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**Rural Versus Urban Students –  
Differences in Accessing and Financing  
PSE, Their PSE Outcomes and Their Use  
of Distance Education Research Projects**

Lavallée, Laval and Kapsalis, Constantine and Usher,  
Alexander

Data Probe Economic Consulting

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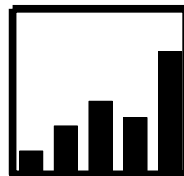
**Draft Report**

Laval Lavallée  
Constantin Kapsalis  
Alexander Usher

January 9th, 2005



**Vestimetra  
International Inc.**  
Management Consultants



**Data Probe Economic  
Consulting Inc.**



Educational Policy Institute

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## Executive Summary

Among the questions to examine in this research study are:

- 1) the distance from a PSE institution (commuting distance to PSE institution);
- 2) financial barriers that student face (costs of living away from home, fear of higher debt load, workings of the student loan program);
- 3) the use of distance learning methods such as e-learning;
- 4) the rate of return on PSE for rural students (including differences in rural as opposed to urban recipients of CSL); and,
- 5) other barriers, such as emotional concerns of being away from home, lack of university role models in rural communities, etc.).

In addressing these questions, we examine specifically the differential impacts according to rural-urban origins. To these, we will add institution type, financial variables, gender, age, aboriginal status, province, presence of a disability, academic performance in secondary school and a range of indicators measuring “attachment to education” at the secondary level.

In the first part of this paper, we looked at data from YITS on the urban-rural divide. This data showed that there were indeed some small differences between rural and urban students in terms of the kinds of assistance they received, but that these differences were essentially minor compared to other obvious differences such as province of origin. Multivariate analysis showed that even though rural students might have higher costs, urban students are likelier - other things being held constant – to receive government financial assistance. Data from the Student Financial Survey confirmed that, while differences between rural and urban students in terms of income, expenditure, employment and use of certain financial instruments were statistically significant, they were not especially large in magnitude.

The most significant finding of the report lies in the relationship between distance from PSE institutions and PSE participation and type of institution chosen. Generally speaking, distance from PSE institutions or rural residency (the two are highly correlated) have important effects on the PSE decisions and outcomes of youth. These impacts vary inversely with income, that is to say, the lower the level of parental income, the greater the impact. Youth from rural communities beyond commuting distance to a

PSE institution are less likely than youth from urban communities of comparable income levels to enrol in PSE; however, the gap increases significantly when rural families' incomes fall below \$40,000 per year. Moreover, regardless of income, they are more likely to enrol in a college if a university is not located within commuting distance (our analysis of YITS data also found substantially higher numbers of rural students in colleges than in universities). Distance does not appear to have a major effect on the choice of the field of study; however, there does seem to be some major differences between urban and rural students' post-graduation incomes, at least among those who choose to borrow to finance their education.

Understanding the reasons why students move to attend school is somewhat difficult as it requires a careful disentangling of income and "rurality". In short, our results show that income does not explain very much in terms of rural students' mobility patterns, but explains a great deal of urban students' behaviour. The reason for this is relatively simple: rural students have to move; urban students can choose to move if their families' financial circumstances permit them to do so.

With respect to distance education, our examination of YITS data suggests that there is no especially great demand for or use of this medium, at least among the younger students that are covered by the YITS Cycle 1 and Cycle 2 surveys. Less than 5% of youth have ever taken a distance education course, and it seems likely that some of these are doing so part-time. There are few obvious correlations between socio-demographic factors (i.e. gender, region, etc) and use of distance education; however, outstanding student loan debt is noticeably higher among distance education users than among non-users.

The policy implications of all this are not entirely clear. To the extent where there is a "problem" in access to PSE for rural students, it is concentrated among the lowest income rural residents, from the smallest and most remote rural communities. Presumably, a substantial proportion of these "missing" students are therefore aboriginal. A holistic strategy on rural students should not ignore this factor.

To the extent where the "missing" students are poor, it would seem that part of the solution lies in better financial aid. But the case here is not entirely clear cut. Rural students who do attend PSE have financial profiles that differ little from urban students – a general program to help rural students would therefore probably result in substantial windfall gains for those students already enrolled. An effective financial aid program

targeted at rural areas would need to discriminate on family income. A level at or just above the current NCB level (i.e. \$35,000 per year) would seem to be ideal, but this has already been introduced through the new Canada Access Grant. It would be intriguing to monitor the progress of rural students after the introduction of the grant to see if it had any effect on rural access to PSE.

However, it needs to be acknowledged that none of the data permits us to definitively rule out barriers related to academic preparedness as the reason behind poor rural students' non-attendance in PSE. We know that school results are lower in rural areas than in urban ones; it may well be that a high proportion of low-income rural students are simply not prepared for or interested in attending PSE. If this is the case, then improving financial aid programs will not yield any improvement in access.

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# 1 Introduction

Over the past few years the Government of Canada has become increasingly concerned with the issue of access to postsecondary education (PSE). The trend began with the 1998 federal budget, which expanded the Canada Student Loans Program and various education tax credits and created both the Canada Education Savings Program and the Canada Millennium Scholarship Foundation. It continued through the early part of the present decade, with the start of research activities conducted by HRSDC and its provincial counterparts at ICCSFA and the release of the Government's Skills and Learning Agenda. It has continued on through the 2004 budget with the introduction of grants for low-income students and the creation of the Canada Learning Bond.

Only in the last two years, however, has a significant amount of data become available that would permit serious empirical work to be done on barriers to education and variations in students' financial positions. Indeed, four new major education-related data sets have become available from Statistics Canada (the *Survey of Approaches to Educational Planning*, the *Youth in Transition Survey*, the *Post-Secondary Education and Participation Survey* and the 2000 *National Graduates Survey*) and from research conducted by the Canada Millennium Scholarship Foundation. All of this has led to a data-rich environment for policy discussions that was unimaginable four years ago.

One of the long-noted disparities in access to postsecondary education is the gap between students from low and high family-income backgrounds and between those coming from an urban versus a rural setting when it comes to access to university studies (students from all income backgrounds have roughly equal chances of attending community college). Based on international data, Canada appears to be doing well in terms of equity of access to education<sup>1</sup> and similar or larger gaps in access exist in other countries regardless of financial barriers. Yet, the mere existence of such a gap indicates that Canada has room for improvement.

## 1.1 Study Objectives

Among the questions to examine in this research study are:

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<sup>1</sup> See Usher (2004a).

- 1) the distance from a PSE institution (commuting distance to PSE institution);
- 2) financial barriers that student face (costs of living away from home, fear of higher debt load, workings of the student loan program);
- 3) the use of distance learning methods such as e-learning;
- 4) the rate of return on PSE for rural students (including differences in rural as opposed to urban recipients of CSL); and,
- 5) other barriers, such as emotional concerns of being away from home, lack of university role models in rural communities, etc.).

In addressing these questions, we examine specifically the differential impacts according to rural-urban origins. To these, we will add institution type, financial variables, gender, age, aboriginal status, province, presence of a disability, academic performance in secondary school and a range of indicators measuring “attachment to education” at the secondary level.

## 2 Critical Review

Our literature review is divided so as to answer each of the five questions outlined above.

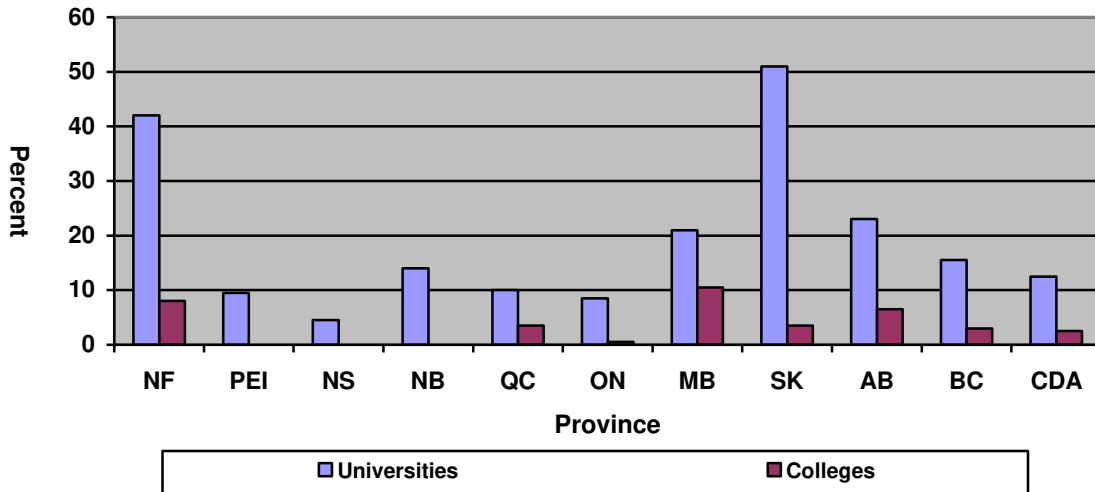
### ***2.1 Distance From Home Community to PSE as a Barrier to PSE***

Students from rural areas face a number of barriers to postsecondary education that are not faced by urban students. On average, students from rural backgrounds have lower literacy scores than students from urban areas, and face higher educational costs as well, stemming from the cost of transportation and the necessity of living away from home. Both these pressures would lead one to believe rural students to be under-represented in postsecondary education, especially at the university level.

One serious analytical problem in looking at rural and urban students comes from the difficulty in defining “rurality”. It is easy conceptually to define large cities as “urban” and farms as “rural”, but there is considerable debate about how to classify the inhabitants of small communities. Different analyses have used different measures of rurality and it is important to understand that studies may not be directly comparable. Even Statistics Canada does not have a single or preferred definition of “rurality”. For the purposes of the Census, however, Statistics Canada defines rurality as any residence located outside a municipality that has an urban core of 10,000 or more people. According to this definition, 20.3 percent of the Canadian population was “rural” in 2001.

Another way of looking at rurality, at least from the point of view of access to education, is to look not at the size of a community but at the “remoteness” of the community as measured by distance to a postsecondary institution. Despite Canada’s enormous size, its dense concentrations of population mean that only a tiny fraction of Canadians live more than 80 kilometres from a postsecondary institution. Just 13 percent of the Canadian population lives more than 80 kilometres from a university and only 2.7 percent of the population lives more than 80 kilometres from a community college.

**Figure 2.1 - Percentage of Canadian Youth Living More than 80 Kilometers from Universities and Colleges, 1996**



Source: Frenette, M: Access to College and University, Does Distance Matter?

The figure above shows that there does appear to be a major distance barrier to attending universities in Newfoundland and Saskatchewan and to attending colleges in Manitoba. Across the country as a whole, however, the problem seems to be fairly small. Without minimizing the importance of distance as a barrier to those who face it, this evidence suggests that there are relatively few Canadians for whom distance is really a barrier to postsecondary education.

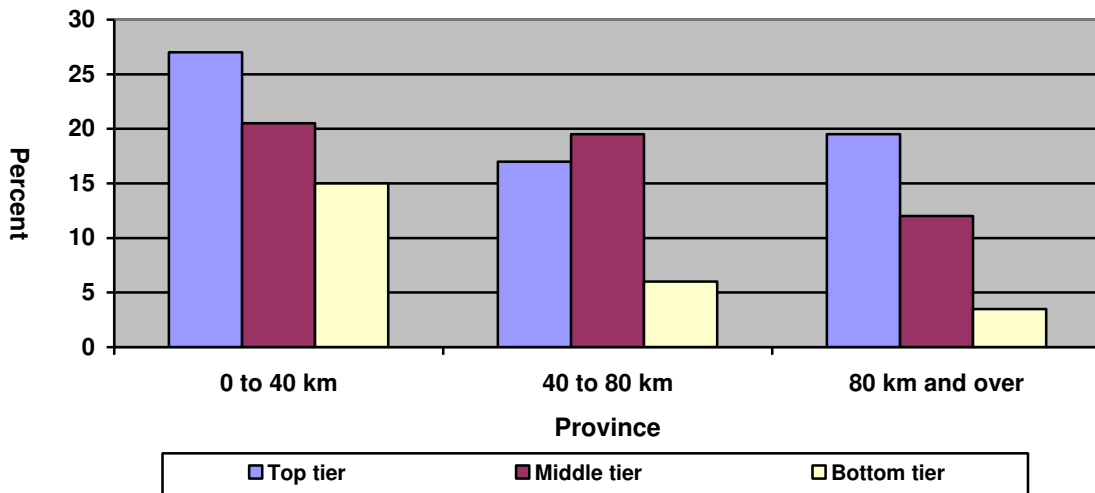
A recent Statistics Canada study (Frenette (2002)) used the Survey of Labour and Income Dynamics (SLID) to look at the effect of distance to an institution on PSE attendance. This study found that if both a university and a college were “nearby” (defined as within 80 kilometres), or if neither was nearby, then youth were relatively equally likely to attend either a college or a university. If, however, a college is appreciably closer than a university (i.e. there is a college within 80 kilometres but not a university), then the likelihood of attending a college was substantially higher.

This result is intriguing, but it may well be that this is an effect of provincial policies in British Columbia rather than a “natural” effect found across the country. Indeed, a less reported aspect of Frenette’s study is that his distance-to-school finding was significant only in Quebec and British Columbia. In the latter, at least, the provincial government had pursued a conscious strategy for the past thirty years of building colleges as an alternative to universities in remote regions, but at the same time permitted students to

undertake university studies at these colleges. Since Frenette’s study looked at type of school rather than type of program, it may well be that a number of his “rural” BC students listed as going to “college” may in fact have been enrolled in university programs..

Another much-remarked-upon result of Frenette’s study is the interaction between rurality, income levels and university attendance. One notable finding is that while poor families who lived close (i.e. less than 40 kilometres) to universities were half as likely as rich families to attend a university, poor families who lived far from universities (i.e. more than 80 kilometres) were only one fifth as likely to attend (see reproduced chart, below).

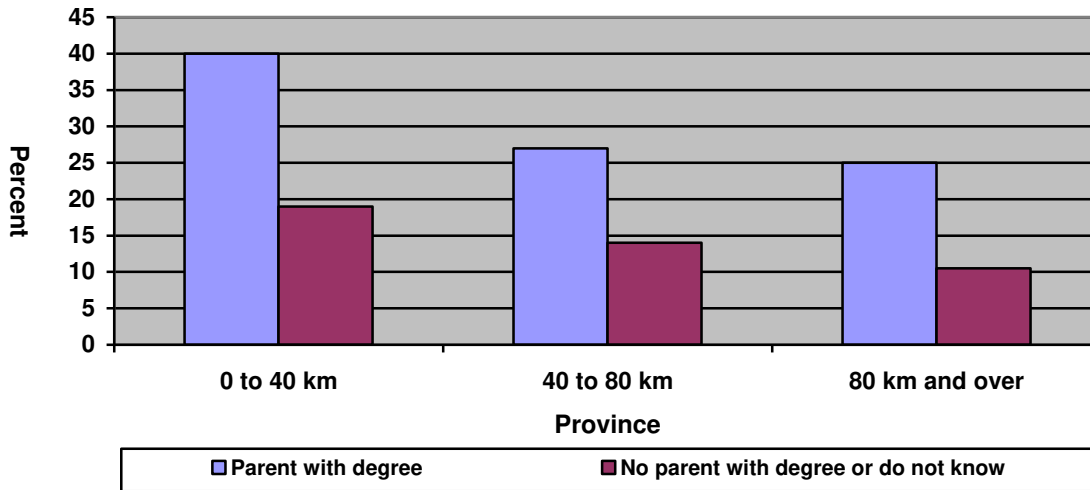
**Figure 2.2 – Predicted Probability of University Participation by Distance to School and Family Income**



Source: Frenette, M: Access to College and University, Does Distance Matter?

Yet here too, things are not quite as clear cut as they might be. Frenette also found that distance to a PSE institution had no effect on the relationship between parental education levels and attending a university, as shown below in Figure 2.3.

**Figure 2.3 – Predicted Probability of University Participation by Distance to School and Parental Education**



Source: Frenette, M: Access to College and University, Does Distance Matter?

The problem, in effect, is that there are fewer university-educated parents in rural areas than there are in poor areas. The difference in the two results can be explained by the fact that the urban rich are better educated, on average, than the rural rich (in fact, the rural rich are a vanishingly small group – it is not at all clear that the fraction of the population living more than 80 kilometres from a university with incomes in the top income quartile is a statistically important one). This in turn suggests that the distance barrier may be due more to transmission of cultural values from parents to children than to financial barriers.

Complicating matters further is another set of data which suggests that students from rural areas may not be underrepresented at all. The Canadian Undergraduate Survey Consortium 2002 Survey of Undergraduates (???? Please check name of survey), using a sample considerably larger than that from SLID, found that students from rural areas (less than 10,000 inhabitants) are actually *over-represented* among Canadian undergraduates. As shown in Table 2.1, 24.3 percent of CUSC respondents declared that they came from a community of 10,000 or fewer people, compared to 20.3 percent of the Canadian population as a whole. No comparable data is available for community colleges.

**Table 2.1 – Distribution of Canadian Undergraduate Students by Size of Home Community, 2002**

<b>Size of Community</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
Lived on a ranch/farm	624	5.1	5.1
Less than 5,000	1,404	11.6	16.7
5,000 to 9,999	931	7.6	24.3
10,000 to 49,999	1,736	14.4	38.7
50,000 to 99,999	1,451	11.9	50.6
100,000 to 300,000	2,111	17.4	68.0
300,000 and over	3,876	32.0	100.0
Total	12,133	100.0	100.0

Source: 2002 CUSC Survey of Undergraduate Students

## ***2.2 Financial Barriers Facing Rural Students***

Very little has been written on this topic, though many student aid professionals are – with some reason – quick to point to this as a barrier to participation. Hemingway (2003) noted that while students from urban areas can just about have their needs met by maximum student loan amounts, students from rural areas (whose costs of attendance are much higher than those of urban students attending urban institutions) may see a shortfall of \$5,000 in their annual budget if they rely solely on student aid as a support. One way rural students may compensate for this, he suggested, is to attend institutions (i.e. community colleges) closer to home, and he cited Alberta data similar to Frenette's as evidence. As a result, Hemingway (2004) suggested that Canada Student Loans Program amounts should be raised to \$210 per week, a suggestion that was adopted by the Government of Canada in its 2004 budget.

