%2Fcf%2F%257BE9245FE4%2D9A2B%2D43C7%2DA521%2D5D6FF2E06E03%257D%2FUNEQUALFA%2EPDF

This American report addresses access to postsecondary education by low-income and racial minority groups. Despite recent increases in Pell Grant funding, tuition increases have caused the purchasing power of the Pell Grant to decline. The author shows that the average net cost of postsecondary education for low-income students in 1999–2000 had increased by $1,000 over the prior year and by $1,600 for lower-middle income students. Tax credits, on the other hand, virtually eliminated the increase in net cost to middle-income students.

Statistics Canada. 2006a. "Back-to-school factbook." *Education matters: Insights on education, learning and training in Canada*. Vol. 3(3). Ottawa: Statistics Canada

The 2006 Factbook presents national data on parental expectations and education savings, tuition fee trends, student living arrangements, student employment activities, student loan debt, enrolment trends, and graduate employment and income outcomes. Data is drawn from a variety of national surveys.

Swail, Watson Scott. 2004. *The affordability of university education: A perspective from both sides of the 49th parallel*. Washington, DC: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/Affordability.pdf

This study compares the affordability of university education in Canada and the United States, as of 2000–01. In terms of total cost, university is about 25% less expensive in Canada than in the United States. As a proportion of family income, the total cost of attendance is about the same in both countries, as is the net cost of attendance (cost minus grants). However, greater availability of grant and student loan aid in the United States makes university education more affordable, in terms of out-of-pocket expense. The author attributes Canada's less affordable system to a low-cost, low-aid policy model, whereas the United States tends to follow a high-cost, high-aid model, which enables the redistribution of funding based on the ability to pay. Canada's model, on the other hand, substitutes targeted subsidies to high-need students with a general subsidy (in the form of low

tuition).

Swail, Watson Scott, and Donald E. Heller. 2004. *Changes in tuition policy: Natural policy experiments in five countries*. Montreal: Canada Millennium Scholarship Foundation.
http://www.millenniumscholarships.ca/images/Publications/tuition_e.pdf

This study examines the variation in university enrolment among jurisdictions with markedly different tuition fee polices. The analysis includes Québec, British Columbia, Manitoba and Newfoundland, where tuition fees have either been frozen or reduced in the past ten to twenty years, Ireland where tuition fees were abolished in 1996, Australia and the United Kingdom, where tuition fees were introduced in the 1980s and 1990s, respectively, and Massachusetts, Virginia and California, where tuition prices were reduced in the 1990s.

Swail, Watson Scott, Kenneth E. Redd, and Laura W. Perna. 2003. "Retaining minority students in higher education: A framework for success." *ASHE-ERIC Higher Education Report*. Vol. 30(2).
http://www.educationalpolicy.org/pdf/Swail_Retention_Book.pdf

The authors explore reasons why, despite the availability of student financial aid, minority and low-income youth are less likely than average to enrol and persist in university bachelor degree programs in the United States. It is concluded that recent shifts in student aid policy have had a disproportionate negative impact on these student populations. A shift in the composition of financial aid that favours loans over grant aid is particularly detrimental, given the greater tendency of minority and low-income youth to be debt-averse. These groups are further disadvantaged by the trend toward merit-based grant aid, as they are less likely to meet the required academic criteria.

Swail, Watson Scott. 2002. *Higher education and the new demographics: Questions for policy*. Washington, D.C.: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/higherED_demographics02.pdf

This paper argues that while recent American policies have increased postsecondary opportunities for under-represented groups, there remains a gap in attendance among low-income, first-generation, and visible minority students. Methods of addressing the challenges posed by the changing demographics are discussed.

Taylor, Alison, and Harvey Krahn. 2005. "Aiming high: Educational aspirations of visible minority immigrant youth." *Canadian Social Trends*. Vol. 79. Winter. Ottawa: Statistics Canada.
http://www.statcan.ca/english/freepub/11-008-XIE/0030511-008-XIE.pdf

Educational aspirations of visible minority first- or second-generation immigrant youth are compared with those of Canadian-born non-visible minority youth. Data sources reveal that parental aspirations, parental education, and student grades have a strong positive effect on university aspirations of youth, while family structure, first language, parents' school involvement, and parents' supervision has little impact. Disadvantages related to community size, parental education, household income and grades are less influential on the aspirations of visible minority immigrant youth than they are on non-visible minority Canadian born youth.

Tomkowicz, Joanna, and Tracey Bushnik. 2003. *Who goes to post-secondary education and when: Pathways chosen by 20 year-olds*. Ottawa: Statistics Canada, 81-595-MIE – No. 006.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2003006.pdf

This study looks at the influence of socio-demographic variables on students' decisions whether to participate in postsecondary education. Findings reveal province of residence and absence of non-repayable financial aid to significantly predict delayed transitions. Unlike previous research, this study did not find gender, dependent children, parental education or parental attitudes to significantly predict delayed transitions.