Yet, it should be stressed that Hemingway's work was policy analysis, not data analysis. It concluded – with good reason – that student aid policy may work to the disadvantage of rural students. But it did not "prove" a financial barrier in any sense; it merely pointed out that there were grounds to believe that one existed.

## ***2.3 The Use of Distance Learning Methods***

There is surprisingly little information on distance education in Canada; even the number of students pursuing it is unknown. Canadian Virtual University, for instance, a consortium of 11 universities' distance education programs, claims only that there are



150 000 “distance course registrations”. This number does not indicate how many students are registered in more than one course.

Distance education was originally designed to serve students in remote communities and, more generally, non-traditional (i.e. older) students<sup>2</sup>. While distance education students remain on average older than traditional students, recent studies in a number of countries including Canada<sup>3</sup> have shown that their average age is dropping and that they are increasingly drawn from urban rather than rural areas. Studies in the United States such as Sikora (2003) and Hudson and Shaefer (2004) have shown that there are very few SES or geographic differences between distance education students and students attending traditional campuses. The differences between the two groups of students are in fact largely affective – distance education appeals to certain types of learners who are distributed normally by SES and geography.

## **2.4 The Rate of Return on PSE for Rural Students**

We have been unable to locate a study that tracks long-term income according to urbanicity / rurality of the graduate prior to the start of postsecondary study. To the extent that students from rural areas attend college rather than university, one can say that they likely have lower returns to PSE because college graduates, on average, have lower rates of return than university graduates<sup>4</sup>. Similarly, to the extent that youth from rural areas pay higher costs to obtain a university education (a reasonable inference based on data from Frenette and Hemingway), the ratio of lifetime income to education cost will be lower for rural students than for urban ones unless they obtain higher average lifetime incomes than students from urban areas. While we do not know the different lifetime income paths of urban and rural students, there is no *prima facie* reason to believe that this is the case. Hence, it is likely that the lifetime return is lower for rural students than urban ones.

However, one cannot necessarily infer from this simply because the ratio of costs to benefits is lower for rural students than urban ones that the rates of return are necessarily lower as well. In order to calculate rates of return, one would need to know

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<sup>2</sup> See Thompson (1998).

<sup>3</sup> For instance, see Wallace (1996)

<sup>4</sup> See Emery (2003)

the income paths of urban and rural youth who do *not* attend PSE. These data, crucially, are missing, hence making adequate calculations of rates of return difficult.

## **2.5 Non-Financial Barriers to Education for Rural Students**

The evidence for poorer academic preparation among rural students comes from data gathered as part of the 2001 Programme for International Student Assessment (PISA), and summarized by Cartwright and Allen (2003). PISA administered tests in reading, math and science to 15 year-olds across Canada and around the world, and standardized responses on a scale from 200-800. 50 points on the reading scale is thought to be equal to one year of formal schooling.<sup>5</sup>

On average, Cartwright and Allen (2003) found that students from schools in urban settings in Canada scored about 15 points better than students from rural areas.<sup>6</sup> The gap was particularly large in Newfoundland, Prince Edward Island and Alberta, and almost non-existent in Manitoba. Smaller but still significant gaps were also found between rural and urban students in math (8 points) and science (11 points). Cartwright and Allen (2003) ascribed these gaps not to socio-economic differences (which were negligible) but rather to differences in the average level of *adult* educational attainment<sup>7</sup>. More colloquially, a lack of highly literate adult role models does seem to affect youth literacy outcomes which, in turn, presumably affect access to higher education.

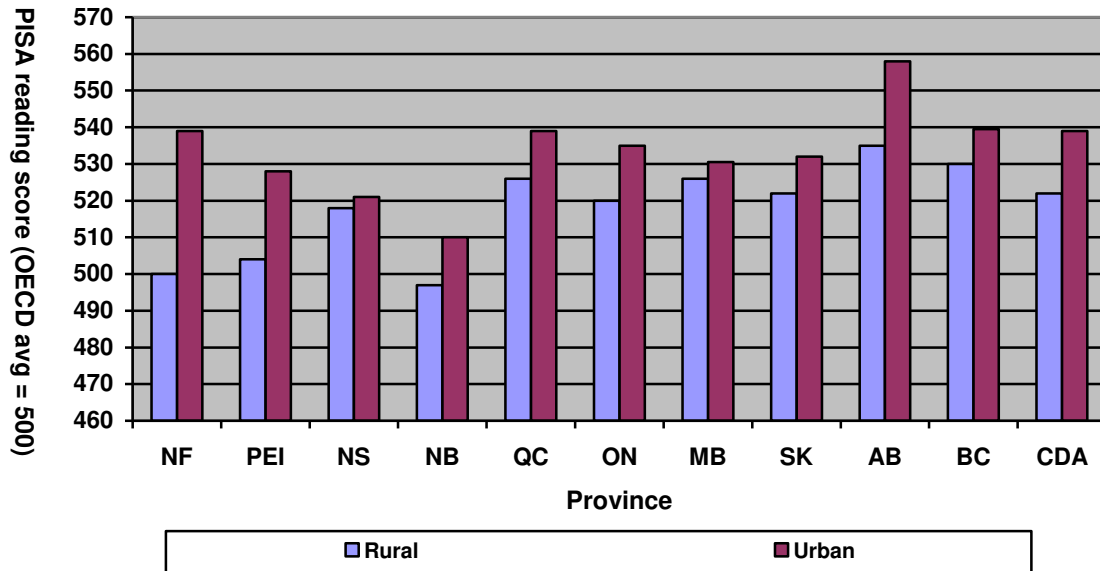
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<sup>5</sup> See Wilms (2003).

<sup>6</sup> In this study, a "rural" high school is one located in a community with a population of less than 100,000.

<sup>7</sup> See also De Broucker and Lavallée (1999).

**Figure 2.4 – Average Urban and Rural Reading Scores, by Province, from the Program for International Student Assessment (PISA), 2000**



Source: Cartwright, F. and Allen, M (2002). *Understanding the Urban-Rural Reading Gap*.

These data are intriguing, but do not entirely fit with the observations of Frenette (2003). On the surface, the two appear to point to a common conclusion, with Cartwright and Allen's data on lower rural literacy rates providing an obvious explanation for the university participation gaps noted by Frenette. But it should be recalled that Frenette did *not* suggest that rural students as a whole are less likely to attend university than college. Rather, he noted a gap only in those instances where colleges are appreciably closer than universities. If Cartwright and Allen's reading gap was the cause of lower university participation rates, it is unlikely that Frenette would have found a difference between the university attendance rates of students who lived near or far from community colleges.

In fact, the likely implication of the combined results of Cartwright and Allen and Frenette is that the higher relative rates of college attendance among rural youth who live close to college and far from universities is the result of student choices, not institutional selection procedures. Whether a choice is being made on the basis of cost (universities are too expensive), familiarity (universities are misunderstood – and hence undesirable – because they are not part of the local landscape) or personal and psychological comfort (going to a university means losing one set of old friends and creating a new set) is not clear.

### **3 Data Sources**

This report is based on three separate data sources and as such is one of the most thorough single studies into access to education ever undertaken in Canada. A brief description of each of the five data sources follows.

#### ***3.1 Youth In Transition Survey***

The *Youth in Transition Survey (YITS)* is a longitudinal survey developed through partnership between Human Resources Development Canada and Statistics Canada. The preliminary report presents findings from the first cycle of *YITS*. Between January and April 2000, more than 22,000 Canadian youth participated in the survey.

The survey is designed to examine key transitions in the lives of young people as they move from high school to postsecondary education and from schooling to the labour market. The preliminary report examines the situation of youth (18 to 20 years old) with respect to both their participation in education and attainment, as well as their labour market participation, as of December 1999.

In addition to the survey of 18- to 20-year-olds, *YITS* also collected information from a cohort of 15-year-olds in the spring of 2000. These youth were involved in the Programme for International Student Assessment (PISA). Youth from both the 15-year-old and 18- to 20-year-old cohorts were surveyed again in 2002, and asked about changes in their family situation, participation in education and labour market activity. This second survey is known as *YITS Cycle 2*.

#### ***3.2 Student Financial Survey (SFS)***

This study, conducted during the 2003-04 academic year, was designed to capture baseline information from a sample of postsecondary students across the country regarding their financial situation coming into a school year and monthly income and expenditures across the school year.

Recruitment of the student panel for the study was conducted in two ways. Firstly, 46 post secondary institutions across the country were asked to send either an E-Mail or hard copy letter to their students telling them about the study and asking interested individuals to register on an external web site designed specifically for its sample

recruitment. Sixteen thousand one hundred seventy eight (16,178) students were recruited using this method. Another 4,937 students were recruited on-campus at these 13 institutions. Of the 21,115 students assembled using these two methods, 11,601 were selected using a stratified sampling technique to construct an initial sample of on the frame for the survey. No more than 400 students from any one school were chosen. Students were then contacted individually by telephone to confirm their participation in the survey. Of the 11,601 students who were finally recruited into the panel, 9,401 actually completed the baseline questionnaire, or 81 percent of the initial panel. These students formed the base of the study and were invited to participate in five subsequent follow-up waves of the survey, as well as to provide the names and contact information for parents who were also being asked to participate. Just over 40 percent (n=3,883) of students who completed the baseline survey agreed to provide parent contact information. Of the 3,883 students' parents contacted, 72 percent (n=2,796) participated in the first parent interview in November, 2003. In May of the following year, the same 2,796 parents were contacted for a shorter follow-up survey. The retention rate for the second survey was 68 percent.

The student survey information was collected using a hybrid of telephone and self-administered (through the Internet) interviews. An initial baseline survey in October, 2003 gathered information about students' education, financial status coming into the school year and socio-demographic characteristics (e.g., age, gender, region, etc), as well as income and expenses during the month of September. Monthly waves of the panel survey took place at the start of each month with respondents receiving notification of the next survey by e-mail. Administration of the survey over the Internet involved students clicking on the link and entering their unique PIN, both of which were provided in the E-Mail invitation each month. Within a week, non-respondents received an E-Mail reminder. After an additional week, all non-respondents were contacted by phone to complete the survey. Typically, three in four cases were collected over the Internet each month and the remaining cases were administered by an interviewer over the telephone.

### **3.3 Canada Student Loans Program – Longitudinal Administrative Database**

The Canada Student Loans Program (CSLP) is jointly administered by the Federal Government, nine of the participating provinces and the Yukon Territory. Quebec, the Northwest Territories and Nunavut receive alternative assistance for their own provincial/territorial student assistance programs, as they do not directly participate in the CSLP. (LAD only)

The LAD/CSLP database was created by linking (CSLP) administrative records with the Statistics Canada Longitudinal Administrative Database (LAD). The CSLP file was created through the synthesis of several CSLP administrative files. The LAD file was created from taxation records, representing a random sample of approximately 20 percent of all tax filers. Thus, the LAD/CSLP linked file also covers 20 percent of all tax filers. The file includes tax filers with and without CSLP.

The CSLP records are organized by loan year (from August 1 to July 31 of the following year), while the LAD records are organized by calendar year. The period covered is 1993-2000. The sample used in the current study consists of youth, aged 18 to 29, whose home province was one of the nine provinces participating in the CSLP. Although the Yukon Territory participates in the CSLP, it was excluded from the analysis due to sample size limitations.

Key variables in the analysis are the following:

1. Full-time PSE participation: It was calculated based on the presence of a full-time education deduction in the LAD file.
2. Parental income: In the case of youth who are still living with their parents, parental income refers to the current income of their parents in LAD. In the case of those who are not classified as children in the LAD any longer, the current parental income is not known. In these two cases, we went back in history to the most recent year in which youth were classified as children. All parental incomes were expressed in 2000 prices, using the Consumer Price Index.
3. Home address: A similar process was used to determine the home address, based on the parental address.

4. *Distance between home address and PSE institutions*: Using the parental postal code, the PSE institution postal code and the PCCF+ program, we calculated the distance between home address and nearest university or college.

All results presented here are weighted by a factor of approximately 5, to reflect the fact that LAD covers 20 percent of all tax filers. Further weighting was applied to bring the PSE participation rates and CSLP participation rates closer to Labour Force Survey and CSLP administrative records respectively.

## 4 Analysis

The following section is broken down into four sub-sections. The first sub-section covers an analysis of students who moved from a rural setting to an urban one (Question 1), rural students who stayed in their community to attend PSE (Question 2), a demographic comparison of rural versus urban students (Question 3) and an analysis of expenditure patterns in the two populations (Question 4).

The next sub-section covers an analysis of parental income of rural versus urban students (Question 5) and of the type of institution chosen on the basis of distance to the institution (Question 7). Part of Question 7 is integrated in the next sub-section dealing with distance learning. This sub-section also includes an analysis of the profile of students who used distance learning in PSE (Question 6) and an analysis of their expenditure patterns and income sources (Question 8).

The last sub-section deals with the rate of return of rural versus urban students (Question 9). The analysis also covers the rate of return by institution type.

### ***4.1 Rural Versus Urban Students***

Several points need to be mentioned with respect to the data and the procedures used to generate the numbers found in this section. Data stem from files made available by Statistics Canada and extracted from its Youth In Transition Survey Cycle 1 and Cycle 2 micro data files<sup>8</sup>. The Youth in Transition Survey (YITS), conducted in January-February 2000 and launched by Human Resources and Skills Development Canada with Statistics Canada, collected information about school to work transitions on about 23,000 18 to 20 years old youths. Data were obtained using computer-assisted telephone interviews (CATI). The second cycle of the survey was conducted two years after the first one (between mid-February and mid-June of 2002) and interviewed the same people. The response rate for the Cycle 2 cohort was 85 percent.

The survey excluded northern territories, Indian reserves, Canadian Forces bases and some remote areas. It was based on the Labour Force Survey and drew from currently

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<sup>8</sup> For more information on the survey, see <http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=4435&lang=en&db=IMDB&dbg=f&adm=8&dis=2#1>



active and rotate-out households. One person in the target population was selected from each household.

#### **4.1.1 Tabulations and Estimates**

Bootstrap weights were used for all frequency and mean tables so as to eliminate variance in the calculations of cell numbers<sup>9</sup>. Whenever the coefficient of variation (CV) was between 16 and 33 percent, the related number in a table was followed by an asterisk (\*) indicating that the numbers were only statistically significant at the 95 percent confidence level. Whenever the CV exceeded 33 percent or the calculations were based on 1 to 4 observations, we did not report any value for the cell. Instead, we put in a series of dashes (---). In addition, if we eliminated a cell, we invariably had to eliminate three other cells so that we could not recreate by a rule of three the missing value. Note that some tables do not have three other cells blanked out as the cells that were blanked out were not reported in the tables.

Numbers are expressed, to a large extent, in thousands. Given that a typical observation represents about 80 to 100 people, reporting numbers with a greater precision would only raise doubts about the numbers thus shown.

We also ran a series of regressions. Regression estimates meeting a 95 percent confidence were indicated in bold italic. It goes without saying that any variable not indicated in bold italic should be viewed with caution.

#### **4.1.2 Overall Observations**

The table below provides counts by PSE status. PSE graduates represent 6.7 percent in Cycle 1 and 20.2 percent of the PSE population in Cycle 2, which reflects that persistence improves as students get older. Leavers represent 8.8 and 14.6 percent of the population of Cycle 1 and Cycle 2, respectively. These latter percentages are intuitively correct.

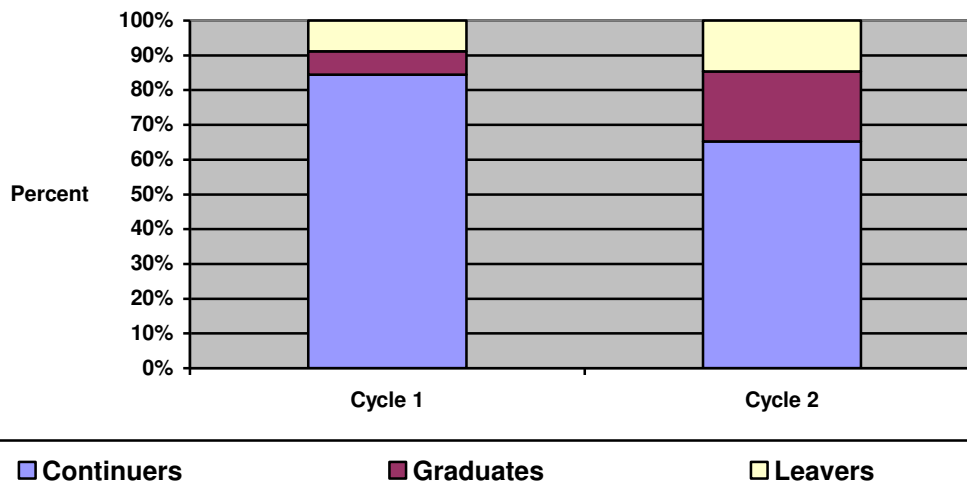
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<sup>9</sup> Bootstrap is a technique based on re-sampling. From an original sample, one selects a random sample with replacement of as many units one has at the beginning of the process. This is repeated in the case of YITS 1,000 times to ensure consistency.

**Table 4.1 – Counts and Percentage of PSE Students by PSE Type, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

	Counts (in 000's)		Percentage	
	Cycle 1 (18 to 20 year olds)	Cycle 2 (20 to 22 year olds)	Cycle 1 (18 to 20 year olds)	Cycle 2 (20 to 22 year olds)
<b>Continuers</b>	551.7	538.3	84.4	65.2
<b>Graduates</b>	44.0	166.8	6.7	20.2
<b>Leavers</b>	57.8	120.3	8.8	14.6
<b>Total</b>	653.6	825.4	100.0	100.0

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors.

**Figure 4.1 Percentage of PSE Students by PSE Type, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors.

Cycle 1 students are 18 to 20 years old when surveyed in 2000. The same students were surveyed in Cycle 2. In the first cycle, we suspect that a greater percentage of students is graduating at the end of the two-year cycle whereas, in Cycle 2, a higher percentage is graduating at the beginning of the two-year cycle. Thus, for this reason alone, students from Cycle 2 are expected to have very different financing profiles from those of Cycle 1. In the following tables, we present results for both Cycle 1 and Cycle 2; however, these two cycles do not contain exactly the same people. Some students who were “graduates” or “leavers” in Cycle 1 may have returned to school and become “continuers” in Cycle 2, and vice-versa. In order to account for this, we have also presented results of students who were either in Cycle 1 or in Cycle 2. The results show

some differences, albeit not very substantial, over results obtained with only Cycle 2 students. The total number of students (i.e., 825,400) is the same for both populations.

Table 4.2 below illustrates the types of financing sources most commonly used by students. Certain sources of financing appear to be relatively consistent across the two cycles. Money from family sources remains roughly similar in both time periods (for continuers, at least) at between 60 and 65 percent. Similarly, the percentage of students receiving student loans is comparable between the two cycles. This is unsurprising, given the eligibility rules surrounding student assistance. Virtually all “continuers” in both Cycle 1 and Cycle 2 are considered to be “dependent students”, and hence their eligibility for student aid is largely conditioned by their parents’ income.<sup>10</sup> Since parental income does not move around much, it is unlikely that any student who was not eligible for student aid in Cycle 1 would suddenly have become eligible in time for Cycle 2 – hence the lack of movement in the data.

While the percentage of students who are continuing their studies and receiving student loans and money from parents remains somewhat constant between the two cycles, the same cannot be said of those receiving bank and family loans. The percentage of students continuing their studies and receiving bank loans and family loans increases significantly between the two age cohorts going from 6.9 percent to 39.7 percent for bank loans and from 3.1 percent to 13.8 percent for family loans. This is a very significant jump from the previous survey, and one that cannot be satisfactorily explained. While other studies have shown that use of private borrowing increases with age<sup>11</sup>, the scale of the increase shown here is quite different from that seen for the same year in other surveys. The Canadian Undergraduate Survey Consortium, the Canadian College Survey Consortium, the Student Financial Survey and Statistics Canada’s Postsecondary Education and Participation Survey (PEPS) all came up with figures in the 13 to 20 percent range for the same academic year.

Scholarships decrease in importance between the two cycles (from 33.0 percent to 23.1 percent), reflecting the fact that merit scholarships are considerably more plentiful in the early years of studies than later on.<sup>12</sup> Use of bursaries, on the other hand, increased

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<sup>10</sup> See Usher (2004b) for a description of the rules surrounding dependent status and their effects on student aid.

<sup>11</sup> Ekos Research (2003).

<sup>12</sup> Gucciardi, F. (????)

slightly, 14.7 percent to 19.0 percent. This is likely the result of an increase in the general availability of bursaries between Cycle 1 and Cycle 2, which occurred both because of the introduction of the Millennium Scholarship bursaries and because of changes to provincial programs.<sup>13</sup>

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<sup>13</sup> Junor and Usher ( 2004).

**Table 4.2 – Counts and Percentage of Students by PSE Financial Instrument Used and by PSE Type, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

	PSE Financial Instrument Used*							Total Number of PSE Students
	Student loan	Bank loan	Family loan	Money from parents	Money from jobs	Scholarships, awards or prizes	Grants and bursaries	
<b>Counts (in 000's)</b>								
<b>Cycle 1 (18 to 20 year olds)</b>								
<b>Continuers</b>	160.8	38.3	17.1	356.2	370.8	182.1	81.0	551.7
<b>Graduates</b>	16.1	3.4	1.2	21.1	23.9	9.4	5.4	44.0
<b>Leavers</b>	16.0	4.6	1.3	29.4	36.4	11.4	5.2	57.8
<b>Total</b>	192.8	46.2	19.6	406.7	431.2	203.0	91.6	653.6
<b>Cycle 2 (20 to 22 year olds)</b>								
<b>Continuers</b>	162.7	213.6	74.2	335.9	451.7	124.3	102.1	538.3
<b>Graduates</b>	42.3	54.9	20.1	65.1	94.4	19.7	20.3	166.8
<b>Leavers</b>	25.1	33.0	10.9	36.5	58.3	9.9	11.6	120.3
<b>Total</b>	230.2	301.5	105.1	437.5	604.4	153.9	134.0	825.4
<b>Either in Cycle 1 or in Cycle 2</b>								
<b>Continuers</b>	184.7	216.9	81.3	390.0	472.0	212.5	140.7	538.3
<b>Graduates</b>	63.9	60.3	23.7	99.1	127.6	42.3	32.9	166.8
<b>Leavers</b>	42.1	36.9	13.2	67.0	88.7	25.2	20.3	120.3
<b>Total</b>	290.6	314.1	118.1	556.1	688.3	280.0	193.9	825.4
<b>Percent</b>								
<b>Cycle 1 (18 to 20 year olds)</b>								
<b>Continuers</b>	29.1	6.9	3.1	64.6	67.2	33.0	14.7	100.0
<b>Graduates</b>	36.6	7.7	2.7	48.0	54.4	21.4	12.3	100.0
<b>Leavers</b>	27.6	8.0	2.3	50.8	63.0	19.7	8.9	100.0
<b>Total</b>	29.5	7.1	3.0	62.2	66.0	31.1	14.0	100.0
<b>Cycle 2 (20 to 22 year olds)</b>								
<b>Continuers</b>	30.2	39.7	13.8	62.4	83.9	23.1	19.0	100.0
<b>Graduates</b>	25.4	32.9	12.0	39.0	56.6	11.8	12.2	100.0
<b>Leavers</b>	20.9	27.4	9.0	30.4	48.5	8.3	9.6	100.0
<b>Total</b>	27.9	36.5	12.7	53.0	73.2	18.6	16.2	100.0
<b>Either in Cycle 1 or in Cycle 2</b>								
<b>Continuers</b>	34.3	40.3	15.1	72.4	87.7	39.5	26.1	100.0
<b>Graduates</b>	38.3	36.1	14.2	59.4	76.5	25.3	19.7	100.0
<b>Leavers</b>	35.0	30.7	10.9	55.7	73.7	21.0	16.9	100.0
<b>Total</b>	35.2	38.1	14.3	67.4	83.4	33.9	23.5	100.0

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors. (\*): Note students can use more than one instrument at a time. Thus, the percentages reported in this report may add to more than 100 percent.

Turning from all sources of funding to the “most important” one (as self-reported by the students themselves), the patterns of financing differ little from cycle to cycle. The younger cohort relies most often on parents and family, on loans (including student loans) and, to a lesser extent, on jobs to fund for their studies. As the cohort ages, jobs

become much more important as a source of income, with the percentage of students citing them as a primary source jumping from 19 to 33 percent. This is only partly due to the fact that more students are working; it is also because they are likely earning more money while working as their age and experience gradually raise their returns in the labour market.<sup>14</sup> , As has been noted in other surveys, parental contributions become less important over time,<sup>15</sup> As noted above, loans stay more or less constant over this age range as a source of financing and, similarly scholarships drop substantially because of the way so many of them are “front-end loaded”.<sup>16</sup>

**Table 4.3 – Counts and Percentage of PSE Students who Continue their Education by Most Prominent PSE Financial Instrument Used, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

Cycle	Most Prominent Financial Instrument Used								Total Number of PSE Students
	Parents or family	Other people	Money from jobs	Loans	Personal savings	Scholarships, awards or prizes	Grants and bursaries	Other sources	
<b>Counts (in 000's)</b>									
<b>Cycle 1</b>	185.9	6.1	86.5	111.1	22.6	32.5	5.2	5.8	551.7
<b>Cycle 2</b>	142.0	6.0	147.4	104.5	10.4	7.1	9.8	14.7	538.3
<b>Percent</b>									
<b>Cycle 1</b>	40.8	1.3	19.0	24.4	5.0	7.1	1.1	1.3	100.0
<b>Cycle 2</b>	32.1	1.4	33.4	23.6	2.4	1.6	2.2	3.3	100.0

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors of this report.

The next table provides average amounts of funds received by students carrying on with their studies. Before analyzing this table in depth, we should review the questions asked for both cycles (see Appendix B). The most contentious question is one from Cycle 2: *As of December 31st, 2001, what was the total amount you had borrowed from a government-sponsored student loan?* This question implies that the amount indicated in the table below is a cumulative sum of all student loans from Cycle 1 and Cycle 2. However, because the tables were not created using longitudinal records, we simply cannot subtract Student loan borrowed of Cycle 1 from Cycle 2 to obtain the actual

<sup>14</sup> Ekos Research (2003)

<sup>15</sup> *ibid*

<sup>16</sup> Gucciardi, *op cit*.

amount borrowed in Cycle 2. An additional question asks: *Did you get a government-sponsored student loan (provincial or federal)?* This question, however, refers to having received or not a student loan between January 2000 and December 2001. It is important to keep in mind while reading these statistics that even within a single cohort, YITS asks students about their income over a two calendar-year period, which makes it very different from most other income surveys, which almost all do so on a single academic year basis. This complicates things given that Cycle 1 cohort is not the same as Cycle 2 cohort. In Cycle 2, if someone has not received a student loan, he or she could have accumulated one from Cycle 1.

With respect to *Scholarship amount due* and *Bursary amount due* in Cycle 2, these were accumulated during Cycle 2 (i.e., between January 2000 and December 2001). The *Amount owing* reflects the amounts owing since high school, whereas *Amount received* reflects amounts received during Cycle 2.

With the above as caveats, we observe that on average Cycle 1 students borrowed \$5,800 (rounded to the nearest \$100) for their student loans, whereas those of Cycle 2 borrowed \$9,300 since leaving high school. Consistent with Canada Student Loans Program rules, students who receive money from their parents will receive less money in student loans than those who do not. With respect to scholarships and prizes, we have a somewhat paradoxical situation. On average, students who do not receive student loans report slightly higher amounts of scholarship; however, on average, scholarship recipients obtain more student loans than non-scholarship recipients. Effectively, what this means is that students with loans are less likely to receive scholarships. However, scholarship recipients tend to be those with higher need. There is a possible endogeneity situation here: receipt of a scholarship might induce students to leave their home and go to school in another city. This might raise their “assessed need” by more than the rise in resources conferred by the scholarship, and hence make them more eligible for loans.

The results for bursaries are more puzzling and suggest that students may not be interpreting the term in the same way that policymakers do. Policymakers assume that “bursaries” means government need-based assistance. However, Table 4.4 clearly shows there are a number of students who say they are receiving “bursaries” but not receiving loans. This should be nearly impossible in the Canadian system of student aid,

which almost always require students to borrow a significant amount of money before allocating grants (the new Canada Access Bursary is an exception, but was not in place when either of the YITS surveys was conducted). It may be that the bursaries in question are institutional need-based bursaries. It may also be that there is some confusion on the meaning of the term “bursary”, possibly accentuated by linguistic differences: the French term “bourse” covers both need- and merit-based awards.



**Table 4.4 – Average Amount of Financing (in \$000) for PSE Students Continuing their Education by Financial Instrument Used, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

	Cycle 1 (18 to 20 year olds)							Cycle 2 (20 to 22 year olds)				
	Student Loan Amount Borrowed	Bank Loan Amount Due	Family Loan Amount Due	Scholarship Amount Due	Bursary Amount Due	Amount Owing	Amount Received	Student Loan Amount Borrowed	Scholarship Amount Due	Bursary Amount Due	Amount Owing	Amount Received
<b>Received a government-sponsored student loan</b>												
<b>No</b>	0.0	4.7	4.5*	2.4	1.1	4.8	2.5	7.7	3.3	2.4	6.7	3.4
<b>Yes</b>	5.8	3.7	2.4	2.1	1.5	6.0	2.4	9.4	2.5	2.5	9.9	3.1
<b>Received a bank loan</b>												
<b>No</b>	5.9	0.0	3.3	2.3	1.3	5.7	2.4	0.0	3.4	2.1	4.1	3.4
<b>Yes</b>	4.9	4.3	---	---	---	6.3	2.5*	9.3	2.6	2.6	9.5	3.2
<b>Received a family loan</b>												
<b>No</b>	5.8	4.4	0.0	2.3	1.3	5.8	2.4	9.4	3.1	2.5	8.3	3.3
<b>Yes</b>	4.3	---	3.5	1.6	1.2*	6.1	---	9.2	2.6	2.6	10.4	3.2
<b>Received money from parents</b>												
<b>No</b>	6.4	4.3	4.3*	2.5	1.4	6.3	2.6	10.0	3.4	2.5	9.7	3.5
<b>Yes</b>	5.0	4.4	2.4	2.2	1.2	5.2	2.3	8.6	2.9	2.5	8.3	3.1
<b>Received money from jobs</b>												
<b>No</b>	6.0	4.2	4.5*	2.4	1.5	5.9	2.5	9.6	4.7*	2.9	9.4	4.5
<b>Yes</b>	5.6	4.4	3.2	2.3	1.2	5.8	2.4	9.3	2.8	2.4	9.0	3.1
<b>Received money from scholarships, awards or prizes</b>												
<b>No</b>	5.4	4.1	3.6*	0.0	1.5	5.5	1.5	8.8	0.0	2.7	8.5	2.7
<b>Yes</b>	6.4	4.8	---	2.3	1.1	6.3	2.6	10.9	3.0	2.0	10.5	3.6
<b>Received money from grants and bursaries</b>												
<b>No</b>	5.3	4.2	3.4	2.3	0.0	5.5	2.3	8.7	3.1	0.0	8.2	3.1
<b>Yes</b>	7.3	4.6	4.9*	2.3	1.3	7.0	2.7	10.2	3.0	2.5	10.6	3.4
<b>Overall Funding</b>												
<b>Total</b>	5.8	4.3	3.5	2.3	1.3	5.8	2.4	9.3	3.0	2.5	9.0	3.3

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors of this report.

### 4.1.3 Specific Observations

The Youth in Transition Survey uses the traditional Statistics Canada's way of delineating rural and urban from the total population. This does not take into account the distance one lives from an urban centre. As we noted in our literature review in Section 2.2 however, the distance to an institution, rather than "rurality" as such, appears to be the key influence on attendance or non-attendance at PSE. As a result, YITS Cycle 1 and Cycle 2 may not be the ideal instrument to look at financial barriers for students from more remote communities where real barriers to access seem to exist<sup>17</sup>.

Table 4.5 shows the distribution of rural and urban students by region. The numbers on rural / urban origin refer to the designation at the time of the survey of Cycle 1.

**Table 4.5 – Counts and Percentage of Students by Province and by Rural/Urban Origin, Cycle 1 (18 to 20 Year Olds)**

	Province					
	Atlantic Provinces	Québec	Ontario	Prairie Provinces	British Columbia	Total
<b>Counts (in 000's)</b>						
<b>Rural</b>	45.2	65.4	71.8	58.2	18.0	258.8
<b>Urban</b>	52.8	235.2	373.9	159.2	138.1	959.5
<b>Row Percentage</b>						
<b>Rural</b>	46.1	21.8	16.1	26.8	11.5	21.2
<b>Urban</b>	53.9	78.2	83.9	73.2	88.5	78.8

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors of this report.

Table 4.6 shows financing patterns for rural and urban students by region. The differences between regions are much starker than the differences between rural and urban students within any given region. Student loan receipt is very high in the Atlantic Provinces and much lower elsewhere. Student borrowing levels actually vary very little between rural and urban students anywhere in the country outside the Atlantic, where urban students tend to have higher borrowing than rural ones. Bursary amounts due vary across the country – BC and Quebec having the highest amounts (which would be expected given the nature of their student aid programs at the time). But again, the rural/urban differences are minimal.

<sup>17</sup> The original intent was to obtain distance variables for YITS, but due to difficulties at Statistics Canada, such variables were not available at the time of the analysis contained in this report.

**Table 4.6 – Average Amount of Financing (in \$000) for PSE Students by Financial Instrument Used and by Province and by Rural / Urban Origin, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

	Cycle 1 (18 to 20 year olds)							Cycle 2 (20 to 22 year olds)				
	Student Loan Amount Borrowed	Bank Loan Amount Due	Family Loan Amount Due	Scholarship Amount Due	Bursary Amount Due	Amount Owing	Amount Received	Student Loan Amount Borrowed	Scholarship Amount Due	Bursary Amount Due	Amount Owing	Amount Received
<b>Atlantic Provinces</b>												
<b>Urban</b>	8.3	6.0	4.9*	2.5	0.9	8.3	2.3	13.2	3.0	2.1	12.1	2.9
<b>Rural</b>	9.5	5.7	2.0*	2.0	1.0	9.4	2.0	15.1	2.9	2.6	13.9	3.2
<b>Total</b>	8.9	5.9	3.6*	2.3	0.9	8.8	2.2	14.2	2.9	2.4	13.0	3.1
<b>Québec</b>												
<b>Urban</b>	3.7	2.3*	1.5*	2.3	1.4*	3.8	2.2	6.8	2.0	3.6	5.2	3.3
<b>Rural</b>	3.7	3.3	1.4*	2.4	---	3.9	2.8	6.4	1.3	2.9	5.3	2.5
<b>Total</b>	3.7	2.8	1.5	2.3	2.3*	3.8	2.4	6.7	1.8	3.4	5.3	3.1
<b>Ontario</b>												
<b>Urban</b>	6.3	4.3	3.9*	2.3	1.2	6.2	2.3	9.0	3.3	1.9	8.3	3.1
<b>Rural</b>	6.2	4.0	5.3*	1.7	0.8	6.4	1.8	9.4	2.9	1.8	8.8	2.8
<b>Total</b>	6.3	4.3	4.1*	2.2	1.1	6.2	2.2	9.1	3.2	1.9	8.3	3.0
<b>Prairie Provinces</b>												
<b>Urban</b>	6.5	4.4	---	2.2	---	6.0	2.8	10.0	2.2	3.7	8.4	3.1
<b>Rural</b>	6.5	4.6	---	2.2	1.2	6.5	2.4	10.8	2.9	1.9	9.1	3.0
<b>Total</b>	6.5	4.5	2.9	2.2	2.3*	6.1	2.7	10.3	2.3	3.2	8.6	3.0
<b>British Columbia</b>												
<b>Urban</b>	5.6	4.5*	---	2.2	1.5	5.5	2.5	7.4	2.6	2.8	7.3	3.1
<b>Rural</b>	5.9*	4.7*	---	2.4*	1.3*	5.1	2.9*	7.3	1.7	---	7.4	3.7*
<b>Total</b>	5.6	4.5*	---	2.2	1.5	5.5	2.5	7.4	2.5	3.0	7.3	3.2
<b>Total</b>												
<b>Urban</b>	5.6	4.3	3.4	2.2	1.5	5.6	2.5	8.8	2.8	2.6	7.8	3.1
<b>Rural</b>	6.1	4.4	2.9*	2.1	1.2	6.2	2.3	10.3	2.6	2.5	9.0	2.9
<b>Total</b>	5.7	4.3	3.3	2.2	1.4	5.7	2.4	9.1	2.8	2.5	8.1	3.1

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors of this report.