Trimension Group. 1997. *Student assistance task group report*. Prepared for Saskatchewan Post-Secondary Education and Skills Training. June.
http://www.aee.gov.sk.ca/admin/pdfs/stg/app2_execsum.html

Findings are presented from a survey of full-time students, on methods students use to pay for postsecondary education. The report includes descriptive statistics on the demographic characteristics of respondents most likely to hold government student loans, attitudes toward debt and perceptions of ability to repay debt, and

perceptions of the effectiveness and equity of the Canada/Saskatchewan Student Loans Program.

Usalcas, Jeannine, and Geoff Bowlby. 2006. "Students in the labour market." *Education matters.* Vol. 3(1). Ottawa: Statistics Canada.
http://www.statcan.ca/english/freepub/81-004-XIE/2006001/market.htm
This research draws on Labour Force Survey data to examine the labour market activities of postsecondary students. Comparing SLID data over time, we see an increase in the proportion of full-time students funding their postsecondary education through employment income, at least in part. Students also work slightly longer hours during the school year and during the summer. Variations from province to province in student employment activities are presented.

Usher, Alex. 2006a. "Beyond the sticker price: A closer look at Canadian university tuition fees." Educational Policy Institute, Canadian Education Report Series.
http://www.educationalpolicy.org/pdf/BeyondTheStickerPrice.pdf
Although recent affordability research acknowledges net price of tuition as a more valid measure of educational cost than sticker price, there remains a tendency to calculate net price as the cost of tuition minus grant aid. This author, in contrast, suggests that calculations of net price take into account tax credits as well as grant aid, since tax credits act as a form of tuition rebate. Calculations of net price, by province, are provided, from which the author concludes that between 1999–2000 and 2005–06, the sticker price of tuition increased nationally by 9 per cent, but concurrent increases in tax credits resulted in an average net tuition price decline of 2 per cent.

Usher, Alex. 2006b. *Grants for students: What they do, Why they work*. Canadian Education Report Series. Toronto, ON: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/GrantsForStudents.pdf
This paper presents a review of the literature on grants and their impact on postsecondary accessibility. The majority of research finds that fluctuations in available grant aid influence enrolment patterns of lower, but not middle- or upper-income youth. The author explores reasons for this variation and identifies shortcomings in available datasets and research methodologies.

Usher, Alex, and Kim Steele. 2006. *Beyond the 49th parallel II: The affordability of university education.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/49thParallel.pdf
This study draws on secondary data to compare the affordability of university education in Canada and the United States. While there is value in the conclusion that overall, university is less affordable in Canada, equally valuable is the conclusion that there is greater variability in affordability across Canadian jurisdictions than between the two countries. The main differences within Canadian jurisdictions can, according to the authors, be attributed to higher tuition levels in the less affluent provinces, and higher levels of student financial aid spending in the wealthier provinces. The authors conclude that the most valid measure of affordability is that which measures out-of-pocket costs incurred at time of enrolment (total cost of tuition, fees, materials, books, and living expenses, less repayable and non-repayable government student financial assistance and tax expenditures), expressed as proportion of median household income.

Usher, Alex. 2005a. *Much ado about a very small idea: Straight talk about income-contingent loans.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/ICR.pdf
The author responds to recent considerations of income-contingent student loans in Ontario and Quebec by examining their use in nine countries, and concludes that while formalized income-contingent loans may facilitate repayment for the small minority of students experiencing repayment difficulty, they would not be an effective means of increasing access to postsecondary education. Access among low-income Canadians would be better served, the author argues, by an increase in need-based grant funding and greater investment in student loan funding.

Usher, Alex. 2005b. *A little knowledge is a dangerous thing: How perceptions of costs and benefits affect access to education.* Toronto: Educational Policy Institute.

http://www.educationalpolicy.org/pdf/littleknowledge.pdf
While perceptions of postsecondary costs and benefits are thought to influence participation, little is known about the extent to which individuals perform rational analyses based on accurate cost:benefit information. This article draws on recent research to illustrate that Canadians have a poor understanding of actual costs and benefits, and that this is particularly the case among lower-income individuals.

Usher, Alex. 2005c. *Global debt patterns: An international comparison of student loan burdens and repayment conditions.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/Global_Debt_Patterns.pdf
This study examines debt in an international context and concludes that high debt loads can be manageable with generous interest rates and repayment policies, as exemplified by Sweden. Canada is found to have the fourth highest average student debt level, but is also shown to have among the highest repayment-period interest rates and the shortest amortization period of the countries examined, resulting in Canada's having among the highest average debt service ratios. The author concludes that debt reduction measures are not the most efficient or effective method of reducing the burden of student debt.