Table 4.7 looks at rural/urban differences in the types of schools attended. It shows that students from rural areas are more likely to attend business schools and technical institutes than community colleges, and more likely to attend colleges than universities. These differences are substantial and significant. However, as noted in the literature

review in Section 2.2, we do not know whether or not this has to do with financial barriers, academic barriers, or simple student choices.

**Table 4.7 – Counts and Percentage of Students by Institution Type and by Rural/Urban Origin, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

	Type of Institution							
	Business Schools and Technical Institutes		Community Colleges and CEGEP's		Universities and Colleges		Total	
	Cycle 1	Cycle 2	Cycle 1	Cycle 2	Cycle 1	Cycle 2	Cycle 1	Cycle 2
<b>Counts (in 000's)</b>								
<b>Rural</b>	156.4	152.7	57.2	66.3	45.2	65.9	258.8	285.0
<b>Urban</b>	506.6	463.9	214.0	258.2	240.7	373.6	961.3	1,095.8
<b>Column Percentage</b>								
<b>Rural</b>	23.6	24.8	21.1	20.4	15.8	15.0	21.2	20.6
<b>Urban</b>	76.4	75.2	78.9	79.6	84.2	85.0	78.8	79.4

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors of this report.

The table below provides counts of students who attended a PSE institution by financial instrument used during their studies and by family origins (single-family or other types of household, as defined when the students were in Cycle 1 (18 to 20 years of age)). One would expect access to financial instruments to be different for single-family households, because such households have lower incomes than other types. Indeed, proportionally more students rely on student loans in single-family households than in other types of households, as they receive less money from parents and from jobs.

When we examine the financial instruments where students get the most money, similar conclusions emerge. Students from other types of households rely to a greater extent on parents and family than those from single-family households. Money from jobs, however, does not favour one group over another.

**Table 4.8 – Counts and Percentage of PSE Students by Most Prominent PSE Financial Instrument Used and by Rural/Urban Origin, Cycle 1 (18 to 20 Year Olds) and Cycle 2 (20 to 22 Year Olds)**

Cycle	Most Prominent Financial Instrument Used								
	Parents or family	Other people	Money from jobs	Loans	Personal savings	Scholarships, awards or prizes	Grants and bursaries	Other sources	Total
<b>Counts (in 000's)</b>									
<b>Rural</b>									
Cycle 1	44.0	1.7	22.1	42.7	7.4	6.5	1.5	1.9	127.8
Cycle 2	33.5	1.2	41.4	1.8	1.9	2.9	44.8	5.6	133.1
<b>Urban</b>									
Cycle 1	221.7	6.9	103.4	112.3	26.3	35.2	5.7	8.4	519.9
Cycle 2	189.7	7.5	200.0	14.5	11.8	10.1	134.9	19.9	588.3
<b>Percent</b>									
<b>Rural</b>									
Cycle 1	34.4	1.3	17.3	33.4	5.8	5.1	1.1	1.5	100.0
Cycle 2	25.1	0.9	31.1	1.3	1.5	2.2	33.7	4.2	100.0
<b>Urban</b>									
Cycle 1	42.6	1.3	19.9	21.6	5.1	6.8	1.1	1.6	100.0
Cycle 2	32.2	1.3	34.0	2.5	2.0	1.7	22.9	3.4	100.0

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors of this report.

#### 4.1.4 Multivariate Analysis

Multivariate analysis allows the collection of a number of cross tabulation results in one piece of analysis. This type of analysis assumes that there are relationships between an independent variable, such as having had a student loan, and a number of independent variables, such as the type of institution attended, the province of residence, the type of household the student came from and the urban-rural background of the student at the time of the survey (Cycle 1). Also included as independent variables are the educational attainment of parents and the number of hours worked while in high school.

We carried out separate logistics regression on students having received student loans, bank loans, family loans, money from their parents, money from jobs, scholarships, awards or prizes, and grants and bursaries. The results of these regressions were translated into odds ratios and into reduced risk ratios (RRR). We then transformed these reduced risk ratios into probabilities of the dependent variable occurring (for

instance receiving a student loan) for each independent variable. To make the analysis easier to interpret, the probabilities associated with each independent variable were calculated and expressed as probabilities that the dependent variable will occur given that the student is from, for instance, a single family household, every other variables taken at its mean value (that is, everything else being equal).

The resulting probabilities of the logistic regression may be similar to the results obtained from the cross tabulations of the previous sections. There will undoubtedly be some differences given that multivariate analysis such as logistic regressions considers the interactions between the variables of the regressions. To further simplify matters, as shown in the table below, we expressed the probabilities as deviations, either positive or negative, from the overall regression probabilities. Thus, the probability of obtaining a student loan given the student comes from a single family household, everything else being equal, is expressed as a value which is so many probability points above or below the average.

Now let us examine what the following table reveals. The probability of receiving a student loan is lower if a student comes from a single-family household than if he comes from another type of household, everything else being equal. Students from Atlantic Provinces are less likely to get student loans, whereas students from British Columbia are more likely than students from other provinces. Should a student come from a rural community, he or she is less likely to obtain a student loan than if he or she comes from an urban background. Student loans also favour students whose parents received a postsecondary education and those who worked while they were in high school.

Given that the t-statistics on bank loans and on other money obtained by students are very low, we cannot say much about the associated probabilities. As for family loans, the probabilities are not very different from the overall probabilities. Students are less likely to obtain money from parents (or partners) if they come from single-parent households and go to university or college than otherwise. Students are more likely to obtain money from jobs if they attend business and technical schools, are from an urban background, have parents that do not possess a postsecondary education and have worked while they were in high school. This is intuitively consistent as one would expect someone who does not have much money to finance his or her education by working

and to attend a business or technical school. A similar argument can be raised for a student who resorts to personal savings to finance his or her PSE endeavour.

Overall, 60 percent of students from Cycle 1 obtain scholarships, awards or prizes to finance their postsecondary education. Approximately 4 percent more people are likely to be from a single-family household, 20 percent more for students attending business or trade schools, 2 percent more if they come from a rural background and about 3 percent more if their parents do not have a postsecondary education. Grants and bursaries favour those coming from other family households, from an urban background, from parents with a postsecondary education and those who have not worked while in high school.

Some of these results seem highly counter-intuitive. Students whose parents possess a postsecondary background should not, in theory, be favoured in getting student loans and bursaries. They should have higher incomes that disqualify them from receiving this assistance. Students at trade schools should not be more favoured in getting scholarships, because these institutions almost never give out merit-based assistance. There is no obvious answer to the questions raised by these results.

**Table 4.9 – Probability of Getting PSE Financing by PSE Financial Instrument Used, Cycle 1 (18 to 20 Year Olds), Excluding Québec**

	Financial Instruments Used								
	Student loan	Bank loan	Family loan	Money from parents	Other money	Money from jobs	Personal savings	Scholarships, awards or prizes	Grants and bursaries
<b>Overall</b>	<b>71.8</b>	<b>91.2</b>	<b>96.4</b>	<b>40.2</b>	<b>88.3</b>	<b>33.9</b>	<b>45.7</b>	<b>60.0</b>	<b>80.3</b>
<b>Male</b>	1.4	-1.3	-0.9	-1.1	2.0	-1.0	-3.5	3.1	1.0
Female	<b>-1.1</b>	<b>1.0</b>	<b>0.8</b>	0.9	<b>-1.5</b>	0.9	<b>2.8</b>	<b>-2.4</b>	-0.8
<b>Other family household</b>	2.8	-0.2	-0.1	-2.1	0.5	-0.6	-0.3	-0.8	0.6
Single-parent household	<b>-11.6</b>	0.6	0.3	<b>8.6</b>	<b>-2.2</b>	2.7	1.2	<b>3.8</b>	-2.6
Other institution	-2.8	-0.8	-0.1	<b>14.1</b>	1.7	13.8	<b>9.2</b>	<b>16.7</b>	<b>5.5</b>
Community college / CEGEP	<b>3.5</b>	-0.2	0.3	<b>2.7</b>	<b>1.9</b>	<b>-0.1</b>	<b>2.2</b>	<b>13.2</b>	<b>3.9</b>
<b>University / college</b>	-1.6	0.2	-0.2	-4.2	-1.1	-2.5	-3.0	-9.2	-3.0
Atlantic provinces	<b>-14.1</b>	<b>-3.3</b>	<b>0.9</b>	<b>9.6</b>	1.4	1.6	<b>12.1</b>	<b>11.9</b>	0.1
<b>Ontario</b>	-3.5	0.4	-1.0	-2.2	0.6	-1.9	-4.3	6.7	1.9
Manitoba / Saskatchewan	<b>5.5</b>	<b>-5.7</b>	0.6	<b>3.5</b>	-0.4	-1.2	4.7	3.9	<b>7.3</b>
Alberta	<b>4.5</b>	0.2	<b>1.7</b>	-0.6	-1.1	-0.3	-2.5	<b>-13.5</b>	<b>-2.4</b>
British Columbia	<b>12.3</b>	<b>4.2</b>	0.3	-2.6	-1.3	<b>4.2</b>	<b>1.1</b>	<b>-16.6</b>	<b>-6.8</b>
<b>From an urban background</b>	1.8	0.7	-0.1	0.0	0.5	0.8	1.8	2.1	1.7
From a rural background	<b>-7.2</b>	<b>-3.0</b>	0.4	-0.2	-1.8	<b>-3.2</b>	<b>-7.9</b>	<b>-9.0</b>	<b>-7.3</b>
<b>No postsecondary education of parents</b>	-6.4	0.2	0.4	5.8	2.3	2.9	1.3	2.2	-2.3
Postsecondary education of parents	<b>3.8</b>	-0.2	-0.2	<b>-3.4</b>	<b>-1.2</b>	<b>-1.6</b>	-0.8	<b>-1.1</b>	<b>1.3</b>
<b>High school grade average less than 80%</b>	-1.5	-1.2	-1.3	1.0	1.7	1.6	1.5	14.2	3.9
High school grade average greater than 80%	1.5	<b>1.2</b>	<b>1.3</b>	-1.1	-1.4	<b>-1.6</b>	-1.5	<b>-12.5</b>	<b>-3.5</b>
Not worked while in high school	<b>-3.9</b>	<b>2.5</b>	0.9	<b>-4.6</b>	0.6	<b>12.3</b>	<b>6.0</b>	0.5	<b>2.9</b>
<b>Worked while in high school</b>	2.1	-1.4	-0.4	2.4	-0.3	-6.5	-3.3	-0.2	-1.6

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors. Note that characters in bold italic indicate that the numbers are reliable at a 95 percent confidence level. Confidence levels are not reported for numbers associated with the omitted variables (variables in bold).

Cycle 2 results confirm to a large extent results from Cycle 1. Understandably, students from Cycle 2 are older than students from Cycle 1 and their financial needs differ.



Students from single-family households are less likely to obtain bank loans than those other types of households. They are more likely to obtain such loans if they are from an urban background and if their parents have a postsecondary education.

Students are more likely to obtain family loans if they come from an urban background, if their parents have no postsecondary education and if they did not work while in high school.

Cycle 2 results for money from parents, money from jobs, scholarships, awards and prizes, and from grants and bursaries are similar to those of Cycle 1. The probabilities differ somewhat, but substantially the same picture holds across both waves.

**Table 4.10 – Probability of Getting PSE Financing by PSE Financial Instrument Used, Cycle 2 (20 to 22 Year Olds), Excluding Québec**

	Financial Instruments Used								
	Student loan	Bank loan	Family loan	Money from parents	Other money	Money from jobs	Personal savings	Scholarships, awards or prizes	Grants and bursaries
<b>Overall</b>	<b>71.1</b>	<b>60.5</b>	<b>84.7</b>	<b>46.9</b>	<b>87.3</b>	<b>53.6</b>	<b>71.2</b>	<b>77.5</b>	<b>82.0</b>
<i>Male</i>	0.3	0.3	-0.2	-0.8	1.1	0.6	-2.3	1.0	1.5
Female	-0.3	-0.3	0.3	0.7	<b>-0.8</b>	-0.4	<b>1.9</b>	-0.7	<b>-1.2</b>
<i>Other family household</i>	2.9	2.7	-0.4	-1.6	0.8	-0.9	0.0	0.0	1.1
Single-parent household	<b>-11.4</b>	<b>-10.7</b>	<b>1.9</b>	<b>6.3</b>	<b>-3.2</b>	<b>3.7</b>	0.1	0.3	<b>-4.3</b>
Other institution	8.7	11.8	3.8	20.8	3.3	0.2	11.8	9.3	7.0
Community college / CEGEP	-2.1	-2.9	-1.0	<b>2.5</b>	<b>2.0</b>	<b>2.6</b>	<b>-0.8</b>	<b>8.3</b>	-1.3
<i>University / college</i>	-2.6	-3.5	-1.0	-10.3	-2.3	-1.4	-4.4	-7.2	-2.1
Atlantic provinces	<b>-13.9</b>	<b>-15.0</b>	<b>-3.8</b>	<b>9.7</b>	0.8	-5.5	<b>8.8</b>	3.7	<b>4.5</b>
<i>Ontario</i>	2.3	2.2	0.8	-2.4	-0.7	2.6	-2.3	1.3	-0.8
Manitoba / Saskatchewan	4.8	-0.2	<b>-4.8</b>	<b>5.9</b>	-0.6	-4.3	<b>3.7</b>	3.7	<b>6.8</b>
Alberta	-0.9	-2.0	-2.6	-1.9	-0.6	<b>-3.1</b>	-4.2	<b>-8.6</b>	0.6
British Columbia	0.6	4.6	<b>4.8</b>	-1.0	<b>2.3</b>	<b>0.5</b>	<b>1.9</b>	<b>-2.4</b>	<b>-4.4</b>
<i>From an urban background</i>	1.4	1.6	0.9	-0.1	0.1	0.3	0.5	0.8	0.6
From a rural background	<b>-5.8</b>	<b>-6.8</b>	<b>-3.5</b>	0.3	-0.2	-1.3	-2.5	<b>-3.4</b>	<b>-3.0</b>
<i>No postsecondary education of parents</i>	-5.5	-3.9	1.5	7.1	2.6	3.2	-0.2	1.1	-2.4
Postsecondary education of parents	<b>3.3</b>	<b>2.3</b>	<b>-0.9</b>	<b>-4.3</b>	<b>-1.5</b>	<b>-1.9</b>	0.1	-0.5	<b>1.4</b>
<i>High school grade average less than 80%</i>	1.4	0.8	-0.2	1.0	1.0	5.2	2.6	7.9	1.4
High school grade average greater than 80%	<b>-1.7</b>	-0.9	0.3	-1.2	<b>-1.0</b>	<b>-5.9</b>	-3.0	<b>-7.6</b>	<b>-1.6</b>
Not worked while in high school	-0.8	<b>2.3</b>	<b>4.2</b>	<b>-3.3</b>	0.6	<b>7.3</b>	<b>3.4</b>	1.0	-0.6
<i>Worked while in high school</i>	0.4	-1.1	-2.0	1.5	-0.2	-3.5	-1.7	-0.4	0.3

Source: Statistics Canada, Youth in Transition Survey, tabulation by the authors. Note that characters in bold italic indicate that the numbers are reliable at a 95 percent confidence level. Confidence levels are not reported for numbers associated with the omitted variables (variables in bold).

## **4.2 Rural Versus Urban Students' Income and Expenditures**

The following tables show income and expenditures of urban and rural students at Canadian universities and colleges based on data from the Student Financial Survey (hence forth referred to as SFS). SFS is the preferred survey for looking at data on student income and expenditure. YITS may also be used to look at this question, but its data on expenditures is limited and, unlike SFS, is focussed on younger students only. SFS' wider sample frame and inclusion of expenditure data gives it preferred status among the five surveys for looking at this issue.

The SFS is very inclusive in its definition of expenditures, capturing not only tuition and room and board, but also various household expenditures, and expenditures related to transportation, clothing and entertainment. The table below focuses on the issue of total annual expenditures. As noted in the literature review, Hemingway (2003) had suggested that rural students may be choosing college because of the higher costs they face in moving to universities. This appears to have some basis in reality. Students from rural areas face higher expenses than those from urban areas both at the community college and university levels, and expenses are higher at university than at college. However, the extent of the difference in rural students' costs between university and college is less than \$2,300, and can largely be explained by differences in tuition costs. As shown in the table below, it is not obvious that travel costs add that much to the gap in costs for rural students in university. However, rural university students may absorb these travel costs by foregoing certain other types of purchases. In other words, they may face higher travel costs, but meet these by lowering their standard of living in other areas.

**Table 4.11: Average Total Educational Expenditures of Students by Institutional Type and Urbanicity of Parental Home**

	University	College
Rural	\$18,600	\$16,364
Urban	\$17,114	\$15,025

Source: Student Financial Survey, tabulations by the authors.

The next table shows data on student employment during the study period. Students from rural backgrounds are somewhat likelier than their urban counterparts to hold part-

time employment during the school year. Given their higher average costs, this is not a particularly surprising result.

**Table 4.12: Students Working While Attending School by Urbanicity of Parental Home**

	Rural	Urban
Count	354	3,670
Percent	58.7%	51.8%

Source: Student Financial Survey

The next table shows that students from rural backgrounds are likely to earn significantly less from their in-study employment than students from urban backgrounds; in fact, the income differential is about 20 percent.

**Table 4.13: Average Annual Student Employment Income by Urbanicity of Parental Home**

	Average Income
Rural	\$5,366
Urban	\$6,265

Source: Student Financial Survey

The table below looks at receipt of government loans by institutional type and urbanicity of parental residence. There do not appear to be any major differences between rural and urban students in their use of government student loans, once type of institutions are controlled for. University students from rural backgrounds are slightly more likely to receive government loans than their urban colleagues. However, college students from rural backgrounds are slightly less likely to have loans than their urban colleagues. In neither case is the difference especially important from a policy perspective.

**Table 4.14: Number and Percent of Students in Receipt of Government Loans by Institutional Type and Urbanicity of Parental Home**

	Count		Percentage	
	University	College	University	College
Rural	243	56	51.3%	42.4%
Urban	2,456	470	49.0%	44.6%

Source: Student Financial Survey

The next table looks at the receipt of private loans by institutional type and urbanicity of parental residence. There does not appear to be a major difference in the uptake of private loans among rural and urban university students. There does, however, appear to be a major difference in the uptake of private loans among college students. College students from rural backgrounds are nearly twice as likely as their urban counterparts to be in receipt of a private loan, and nearly two-thirds as likely as university students from rural backgrounds. This is somewhat puzzling in that private loans are usually thought of as an instrument used by individuals facing high costs; yet the higher uptake among rural college students, who face lower costs than rural university students (see Table 4.1, above), would seem to contradict this.

**Table 4.15: Number and Percent of Students with Private Loans by Institutional Type and Urbanicity of Parental Home**

	Count		Percentage	
	University	College	University	College
Rural	109	40	22.9%	30.3%
Urban	1,100	172	22.0%	16.3%

Source: Student Financial Survey

In sum, rural students appear to have total annual educational expenditures that are about 5% higher than those of urban students. This leads to a slightly higher uptake of student loans and higher rate of employment among rural students, though urban students have higher earnings, on average, than rural ones. Thus, though there are statistically significant differences between rural and urban students, the magnitude of the differences is fairly small.

## 5 Distance Education

The use of distance education in PSE was originally meant for students living in rural settings who were older; however, as our literature survey has shown, this relationship may be changing over time. The following tables use YITS Cycle I data to show the percentage of youth aged 18 to 20 that had taken at least one course using distance education. Note that the student counts in these tables are based simply on enrolment in a single class. Students included in these counts are not necessarily enrolled in distance education on a full-time basis, or even exclusively enrolled in distance education programs. One can, for instance, be enrolled on a full-time basis in the traditional fashion and simultaneously be taking a single distance education course at another campus.

According to data from YITS Cycle 1, just 3.7 percent of all 18 to 20 year olds with PSE experience have ever taken a course via distance education. Males were more likely to have taken a course in this manner than females. The table below shows distance education participation rates by gender.

**Table 5.1: Distance Education by Gender, Cycle 1 (18 to 20 year olds)**

Gender	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
<b>Male</b>	337.7	<b>16.2</b>	354.0	95.4	4.5	100.0%
<b>Female</b>	286.2	8.8	295.1	96.9	3.0	100.0%
<b>Total</b>	623.9	25.1	649.1	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The next table shows participation in distance education by current PSE status (graduate, continuer and leaver). The data show that PSE leavers were less likely to have taken a distance education course than either continuers or graduates.

**Table 5.2: Distance Education by Postsecondary Status, Cycle 1 (18 to 20 year olds)**

Postsecondary Type	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
<b>Graduates</b>	43.3	1.4	44.8	96.7	3.2	100.0%
<b>Continuers</b>	522.5	22.3	544.8	95.7	4.0	100.0%
<b>Leavers</b>	58.1	1.3	59.4	97.7	2.2	100.0%
<b>Total</b>	623.9	25.1	649.1	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The table below shows participation in distance education by institution type. Students enrolled in universities were the likeliest to have taken courses using distance education while students in community colleges were the least likely to have done so.

**Table 5.3: Distance Education by Institution Type, Cycle 1 (18 to 20 year olds)**

Institution Type	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
<b>University / College</b>	269.7	12.7	282.5	95.4	4.5	100.0%
<b>Community College / CEGEP</b>	261.8	8.7	270.6	96.7	3.2	100.0%
<b>Tech Institute / Business School</b>	74.2	3.1	77.3	95.9	4.0	100.0%
<b>Total</b>	605.8	24.6	630.5	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The next table shows participation in distance education by family type. Students from non-traditional family types were slightly likelier than students from two-parent families to have taken a course using distance education.

**Table 5.4: Distance Education by Family Type, Cycle 1 (18 to 20 year olds)**

Family Type	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
<b>Two-parent family</b>	472.1	18.2	490.4	96.2	3.7	100.0%
<b>Other family types</b>	151.8	6.8	158.7	95.5	4.2	100.0%
<b>Total</b>	623.9	25.1	649.1	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The table below shows participation in distance education by province. Some significant variations exist between provinces in terms of use of distance education. In Quebec, where use is the lowest, just 2.2 percent of students aged between 18 and 20 report using current distance education, possibly because students in Québec are well served by the wide geographic distribution of CEGEPs. In Manitoba, where distance education use is the highest, 7.5 percent of students reported using this mode of education.

**Table 5.5: Distance Education by Province, Cycle 1 (18 to 20 year olds)**

Province	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
<b>Atlantic Provinces</b>	54.2	2.8	57.1	95.0	4.9	100.0%
<b>Québec</b>	208.2	5.1	213.3	97.5	2.2	100.0%
<b>Ontario</b>	193.4	9.1	202.6	95.4	4.5	100.0%
<b>Manitoba</b>	18.5	1.5	20.0	92.4	7.5	100.0%
<b>Saskatchewan</b>	19.4	1.0	20.4	95.0	4.7	100.0%
<b>Alberta</b>	55.9	1.8	57.8	96.7	3.2	100.0%
<b>British Columbia</b>	72.9	3.6	76.5	95.2	4.7	100.0%
<b>Total</b>	622.8	25.1	648.0	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The next table shows participation in distance education by average marks in secondary school mathematics. The distribution of distance education use appears to be bi-modal, with students from the top and bottom of the class being slightly more likely to use distance education than students with average academic marks.



**Table 5.6: Distance Education by High School Math Grade Average in Last Year of High School, Cycle 1 (18 to 20 year olds)**

High School Math Grade Average	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
80% to 100%	264.4	11.0	275.4	95.9	4.0	100.0%
60% to 79%	314.1	12.1	326.2	96.2	3.7	100.0%
Under 60%	36.0	1.6	37.6	95.5	4.2	100.0%
<b>Total</b>	614.6	24.7	639.3	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The table below shows participation in distance education by hours of paid work during the first year of PSE. Contrary to the perception that distance education is the choice mode of study for individuals who are highly engaged in the labour force, the YITS survey finds that among younger people, hours of work are very slightly negatively correlated with use of distance education.

**Table 5.7: Distance Education by Average Hours of Paid Work per Week during First Year of PSE, Cycle 1 (18 to 20 year olds)**

Average Hours Paid Per Week	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
Did not work	250.9	10.8	261.7	95.7	4.0	100.0%
1 - 9 hours	108.3	4.4	112.7	96.0	3.8	100.0%
10 - 19 hours	146.5	5.6	152.1	96.2	3.6	100.0%
20 hours or more	114.9	4.2	119.1	96.4	3.5	100.0%
<b>Total</b>	620.7	25.1	645.8	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The next table shows participation in distance education by parental education. The data show that there is a clear distinction between distance education and having a parent with a university degree. Below the university degree level, changes in parental education do not really affect the use of distance education at PSE; however, it does drop noticeably with the presence of a university degree in the family. We suspect that distance learning is more prevalent at the university level and that a greater proportion of university students come from parents who also have a university education.

**Table 5.8: Distance Education by Highest Level of Education Attained by Parents, Cycle 1 (18 to 20 year olds)**

Highest Level of Education Attained by Parents	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
Less Than High School	48.3	2.1	50.4	95.7	4.2	100.0%
High School	176.9	7.9	184.8	95.7	4.2	100.0%
Postsecondary Certificate / Diploma	161.7	6.7	168.4	95.9	4.0	100.0%
University Degree	214.5	7.5	222.0	96.5	3.3	100.0%
<b>Total</b>	601.4	24.4	625.8	96.0	3.7	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The next table shows participation in distance education by the financial instruments from which students have received the most money. Curiously, students whose primary source of income is jobs since high school have the most experience with distance education – a result that seems to conflict with the data in Table 5.7. To the extent that there is a pattern of relationships between financial instruments and use of distance education, it seems that individuals who either work or receive government assistance (i.e. those who on average, are likelier to be from lower SES backgrounds) have a higher frequency of distance education use, while those who favour financial instruments associated with higher socio-economic status (scholarships, family savings) are less likely to have experience in distance education.

**Table 5.9: Distance Education by Financial Instrument from Which Received Most Money, Cycle 1 (18 to 20 year olds)**

Financial Instruments	Counts (000's)			Percent Distribution		
	No	Yes	Total	No	Yes	Total
Grants and bursaries	6.6	0.3	6.9	95.8	4.2	100.0%
Scholarships, awards or prizes	32.5	1.1	33.6	96.8	3.2	100.0%
Jobs since high school	90.1	5.3	95.4	94.4	5.6	100.0%
Personal savings	25.4	1.2	26.6	95.6	4.4	100.0%
Parents or family	208.0	6.5	214.5	97.0	3.0	100.0%
Loans	128.6	5.4	134.0	96.0	4.0	100.0%
Other people	6.6	0.0	6.9	94.9	0.0	100.0%
Other source	6.6	0.2	6.8	96.7	3.3	100.0%
Total	504.4	20.3	524.7	96.1	3.9	100.0%

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

The next tables look at the borrowing profiles of students with distance education experience versus those without distance education experience, by PSE Institution type. Generally speaking, these tables find that students with experience in distance education have higher borrowing than those who do not.

**Table 5.10: Average Amount Borrowed and Received (in \$000's) by Using Distance Learning and by Institution Type**

	Student Loan Amount Borrowed	Student Loan Amount Owning	Bank Loan or Line of Credit	Loan from Parents or Family	Total Amount Owning	Scholarships, Awards or Prizes	Grants and Bursaries
<b>Distance Learning</b>							
<b>Technical Institute / Business School</b>							
Yes	8.6*	8.5*	0.0	0.0	7.9*	--	0.0
No	5.7	5.5	4.6	4.9*	6.1	1.7	--
Total	5.8	5.5	4.6	4.9*	6.1	1.6	--
<b>Community College / CEGEP</b>							
Yes	5.8	5.7	--	3.5*	5.5	1.2	--
No	4.6	4.3	3.9	2.2	4.5	1.5	1.1
Total	4.7	4.3	3.9	2.4	4.6	1.5	1.1
<b>University / College</b>							
Yes	9.3	9.2	5.6	0.0	10.0	2.6	1.1
No	6.8	6.7	4.9	3.2	6.8	2.5	1.3
Total	6.9	6.8	4.9	3.8*	6.9	2.5	1.3
<b>Total</b>							
Yes	7.7	7.6	5.1	--	7.8	2.2	1.2*
No	5.7	5.5	4.5	3.2	5.7	2.2	1.4
Total	5.8	5.6	4.5	3.4	5.8	2.2	1.4

Source: Statistics Canada, Youth in Transition Survey, tabulation by authors.

## 6 Rate of Return

In this section, we use CSLP/LAD data to look at rates of return to PSE. CSLP/LAD is a useful database in that it contains information on pre-study, in-study and, to a limited extent, post-study characteristics as well. The length of time coverage of the database makes it impossible to look more than a few years after study, so issues of long run rates of return cannot be examined using this database.

“Rurality” in this section again uses the standard Statistics Canada definition, which, as noted earlier, may hide some crucial divisions between rural-remote and rural-non-remote students. A student’s status as “rural” or “urban” is determined by tracing each individual back, using a SIN number, to the last year in which he was living with his parents. The parents’ address is then checked against the Statistics Canada definition of “rurality” and a “rural”, or “urban” status is then accorded.

### 6.1 *Basic Statistics*

Ninety-five (95) percent of all youth lived within commuting distance to a university or college in 2000. In particular, 82 percent lived within 70 kilometres of a university. An additional 13 percent lived beyond commuting distance to a university, but within 70 kilometres of a college. Only 5 percent of youth lived beyond commuting distance to a university or college (see Table 6.1).

However, the story is quite different among smaller communities. Table 6.1 shows that the critical population threshold is about 30,000 residents. More than 15 percent of youth in communities with less than 30,000 residents live beyond commuting distance to a university or college. Table A1 of Appendix A provide additional details about the distance of youth from PSE institutions in 2000.

The conclusion from these statistics is that distance from PSE institutions is not a problem for most youth. Only about 5 percent live beyond what can be considered as commuting distance. However, this 5 percent is heavily concentrated in rural and small communities, and affects more than 15 percent of their youth.

**Table 6.1: Distribution of Youth by Type of Home Area and Presence of PSE Institution Within 70 Kilometres, 2000**

Type of Home Area (in 000's)	Count (in 000's)				Percentage			
	Univer- sity	College only	Neither	Total	Univer- sity	College only	Neither	Total
Rural	219.2	152.4	78.6	450.1	48.7	33.9	17.5	100.0
Urban less than 15	167.7	125.4	54.4	347.5	48.3	36.1	15.7	100.0
Urban 15-29	33.7	47.4	14.4	95.4	35.3	49.7	15.1	100.0
Urban 30-99	203.3	91.5	6.8	301.6	67.4	30.3	2.3	100.0
Urban 100-499	535.7	5.6	0.0	541.3	99.0	1.0	0.0	100.0
Urban over 500	1,510.3	0.8	0.0	1,511.1	99.9	0.1	0.0	100.0
Total	2,669.9	423.0	154.2	3,247.0	82.2	13.0	4.7	100.0

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative file (LAD/CSLP).  
 Note: In virtually all cases, youth who lived within commuting distance to a university also lived within commuting distance to a college.

## **6.2 Effect of Rural Residence on PSE Enrolments**

Low parental income has been identified as a barrier to postsecondary enrolment. Low parental income is likely to be an even more serious barrier when youth have to move out of their community in order to enrol in PSE. In this section, we analyze the LAD/CSLP database to address the following three specific questions:

- ◆ Is the PSE participation rate of rural youth more sensitive to parental income than the one of urban youth?
- ◆ Among those who attend PSE, is the decision to attend university (as opposed to college) more sensitive to parental income in the case of rural students? and
- ◆ Are rural students more likely to move (e.g. more than 70 kilometres) to attend PSE and how does the phenomenon vary by level of parental income?

The analysis considers both the effect of rural residence and the effect of distance from PSE institutions. Given the high correlation between the two, the results with respect to type of residence and distance from PSE institutions are similar.

### **6.2.1 PSE Participation and Sensitivity to Parental Income**

The analysis in this section includes all youth, regardless if they were full-time students or not in 2000. The key dependent variable is whether they were full-time students or not in 2000 (based on the presence or not of a full-time education deduction in LAD). The key independent variables are parental income and either the type of home area or distance of the parental community from a PSE institution. Figure 7.1 shows that:

- ◆ PSE enrolment rates increase with the level of parental income. For example, in large metropolitan areas (i.e. population 500,000 or greater), the enrolment rate for parental incomes above \$100,000 is almost double that for parental incomes below \$20,000 (43 percent versus 23 percent).
- ◆ At the same time, within the same level of parental income, PSE enrolment rates are higher in large communities than in rural and small communities. The lower the level of parental income, the wider is the gap. For example, among parental incomes above \$100,000, the gap between rural areas and large metropolitan areas is 4 percentage points. However, it reaches 10 percentage points among parental incomes below \$20,000. More detailed results are shown in Table 6.2.

The primary reason why rural and small areas are a barrier to PSE is the greater distance from PSE institutions. As it was pointed out in the previous section, there is a close correlation between size of the community and distance from PSE institutions. *Figure 6.2* and *Table 6.3* show that there is a 8 percentage point difference between communities within 40 kilometres of a PSE institution and those beyond 70 kilometres.