Usher, Alex, and Amy Cervenan. 2005. *Global higher education rankings: Affordability and accessibility in Comparative Perspective, 2005.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/Global2005.pdf
The affordability and accessibility of postsecondary education are compared among sixteen nations. Canada is determined to rank eleventh on six measures of affordability, surpassing only Australia, the United States, the United Kingdom, New Zealand, and Japan.

Usher, Alex. 2004a. *A new measuring stick: Is access to higher education in Canada equitable?* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/measuringstick.pdf
The author addresses the absence of a standardized inter-jurisdictional method of comparing the social origins of university students by introducing an Educational Equity Index (EEI; the ratio of the adult male population with a university credential to the proportion of the university student population with a male parent with a university credential). Using the EEI to measure the extent to which participants with a higher socioeconomic background are over-represented in higher education, Usher finds that nationally, children of university-educated fathers are over-represented by about 59%. While differences in educational equity rates are observable by jurisdiction, these differences are not easily explained.

Usher, Alex. 2004b. *Are the poor needy? Are the needy poor? The distribution of student loans and grants by family income quartile in Canada.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/PoorNeedy.pdf
The author examines the distribution of student loan and grant aid across income quartiles to evaluate the equity of the current student financial aid program for low-income students, and finds that about 40% of loan and grant aid is distributed to students with above-median income backgrounds. The author argues that this compromises the effectiveness of the financial aid program for high-need students, and suggests that funding criteria based on income rather than need would create a more equitable, and efficient, financial aid system.

Usher, Alex. 2004c. *I love you, Brad, but you reduce my student loan eligibility.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/LoveUBrad.pdf
This paper evaluates the eligibility criteria and spousal contribution requirements of student loan applicants with spouses to argue that current policy creates barriers for low- and moderate-income students. Readers should note that this article was published prior to the implementation of revised contribution requirements.

Usher, Alex. 2002. *Who gets what? The distribution of government subsidies for post-secondary education in Canada.* Toronto: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/Who_Gets_What.pdf

This study finds that 62% of universal aid is distributed to students with above-median income backgrounds, leading the author to conclude that universal aid is not consistent with a strategy to facilitate participation among youth of low-income backgrounds. The author concludes that repayable financial aid is targeted to low-income dependent students, but it is widely distributed among higher-income independent students, which may compromise the availability of funds for those in greatest need.

Vaillancourt, Chantal. 2005. *Manitoba postsecondary graduates from the class of 2000: How did they fare?* Ottawa: Statistics Canada, 81-595-MIE – No. 029.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2005029.pdf
Using data from the National Graduates Survey (Class of 2000), Manitoba's postsecondary graduates are compared with graduates nationally in terms of demographic characteristics, education, employment outcomes, and student debt.

Williams, Adriane, and Watson Scott Swail. 2005. *Is more better? The impact of postsecondary education on the economic and social well-being of American Society.* Washington, DC: Educational Policy Institute.
http://www.educationalpolicy.org/pdf/gates.pdf
This is a review of recent American literature on economic and non-economic public and private returns on investment in postsecondary education. It provides an overview of the findings to date on whether there are sufficient returns to the individual and society to justify increasing public investment in postsecondary education.

Wilson, Fred. 2003. "Education as economic investment: Comments on tuition fee policy." *Interchange*. Vol. 34(1): 89–104.
This article cautions against over-reliance on the economic theory of return on investment, which holds that students will continue to invest in postsecondary education, despite tuition fee increases, provided they continue to perceive postsecondary education as a worthwhile investment. The author argues that the economic theory does not take into account the hidden implications of tuition fee increases, such as higher debt among lower-income students, the influence of higher debt loads on deferral of such life decisions as home-buying and starting a family, and the influence of higher tuition fees on choice of institution.

Zeman, Klarka, Tamara Knighton, and Patrick Bussière. 2004. *Education and labour market pathways of young Canadians between age 20 and 22: An overview.* Ottawa: Statistics Canada, 81-595-MIE2004018.
http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2004018.pdf
Data on individuals participating in both the 1999 and the 2001 cycles of YITS are used to analyze non-traditional pathways to, and through, postsecondary education. Youth without a high school diploma by age 22 were unlikely to have participated in postsecondary education two years later (18% participated), and those who did participate were more likely to attend a college or vocational institute than a university. One-fifth of youth enrolled in a postsecondary institution at age 22 had, two years later, left prior to completion of their credential.

Zhao, John, and Patrice de Broucker. 2001. "Participation in postsecondary education and family income. 1998." *The Daily*. December 7, 2001. Ottawa: Statistics Canada.
http://www.statcan.ca/Daily/English/011207/d011207c.htm
This study uses data from the 1998 SLID to examine the impact of family income on postsecondary participation, and finds overall participation rates increase as family income increases, although the differences are more pronounced for university than for college participation.