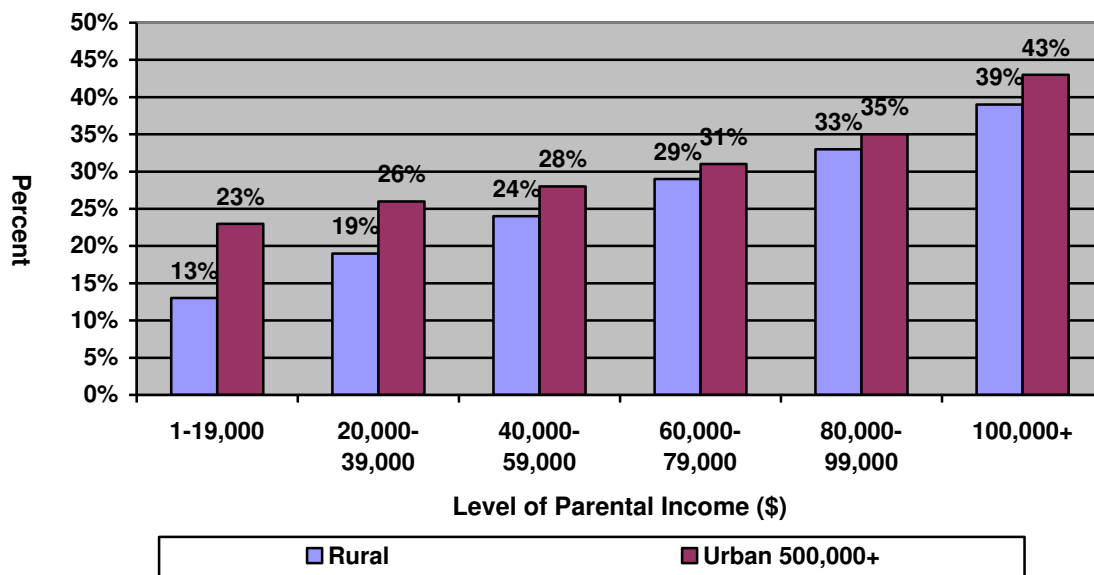
The overall conclusion from the above results is that both parental income and the size of the community (or distance from PSE institutions) have a significant effect on PSE rates. For example, there is a 10 percentage gap between low-income rural and low-income metropolitan youth (13 percent versus 23 percent). There is a further 20 percentage gap between low-income metropolitan and high-income metropolitan youth (43 percent versus 23 percent).

**Table 6.2: Percentage of Full-time PSE Participation among Youth, Age 18-29 by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	13	19	24	29	33	39	23
Urban less than 15	14	19	23	27	32	39	25
Urban 15-29	16	22	26	29	32	41	27
Urban 30-99	16	21	26	30	34	42	28
Urban 100-499	19	23	27	29	34	43	30
Urban over 500	23	26	28	31	35	43	31
Total	19	23	26	30	34	43	29
Difference between Rural and Urban 500+	10	7	4	2	2	4	8

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP). Note: LAD does not distinguish college from university.

**Figure 6.1: Percentage of Full-time PSE Participation among Youth, Age 18-29 by Type of Home Area and Level of Parental Income, 2000**



Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

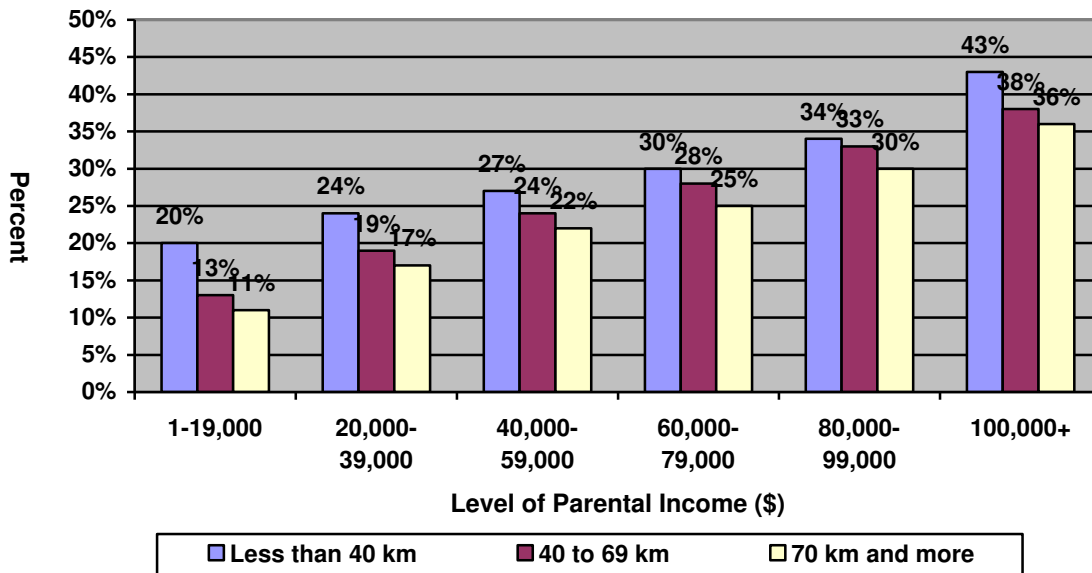


**Table 6.3: Percentage of Full-Time PSE Participation among Youth, Age 18-29 by Distance from Nearest PSE Institution and Level of Parental Income, 2000**

Distance from Nearest PSE Institution	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Less than 40 km	20	24	27	30	34	43	30
40 to 69 km	13	19	24	28	33	38	23
70 km and more	11	17	22	25	30	36	21
Total	19	23	26	30	34	43	29
Difference between less than 40 km and 70 km and more	10	7	5	5	5	7	8

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP). Note: LAD does not distinguish college from university.

**Figure 6.2: Percentage of Full-Time PSE Participation among Youth, Age 18-29 by Distance from Nearest PSE Institution and Level of Parental Income, 2000**



Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

### 6.2.2 Institution Type Choice and Sensitivity to Parental Income

In this section we restricted the sample to individuals who were full-time students in 2000. we are investigating whether the choice between university and college was affected by the size of the parental community or the presence of a university or college

within commuting distance. The sample was further restricted to those with a full-time CSLP loan. The reason is that the type of institution is known in our database only for those with a CSLP loan. This restricts our analysis somewhat, and it is not clear if the results are generalizable to the entire youth or student population.

Our hypothesis is that youth in rural and small communities, as well as those who live beyond commuting distance from a university, are more likely to attend college than university. The results confirm our hypothesis. Figure 6.3 and Table 6.4 show that in 2000, students in large metropolitan areas (population of 500,000 or greater) had a 9 percent higher probability to be in university than students in rural areas. The difference tends to be wider at lower parental income levels, but the correlation to parental income is not a strong one. More detailed data are shown in Table A2 of Appendix A. Similarly, those who lived within commuting distance to a university were 11 percent more likely to attend university than college or private institution. The difference was about the same across all parental income levels (Figure 6.4).

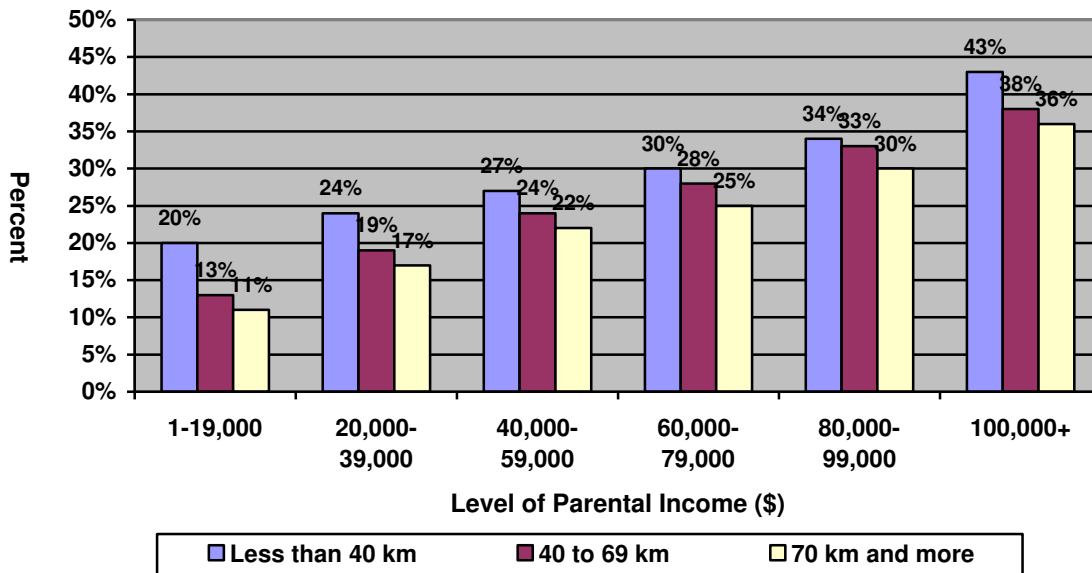
The above results indicate that proximity to PSE institutions influences the choice of institution being attended. However, this effect appears to be driven primarily by the convenience of easier access, rather than cost considerations. The latter conclusion is based on the observation that the impact of distance is similar regardless of the level of parental income. This finding supports the tentative conclusion reached in our earlier literature review (see above, Section 2.5) that students from rural areas are simply choosing college over university, rather than being “prevented” from attending university by financial or academic barriers.

**Table 6.4: Percentage of Full-Time PSE Participation among Youth, Age 18-29 by Distance from Nearest PSE Institution and Level of Parental Income, 2000**

Distance from nearest PSE institution	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Less than 40 km	20	24	27	30	34	43	30
40 to 69 km	13	19	24	28	33	38	23
70 km and more	11	17	22	25	30	36	21
Total	19	23	26	30	34	43	29
Difference between less than 40 km and 70 km and more	10	7	5	5	5	7	8

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP). Note: LAD does not distinguish college from university.

**Figure 6.3: Percentage of Full-Time PSE Participation among Youth, Age 18-29 by Distance from Nearest PSE Institution and Level of Parental Income, 2000**



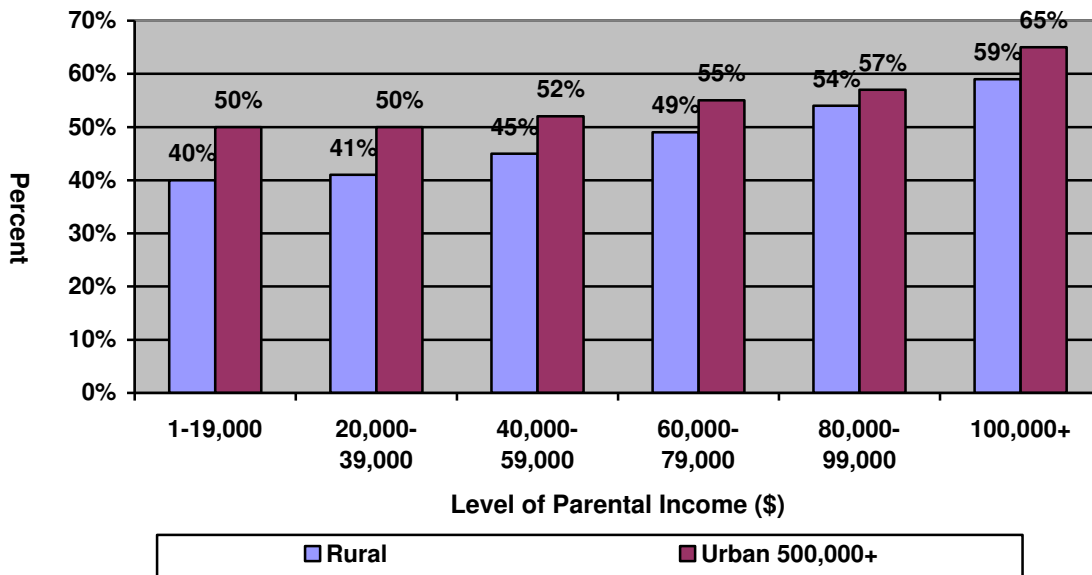
Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Table 6.5: Percentage of Full-time Who Attended University by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	40	41	45	49	54	59	45
Urban less than 15	34	38	42	44	49	56	42
Urban 15-29	39	41	48	49	57	59	48
Urban 30-99	30	34	40	45	49	55	42
Urban 100-499	42	46	50	51	55	66	51
Urban over 500	50	50	52	55	57	65	54
Total	44	45	48	50	54	63	49
Difference between Rural and Urban 500+	10	9	7	6	3	6	9

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Figure 6.4: Percentage of Full-time Who Attended University by Type of Home Area and Level of Parental Income, 2000**



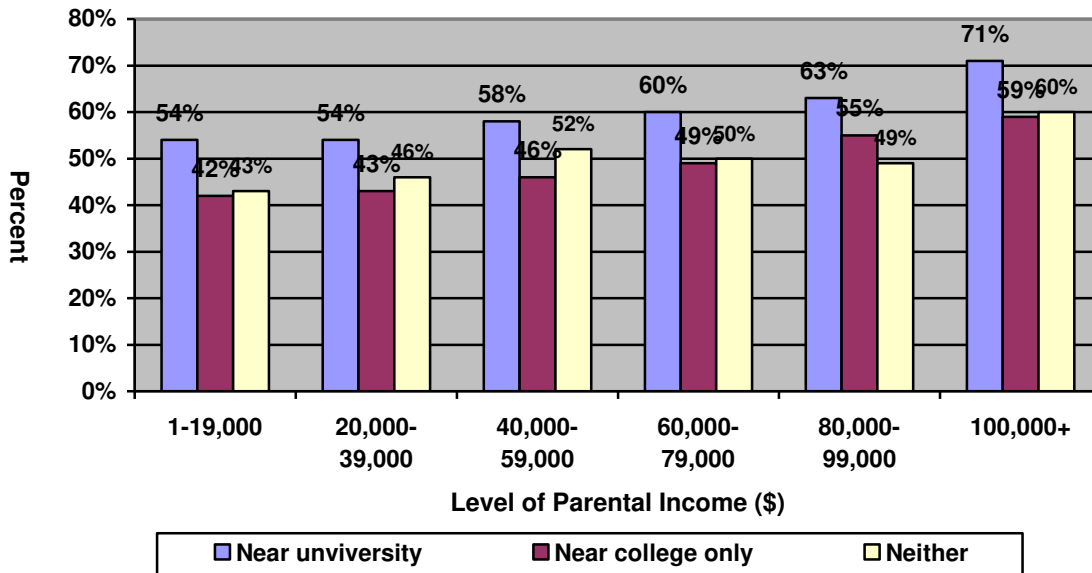
Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Table 6.6: Percentage of Full-Time Student University Enrolments by Level of Parental Income and PSE Institution within 70 kilometres, 2000**

Live within 70 km of:	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
University	54	54	58	60	63	71	59
College only	42	43	46	49	55	59	47
Neither	43	46	52	50	49	60	49
Total	52	52	55	57	61	69	56
Difference between University and College Only	12	11	11	10	9	11	11

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Figure 6.5: Percentage of Full-Time Student University Enrolments by Level of Parental Income and PSE Institution within 70 kilometres, 2000**



Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

### 6.2.3 Distance to PSE Institution and Parental Income

Students may attend an institution that is beyond commuting distance of their home for several reasons – including the absence of PSE institutions within commuting distance, the desire to attend a particular institution, or simply the desire to experience living away from home. In this section, we examine the influence of rural residency or distance from

PSE institutions on whether students attend a PSE institution near home, or beyond commuting distance. As in the previous section, the sample is restricted to full-time students with a full-time CSLP loan.

As expected, the percentage of students who attend a PSE institution that is located more than 70 kilometres from their parents' residence is considerably higher for rural youth than youth in large metropolitan areas (73 percent versus 23 percent) (Figure 6.6).

Interestingly enough, in the case of rural youth the level of parental income does not have much of an effect. The percentage enrolled beyond commuting distance ranges between 71 percent and 76 percent. In other words, a high percentage of rural youth attends a PSE institution that is beyond commuting distance regardless of level of parental income. By contrast, parental income has a strong influence in the case of youth in large metropolitan areas. For example, the percentage enrolled beyond commuting distance ranges from 17 percent, for youth with parental income below \$20,000, to 38 percent, for youth with parental income above \$100,000.

With respect to distance, students who lived more than 70 kilometres from the nearest PSE institution had no choice: they all enrolled in an institution that was more than 70 kilometres from home. Among students who lived 40 to 70 kilometres from a PSE institution, still a high percentage (ranging from 73 percent to 79 percent) enrolled beyond commuting distance. Finally, among students who lived within 40 kilometres of a PSE institution, there was considerable variation depending on parental income (from 31 percent for students with parental income below \$20,000 to 51 percent for students with parental income above \$100,000) (Figure 6.7)

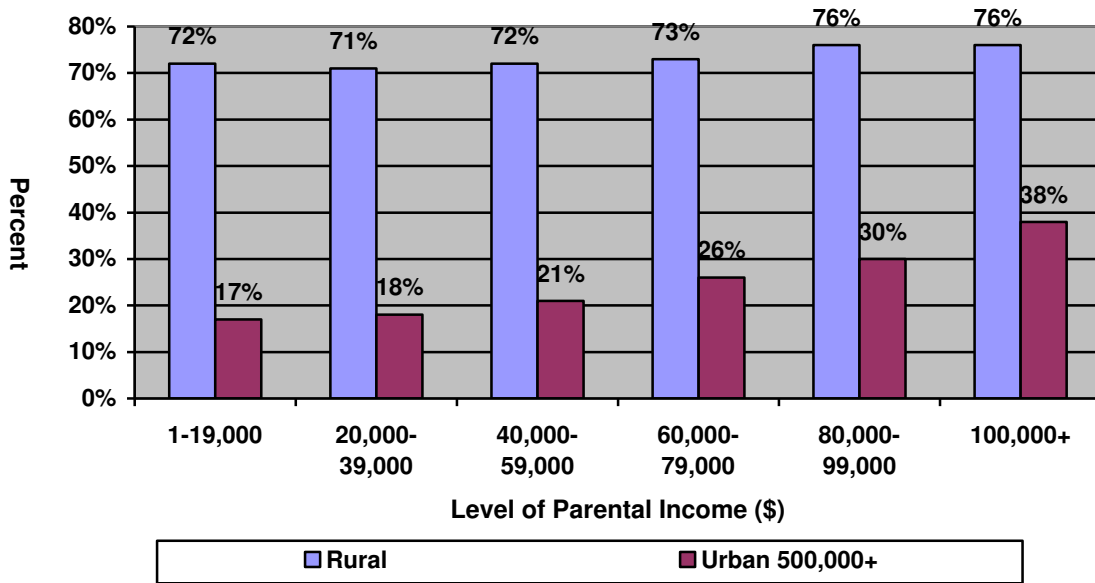
The above results clearly indicate that the availability of a PSE institution within commuting distance affects the likelihood that a student will enrol in a PSE institution that is beyond commuting distance. When there is a choice, however, high parental income makes it more likely that a student will enrol beyond commuting distance from home.

**Table 6.7: Percentage of Full-Time Students who Moved 70 kilometres or More to Attend PSE by Size of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	72	71	72	73	76	76	73
Urban less than 15	70	73	75	76	80	80	75
Urban 15-29	65	67	72	76	80	85	73
Urban 30-99	49	53	58	64	68	73	60
Urban 100-499	29	33	38	43	48	53	39
Urban over 500	17	18	21	26	30	38	23
Total	36	41	45	48	51	53	45

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP). Note: Sample of students with a full-time CSLP loan.

**Figure 6.6: Percentage of Full-Time Students who Moved 70 kilometres or More to Attend PSE by Size of Home Area and Level of Parental Income, 2000**



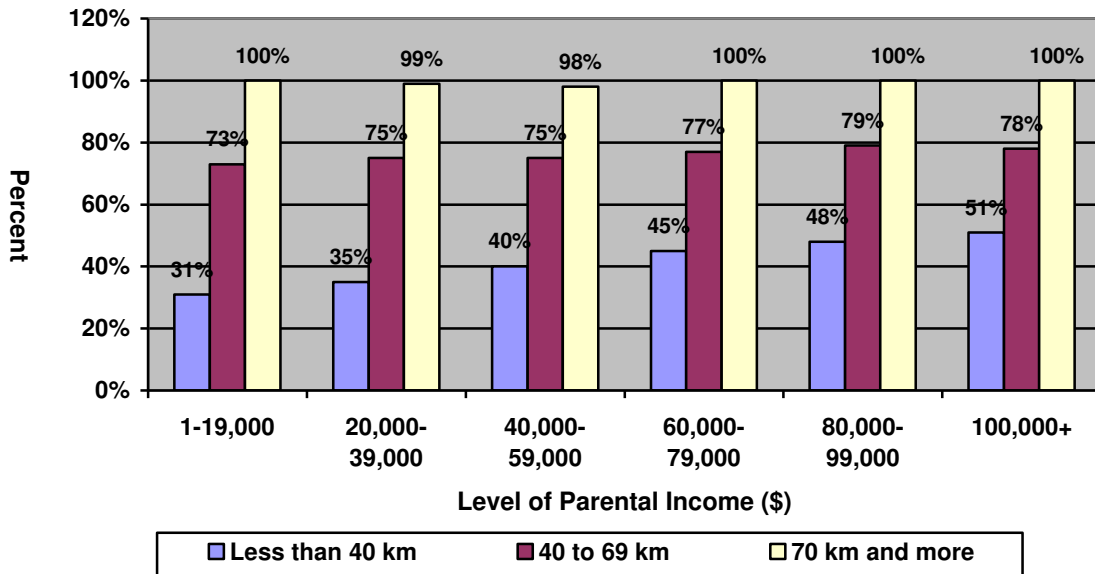
Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Table 6.8: Percentage of Full-Time Students who Moved 70 kilometres or More to Attend PSE by Distance From Nearest PSE Institution and Level of Parental Income, 2000**

Distance from nearest PSE institution	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Less than 40 km	31	35	40	45	48	51	40
40 to 69 km	73	75	75	77	79	78	75
70 km and more	100	99	98	100	100	100	99
Total	0	0	0	0	0	0	0

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP). Note: Sample of students with a full-time CSLP loan.

**Figure 6.7: Percentage of Full-Time Students who Moved 70 kilometres or More to Attend PSE by Distance From Nearest PSE Institution and Level of Parental Income, 2000**



Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)



### **6.3 Effect of Rural Residence on the Field of Study**

In this section, we probe in more detail the relationship between a rural/urban background or distance to PSE institutions, and the field of study. Again, the sample is restricted to full-time students with a full-time CSLP loan in 2000.<sup>18</sup>

The results show only a small differentiation in the distribution by field of study between rural and larger metropolitan areas. The largest differentiation appears with respect to the residual category, where 17 percent of rural students are enrolled compared to just 7 percent of students from urban areas over 500,000 in population. One possible reason for the gap is that “agriculture” appears to be one of the fields in the “other” category. (see Table 6.9). When the residual category is excluded, the only noticeable difference is in Arts, which is the choice of 41 percent of rural students and 50 percent of students from major urban centres. The results are even closer by type of institutions available within 70 kilometres of the parental residence (see Table 6.10). The above results suggest that, although distance from PSE institutions affects the choice between university and college, this effect does not seem to carry over to the choice of the field of study.

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<sup>18</sup> The statement of work included an investigation of the type of degree. However, less than 1% of the CSLP students are in a graduate program. Therefore, no analysis was conducted by type of degree.

**Table 6.9: Percentage Distribution of Students by Field of Study, Type of Home Area and Level of Parental Income, 2000**

Field of study	Type of Home Area						Total
	Rural	Urban less than 15,000	Urban 15,000-29,999	Urban 30,000-99,999	Urban 100,000-499,999	Urban over 500,000	
<b>Less than \$60,000</b>							
Admin. / Commerce	23	23	23	22	23	21	22
Arts	33	35	36	39	41	47	41
Engineering	9	9	9	10	10	14	11
Health / Law	8	10	8	8	8	6	7
Comm. / Education	9	10	10	9	6	5	7
Other	17	14	14	12	11	7	11
Sub-total	100	100	100	100	100	100	100
<b>\$60,000 and more</b>							
Admin. / Commerce	19	19	18	18	18	17	18
Arts	37	39	41	41	42	47	43
Engineering	11	11	10	10	10	11	10
Health / Law	10	11	11	12	11	11	11
Comm. / Education	10	11	12	11	9	8	9
Other	12	9	9	9	9	7	8
Sub-total	100	100	100	100	100	100	100
<b>All, including "Other" category</b>							
Admin. / Commerce	22	21	21	20	21	20	20
Arts	34	36	38	40	42	47	42
Engineering	10	10	9	10	10	13	11
Health / Law	9	10	10	10	9	8	9
Comm. / Education	10	10	11	10	7	6	8
Other	16	12	12	10	10	7	10
Total	100	100	100	100	100	100	100
<b>All, excluding "Other" category</b>							
Admin. / Commerce	26	24	24	22	23	21	23
Arts	41	42	43	44	47	50	46
Engineering	12	11	10	11	11	13	12
Health / Law	10	12	11	11	11	8	10
Comm. / Education	11	12	12	11	8	7	9
Total	100	100	100	100	100	100	100

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Table 8.2: Percentage Distribution of Students by Field of Study, Proximity of Home to Table 6.10 - University or College and Level of Parental Income, 2000**

Field of study	Home within 70 km of:			
	University	College only	Neither	Total
<b>Less than \$60,000</b>				
Admin. / Commerce	22	23	22	22
Arts	43	34	33	41
Engineering	12	10	9	11
Health / Law	7	9	8	7
Comm. / Education	6	10	11	7
Other	10	14	17	11
Sub-total	100	100	100	100
<b>\$60,000 and more</b>				
Admin. / Commerce	17	19	17	18
Arts	44	38	36	43
Engineering	10	11	12	10
Health / Law	11	11	10	11
Comm. / Education	9	11	13	9
Other	8	10	12	8
Sub-total	100	100	100	100
<b>Total</b>				
Admin. / Commerce	20	21	20	20
Arts	44	35	34	42
Engineering	11	10	10	11
Health / Law	9	10	9	9
Comm. / Education	7	10	12	8
Other	9	13	15	10
Total	100	100	100	100

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

## **6.4 Effect of Rural Residence on Rate of Return to PSE**

Our analysis so far indicated that distance from PSE institutions has an effect on the choice between college and university, and may have a further impact on the field of study. However, the latter effect does not appear to be especially important. The next question is whether graduates from rural areas end up with a lower return on their PSE, either because they are more likely to attend college than students in large urban centres, or because of other possible factors associated with rural residency.

For this analysis, we selected all students with a full-time CSLP loan who consolidated it in loan year 1995-96 (i.e. between August 1, 1995 and July 31, 1996). Consolidation normally takes place six months after the termination of PSE studies.

The key independent variable in this section is the average employment plus self-employment earnings of consolidated students over the period 1996-2000. Years with negative or zero earnings were excluded from the analysis. Before averaging positive annual earnings, they were converted to 2000 prices, using the Consumer Price Index (CPI).

### **6.4.1 Main Findings**

The results show that on average the earnings of students from large metropolitan areas (\$27,710) are significantly higher than those of students from rural areas (\$22,071). Students from large metropolitan areas earn \$5,638 or 26 percent more than students from rural areas (see Figure 6.8). A further examination of the data shows that the rural-metropolitan earnings gap is significant regardless of field of study, with the exception of engineering where the gap is only about 4 percent (see Table 6.11).

We were unable, within the scope of the current study, to probe these results further to look at actual rates of return. Clearly, to the extent to which rural students are more likely to attend college than university, and to which college graduates earnings are less than university graduates' earnings, a large portion of the differential may be due to choice of PSE institution. From a rate-of-return point of view, these lower earnings might be offset by the fact that college programs are cheaper and carry lower foregone income costs because of their shorter durations. Additionally, it is not clear from the data here how much of the gap in incomes has to do with the fact that students from rural areas

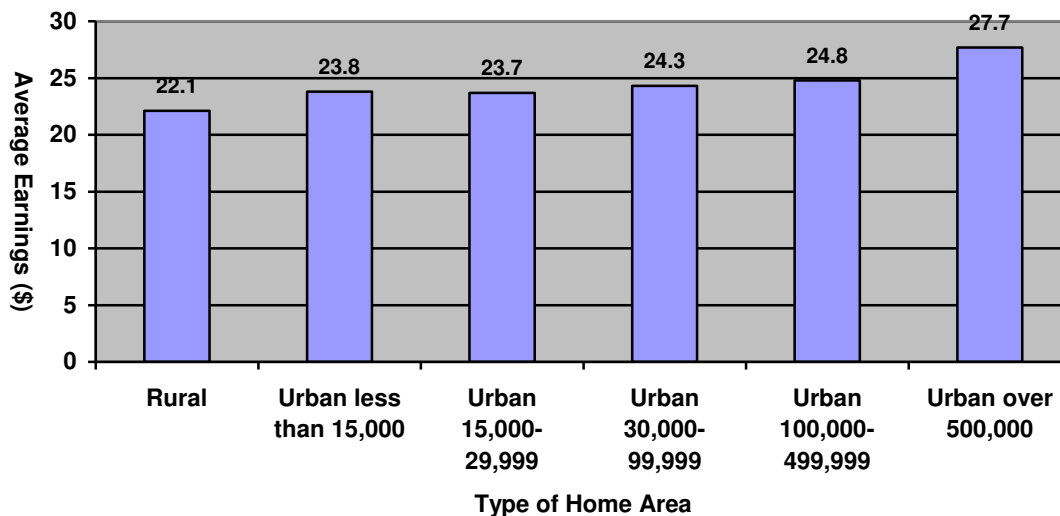
choose to *stay* in rural areas. Given that earnings in urban areas are higher than those in rural areas, choice of community may explain a big portion of the above earnings differential. In short, while these findings are suggestive, one cannot conclude definitively that rates of return are lower for rural students than urban ones.

**Table 6.11: Average Earnings (in \$000) 1996-2000 by Field of Study and Type of Home Area**

Field of study	Type of Home Area						Total
	Rural	Urban less than 15,000	Urban 15,000-29,999	Urban 30,000-99,999	Urban 100,000-499,999	Urban over 500,000	
Admin. / Commerce	20.3	21.8	23.3	22.8	22.8	27.1	24.1
Arts	20.2	23.1	22.6	22.6	24.1	26.2	24.4
Engineering	30.7	31.8	26.8	27.3	31.8	31.8	30.7
Health / Law	27.4	29.8	30.2	46.9	29.2	36.2	32.7
Comm. / Education	22.3	22.9	24.3	23.9	25.3	27.1	25.0
Other	18.9	18.0	17.7	21.0	19.3	21.3	19.9
Total	22.1	23.8	23.7	24.3	24.8	27.7	25.5

Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

**Figure 6.8: Average Earnings (in \$000) 1996-2000 by Field of Study and Type of Home Area**



Source: Statistics Canada Longitudinal Administrative Database coupled to CSLP administrative data file (LAD/CSLP)

## 7 Conclusion and Policy Implications

In the first part of this paper, we looked at data from YITS on the urban-rural divide. This data showed that there were indeed some small differences between rural and urban students in terms of the kinds of assistance they received, but that these differences were essentially minor compared to other obvious differences such as province of origin. Multivariate analysis showed that even though rural students might have higher costs, urban students are likelier - other things being held constant - to receive government financial assistance. Data from the Student Financial Survey confirmed that, while differences between rural and urban students in terms of income, expenditure, employment and use of certain financial instruments were statistically significant, they were not especially large in magnitude.

The most significant finding of the report lies in the relationship between distance from PSE institutions and PSE participation and type of institution chosen. Generally speaking, distance from PSE institutions or rural residency (the two are highly correlated) have important effects on the PSE decisions and outcomes of youth. These impacts vary inversely with income, that is to say, the lower the level of parental income, the greater the impact. Youth from rural communities beyond commuting distance to a PSE institution are less likely than youth from urban communities of comparable income levels to enrol in PSE; however, the gap increases significantly when rural families' incomes fall below \$40,000 per year. Moreover, regardless of income, they are more likely to enrol in a college if a university is not located within commuting distance (our analysis of YITS data also found substantially higher numbers of rural students in colleges than in universities). Distance does not appear to have a major effect on the choice of the field of study; however, there does seem to be some major differences between urban and rural students' post-graduation incomes, at least among those who choose to borrow to finance their education.

Understanding the reasons why students move to attend school is somewhat difficult as it requires a careful disentangling of income and "rurality". In short, our results show that income does not explain very much in terms of rural students' mobility patterns, but explains a great deal of urban students' behaviour. The reason for this is relatively

simple: rural students have to move; urban students can choose to move if their families' financial circumstances permit them to do so.

With respect to distance education, our examination of YITS data suggests that there is no especially great demand for or use of this medium, at least among the younger students that are covered by the YITS Cycle 1 and Cycle 2 surveys. Less than 5% of youth have ever taken a distance education course, and it seems likely that some of these are doing so part-time. There are few obvious correlations between socio-demographic factors (i.e. gender, region, etc) and use of distance education; however, outstanding student loan debt is noticeably higher among distance education users than among non-users.

The policy implications of all this are not entirely clear. To the extent where there is a "problem" in access to PSE for rural students, it is concentrated among the lowest income rural residents, from the smallest and most remote rural communities. Presumably, a substantial proportion of these "missing" students are therefore aboriginal. A holistic strategy on rural students should not ignore this factor.

To the extent where the "missing" students are poor, it would seem that part of the solution lies in better financial aid. But the case here is not entirely clear cut. Rural students who do attend PSE have financial profiles that differ little from urban students – a general program to help rural students would therefore probably result in substantial windfall gains for those students already enrolled. An effective financial aid program targeted at rural areas would need to discriminate on family income. A level at or just above the current NCB level (i.e. \$35,000 per year) would seem to be ideal, but this has already been introduced through the new Canada Access Grant. It would be intriguing to monitor the progress of rural students after the introduction of the grant to see if it had any effect on rural access to PSE.

However, it needs to be acknowledged that none of the data permits us to definitively rule out barriers related to academic preparedness as the reason behind poor rural students' non-attendance in PSE. We know that school results are lower in rural areas than in urban ones; it may well be that a high proportion of low-income rural students are simply not prepared for or interested in attending PSE. If this is the case, then improving financial aid programs will not yield any improvement in access.

Much trickier still is the issue of the disproportionately high numbers of rural students at colleges and disproportionately low numbers of rural students at university. The issue of how and why rural students choose one type of education rather than another remains a mystery; it may well be because of financial barriers (ie. the cost of commuting further to a university), but it may also be a case of cultural barriers (i.e. students not wishing to leave home because of the greater social ties to their families and their home region). In the absence of more solid information, it seems premature to make any solid recommendation in this area.



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## Bibliography

- Advisory Committee for Online Learning. (2001). The e-learning e-volution in colleges and universities: A Pan-Canadian Challenge. Ottawa : Council of Ministers of Education, Canada (CMEC). Retrieved June 15, 2004, from <http://mlg-gam.ic.gc.ca/sites/acol-ccael/en/report.html>
- Allen, Mary and Chantal Vaillancourt (2004): Class of 2000: Profile of Postsecondary Graduates and Student Debt. Statistics Canada, Catalogue no. 81-595-MIE — No. 016.
- Andres-Bellamy (1993): Life Trajectories, Action and Negotiating the Transition from High-School in P. Anisef and P. Axelrod (eds.) Transitions: Schooling and Employment in Canada.*
- Archer, W. (1999). Delivering university-level communications programs at a distance: Benefits, costs, and disruptions. *Canadian Journal of Communication*, 24 (3), 367–383
- Archer, W. (2001). Distance education for adults. In D. H. Poonwassie & A. Poonwassie (Eds.), *Fundamentals of adult education: Issues and practices for lifelong learning* . Toronto : Thompson.
- Archer, W., Garrison, D.R. & Anderson, T.D. (1999). Adopting disruptive technologies in traditional universities: Continuing education as an incubator for innovation. *Canadian Journal of University Continuing Education*, 25 (1), 13–30.
- Barr-Telford L; Cartwright F; Prasil S and Shimmons G (2003). *Access, Persistence and Financing. First Results from the Post-Secondary Education and Participation Survey (PEPS)*. Ottawa: Statistics Canada
- Barr-Telford, Lynn et al (2003): Access, Persistence and Financing: First Results from the Postsecondary Education Participation Survey. Statistics Canada, Catalogue no. 81-595-MIE2003007.
- Bowlby, J & McMullen, K (2002). At a Crossroads: First Results of the 18-20 Cohort of the Youth in Transition Survey. Ottawa: Statistics Canada.
- Butlin, George. "Determinants of postsecondary participation." *Education Quarterly Review*. Ottawa: Statistics Canada, Catalogue No. 81-003-XPB, 5:3 (March 1999).
- Canada Millennium Scholarship Foundation (2004): The Price of Knowledge 2004: Access and Student Finance in Canada.  
<http://www.millenniumscholarships.ca/en/research/factbook.htm>
- Canada Student Loans Program (2004): Annual Report 2001-2002. Human Resources and Skills Development Canada.
- Cartwright, F. and Allen, M (2002). *Understanding the Urban-Rural reading Gap*. Ottawa: Statistics Canada.
- Centre for Education Information (1999), *1999 BC Student Outcomes: Survey Results By Program*, British Columbia Outcomes Working Group (OWG) & Ministry of Advanced Education and Training and Technology.
- Choy, S. P. (1999), « College Access and Affordability », *Education Statistics Quarterly*, vol. 1, no. 2, p. 74-90.
- Christofides, L.N., Cirello, J. and Hoy, M. (2001) Family income and postsecondary education in Canada. *Canadian Journal of Higher Education*, 31 (1):177-208.
- Connor, H. and S. Dewson (2001). *Social Class and higher Education Issues Affecting Decisions on Participation by Lower Social Class Groups*. London: Institute for Employment Studies

- DeBroucker, P. and L. Lavallée. (1997). Intergenerational Aspects of Education and Literacy Skills Acquisition, in Mikes Corak. *Labour Markets, Social Institutions and the Future of Canada's Children*. Ottawa: Statistics Canada. Cat. No. 89-553-XPB. Pp. 129-43. (using IAL survey)
- Ekos Research Inc (2003). *Making Ends Meet: The 2001-02 Student Financial Survey* Montreal: Canada Millennium Scholarship Foundation.
- Emery (2003) ??????
- Finnie, Ross (2001): *Measuring the Load, Easing the Burden – Canada's Student Loan Programs and the Revitalization of Canadian Postsecondary Education*. C.D. How Institute, Commentary, November.
- Finnie, Ross and Saul Schwartz (1996): *Student Loans in Canada – Past, Present, and Future*. C.D. How Institute.
- Frenette, Marc (2003): *Access to College and University: Does Distance Matter?* Statistics Canada, Catalogue no. 11F0019MIE — No. 201
- Frenette, Marc. (2002) *Too Far to Go On? Distance to School and University Participation*,. Ottawa: Statistics Canada, Catalogue no. 11F0019MIE2002191.
- Frenette, Marc. (2002) *Too Far to Go On? Distance to School and University Participation*,. Ottawa: Statistics Canada, Catalogue no. 11F0019MIE2002191.
- Frenette, Marc. (2002) *Too Far to Go On? Distance to School and University Participation*,. Ottawa: Statistics Canada, Catalogue no. 11F0019MIE2002191.
- Frenette, Marc. (2003) *Access to College and University: Does Distance Matter*,. Ottawa: Statistics Canada, Catalogue no. 11F0019MIE2003201.
- Frenette, Marc. (2003) *Access to College and University: Does Distance Matter*,. Ottawa: Statistics Canada, Catalogue no. 11F0019MIE2003201.
- Frenette, Marc. (2003) *Access to College and University: Does Distance Matter*,. Ottawa: Statistics Canada, Catalogue no. 11F0019MIE2003201.
- Gucciardi, F. (????) *Rewarding Excellence? Merit Scholarships in Canada*. ????
- Hemingway, F (2004): *Pressure Points in Student Financial Assistance: Exploring the Making Ends meet Database*. Montreal: Canada Millennium Scholarship Foundation.
- Hemingway, F and Kathryn McMullan (2004): *A Family Affair The Impact of Paying for College on University*. Montreal: Canada Millennium Scholarship Foundation.
- Horn, L.J. & Chen, X. (1999). *Toward resiliency: At-risk students who make it to college*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Hossler, D.; Schmit, N. & Vesper, N. (1999). *Going to college: How social, economic, and educational factors influence decisions students make*. Baltimore: Johns Hopkins University Press.
- Hudson L and L. Shafer (2004) *Participation in Technology-Based Postcompulsory Education. Education Statistics Quarterly vol 5, no.4.*
- Junor, Sean and Alex Usher (2002): *The Price of Knowledge*. Montreal: Canada Millennium Scholarship Foundation. 216 pp. [www.millenniumscholarships.ca/factbook/en/](http://www.millenniumscholarships.ca/factbook/en/)
- Junor, Sean and Alex Usher (2004): *The Price of Knowledge 2004*. Montreal: Canada Millennium Scholarship Foundation.

- Kapsalis, C., Morissette R. and Picot, G. (1999). The Returns to Education and the Increasing Wage Gap Between Younger and Older Workers, Statistics Canada: *Research Paper Series*, no. 131.
- Knighton, T and S. Mirza, "Postsecondary Participation: The Effects of Parents' Education and Household Income" in *Education Quarterly Review*, vol.8 no.3 Ottawa: Statistics Canada.
- 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. Statistics Canada, Catalogue no. 81-595-MIE — No. 026
- Lavallée, L. B. Pereboom I. Silver and T. Wannell (1999), *Employment-Equity Groups Among Post-Secondary Graduates*. Gatineau, Qc.: Human Resources Development Canada, Applied Research Branch. Research Paper R-00-1-3E.
- Lavallée, L., B. Pereboom and C. Grignon (2001), *Access to Postsecondary Education and Labour Market Transition of Post-Secondary Students*. Gatineau, Qc.: Human Resources Development Canada, Mimeo.
- Lavallée, L., B. Pereboom and C. Grignon (2002), *Funding for Postsecondary Education: Results from the Youth in Transition Survey*. Gatineau, Qc.: Human Resources Development Canada, Mimeo.
- Levine, Arthur, & Sun, Jeffrey. (2002). Barriers to distance education. American Council on Education Center for Policy Analysis: Washington, DC. Retrieved June 11, 2004, from <http://www.educause.edu/asp/doclib/abstract.asp?ID=PUB5106>
- Maritime Provinces Higher Education Commission (2004): *A Lasting Legacy: The Impact of family Educational Background on Graduate Outcomes*. Fredericton: author.
- Matheos, K. (2002). Rethinking residency in an age of online learning. Canadian Virtual University. Retrieved June 12, 2004, from <http://www.cvu-uvc.ca/RethinkingResidency.pdf>
- Matheos, K., Dewhirst L., Rowan, S. (2004) *TEL Implementation at the University of Saskatchewan*. Paper presented at Distance Learning Administration Conference, Georgia.
- Paulsen, M.B. (1998). Recent research on the economics of attending college: Returns on investment and responsiveness to price. *Research in Higher Education*, 39 (4): 471-489.
- Postle et. al (1997) *Towards Excellence in Diversity: Status Trends and Future Directions*. University of South Queensland Press: Toowoomba.
- Powell, R, C. Conway and L. Ross: *Effects of Student Predisposing Characteristics on Student Success*. Journal of Distance Education (1990)
- Prairie Research Associates (2002): *Survey of Undergraduate University Students: Master Report*. Winnipeg: Canadian Undergraduate Survey Consortium.
- Prairie Research Associates (2003). *Canadian College Student Finances: Second Edition*. Montreal: Canada Millennium Scholarship Foundation.
- Purnell, K. E. Cuskelly and P. Danaher (1996). *Improving Distance Education for University Students: Issues and Experiences of Students in Cities and Rural Areas* Journal of Distance Education.
- Shipley, L. et al. (2003): *Planning and Preparation: First Results from the Survey of Approaches to Educational Planning*. Ottawa: Statistics Canada, Cat. No. 81-595-MIE2003010.
- Sikora, A. (2003) *A Profile of Participation in Distance Education: 1999-2000*. Washington: National Centre for Education Statistics.

- 
- Silver, I., L. Lavallée. and B. Pereboom (199), *Labour Market Transitions of Graduates*. Gatineau, Qc.: Human Resources Development Canada, Applied Research Branch. Research Paper R-00-1-9E.
- Statistics Canada. (1999): Education Indicators in Canada. Ottawa: Statistics Canada and Council of Ministers of Education.
- Sweet, R. (1991) Canadian Proprietary and Correspondence Schools: Some Issues of Access and Technology. *Journal of Distance Education*.
- Thompson, G. (1990) How Can Correspondence-Based Distance Education be Improved? A Survey of Attitudes of Students Who Are Not Well Disposed Toward Correspondence Study. *Journal of Distance Education*.
- Thompson, M. (1998). "Distance Learners in Higher Education." In Chere Campbell Gibson, ed., *Distance Learners in Higher Education: Institutional Responses for Quality Outcomes*. Madison, WI: Atwood Publishing, pp. 10-18.
- Usher, Alex. (2004a). *A New Measuring Stick: Is Access to Higher Education in Canada Equitable*. Toronto, ON: Educational Policy Institute.
- Usher, Alex. (2004b). *Are the Poor Needy? Are the Needy Poor? The Distribution of Student Loans and Grants by Family Income Quartile in Canada*. ON: Educational Policy Institute.
- Wallace, L. (1996) Changes in the Demographics and Motivations of Distance Education Students. *Journal of Distance Education*.
- Wannell, T., B. Pereboom and L. Lavallée. (1999), *Does the Straight and Narrow Pat? The Path to a Degree and Labour Market Outcomes*. Gatineau, Qc.: Human Resources Development Canada, Applied Research Branch. Research Paper R-00-1-1E.
- Wilms, D. (2003). Ready or Not: Literacy Skills and Postsecondary Education. Montreal: Canada Millennium Scholarship Foundation.

## Appendix A: Additional Tables – CSLP-LAD

Note: The numbering of tables in this Appendix corresponds to the question addressed in the main body of the study.

**Table A1: Distribution of Youth by Type of Home Area and Distance from Nearest University, 2000**

Type of Home Area (in 000's)	Distance from nearest university				Percentage distribution			
	Less than 40 km	40 to 69 km	70 km and more	Total	Less than 40 km	40 to 69 km	70 km and more	Total
Rural	91.4	127.8	230.9	450.1	20	28	51	100
Urban less than 15	72.9	94.8	179.8	347.5	21	27	52	100
Urban 15-29	22.4	11.3	61.8	95.4	24	12	65	100
Urban 30-99	121.6	81.8	98.3	301.6	40	27	33	100
Urban 100-499	500.2	35.6	5.6	541.3	92	7	1	100
Urban over 500	1,490.4	19.9	0.8	1,511.1	99	1	0	100
Total	2,298.8	371.1	577.2	3,247.1	71	11	18	100

**Table A2: Distribution of Youth by Type of Home Area and Distance from Nearest College, 2000**

Type of Home Area (in 000's)	Distance from nearest college				Percentage distribution			
	Less than 40 km	40 to 69 km	70 km and more	Total	Less than 40 km	40 to 69 km	70 km and more	Total
Rural	253.3	113.3	83.6	450.1	56	25	19	100
Urban less than 15	216.8	73.9	56.8	347.5	62	21	16	100
Urban 15-29	76.1	4.9	14.4	95.4	80	5	15	100
Urban 30-99	273.7	10.9	17.0	301.6	91	4	6	100
Urban 100-499	518.6	22.7	0.0	541.3	96	4	0	100
Urban over 500	1,508.6	2.6	0.0	1,511.1	100	0	0	100
Total	2,847.0	228.2	171.8	3,247.0	88	7	5	100

**Table A3: Distribution of Youth by Type of Home Area and Distance from Nearest University or College, 2000**

Type of Home Area (in 000's)	Distance from nearest university or college				Percentage distribution			
	<40km	40km <70km	70+km	All youth	<40km	40km <70km	70+km	All youth
Rural	263.5	108.1	78.6	450.1	59	24	17	100
Urban less than 15	223.6	69.5	54.4	347.5	64	20	16	100
Urban 15-29	76.1	4.9	14.4	95.4	80	5	15	100
Urban 30-99	284.8	10.0	6.8	301.6	94	3	2	100
Urban 100-499	540.7	0.6	0.0	541.3	100	0	0	100
Urban over 500	1,508.6	2.5	0.0	1,511.1	100	0	0	100
Total	2,897.1	195.7	154.2	3,247.0	89	6	5	100

**Table A4: Full-Time PSE Participation Among Youth, Age 18 to 29 by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	13	19	24	29	33	39	23
Urban less than 15	14	19	23	27	32	39	25
Urban 15-29	16	22	26	29	32	41	27
Urban 30-99	16	21	26	30	34	42	28
Urban 100-499	19	23	27	29	34	43	30
Urban over 500	23	26	28	31	35	43	31
Total	19	23	26	30	34	43	29

**Table A5: Full-Time PSE Participation Among Youth, Age 18 to 29 by Type of Home Area and Distance from Nearest University or College and Level of Parental Income, 2000**

Distance from Nearest PSE Institution	Parental Income (in \$000's)						Total
	1-19	20-39	40-59	60-79	80-99	100+	
Less than 40 km	20	24	27	30	34	43	30
40 to 69 km	13	19	24	28	33	38	23
70 km and more	11	17	22	25	30	36	21
Total	19	23	26	30	34	43	29

**Table A6: Percentage of Full-Time Students who Attended University by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						All students
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	40	41	45	49	54	59	45
Urban less than 15	34	38	42	44	49	56	42
Urban 15-29	39	41	48	49	57	59	48
Urban 30-99	30	34	40	45	49	55	42
Urban 100-499	42	46	50	51	55	66	51
Urban over 500	50	50	52	55	57	65	54
Total	44	45	48	50	54	63	49
Difference Between Rural and Urban 500K+	10	9	7	6	3	6	9

**Table A7: Percentage of Full-Time Students who Attended College by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						All CSLP students
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	44	44	41	40	37	32	42
Urban less than 15	48	48	45	46	42	37	45
Urban 15-29	43	46	40	38	32	32	40
Urban 30-99	55	53	47	45	42	37	47
Urban 100-499	38	38	35	35	32	25	35
Urban over 500	38	37	35	32	31	26	34
Total	41	41	39	37	35	28	38
Difference Between Rural and Urban 500K+	-6	-7	-7	-8	-6	-7	-8

**Table A8: Percentage of Full-Time Students who Attended a Private Institution by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						All students
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	17	15	13	11	9	9	13
Urban less than 15	18	14	13	10	9	7	13
Urban 15-29	18	13	12	13	11	9	13
Urban 30-99	16	13	12	11	8	8	11
Urban 100-499	20	17	15	13	13	9	15
Urban over 500	13	13	13	13	12	9	12
Total	15	14	13	12	11	9	13
Difference Between Rural and Urban 500K+	-4	-2	0	1	3	1	-1

**Table A9: Percentage of Full-Time Students Who Moved At Least 70 Kilometres to Attend a PSE Institution by Type of Home Area and Level of Parental Income, 2000**

Type of Home Area (in 000's)	Parental Income (in \$000's)						All students
	1-19	20-39	40-59	60-79	80-99	100+	
Rural	72	71	72	73	76	76	73
Urban less than 15	70	73	75	76	80	80	75
Urban 15-29	65	67	72	76	80	85	73
Urban 30-99	49	53	58	64	68	73	60
Urban 100-499	29	33	38	43	48	53	39
Urban over 500	17	18	21	26	30	38	23
Total	36	41	45	48	51	53	45



## Appendix B: YITS Questions

The following are some of the questions of the Youth In Transition Survey taken from Cycle 1 and Cycle 2.

### Cycle 1 Questions

- As of December 31st 1999, what were your sources of money for funding your certificates / diplomas / degrees? Had you received money from your parents or partner that you do not have to pay back?
- As of December 31st 1999, had you received money from received money from other people that you do not have to pay back?
- As of December 31st 1999, had you received money from jobs since leaving high school (e.g. part-time, co-op, summer)?
- As of December 31st 1999, had you received money from loans to fund your education, including those from government, family, or directly from a bank?
- As of December 31st 1999, had you used money from your personal savings? (exclude money earned from jobs since leaving high school)?
- As of December 31st 1999, had you received money from scholarships, awards or prizes?
- As of December 31st 1999, had you received money from grants or bursaries?
- As of December 31st 1999, had you received money from other sources?
- From which source did you receive the most money?
  - parents/family
  - other people
  - jobs since leaving high school
  - loans
  - personal savings
  - scholarships, awards or prizes

- grants or bursaries
- other source
- Did you get a government sponsored student loan? (provincial or federal)
- Did you get a bank loan (other than a student loan) or line of credit?
- Did you get a loan from your parents or family?
- As of December 31st 1999, what was the total you borrowed using the government student loan program?
- As of December 31st 1999, how much did you owe for all your government student loans?
- As of December 31st 1999, how much did you owe on a bank loan or line of credit?
- As of December 31st 1999, how much did you owe your parents or family?
- As of December 31st 1999, what was the total amount received in scholarships, awards or prizes?
- As of December 31st 1999, what was the total amount received from grants or bursaries?

### **Cycle 2 Questions**

- Considering the different sources of money to fund your education, between January 2000 and December 2001, did you receive any money from your parents or partner that you do not have to pay back?
- Considering the different sources of money to fund your education, between January 2000 and December 2001, did you receive any money from people, other than your parents or partner that you do not have to pay back?
- Considering the different sources of money to fund your education, between January 2000 and December 2001, had you used money earned from jobs?
- Considering the different sources of money to fund your education, between January 2000 and December 2001, had you received money from trust funds,

Registered Education Savings Plan (RESP), or Registered Retirement Savings Plan (RRSP)?

- Considering the different sources of money to fund your education, between January 2000 and December 2001, had you received money from scholarships, awards or prizes?
- What was the total amount received money from these scholarships, awards or prizes during the last two years?
- Considering the different sources of money to fund your education, between January 2000 and December 2001, had you received money from grants or bursaries?
- What was the total amount received money from these grants or bursaries during the last two years?
- Considering the different sources of money to fund your education, between January 2000 and December 2001, had you received money from loans to fund your education, including those from government, family or directly from a bank?
- Did you get a government-sponsored student loan (Provincial or Federal)?
- Other than a student loan, did you get a bank loan, a line of credit or a loan from your parents or family?
- As of December 31st, 2001, what was the total amount you had borrowed from a government-sponsored student loan?
- As of December 31st, 2001, what was the total amount you owed on government-sponsored student loans?
- As of December 31st, 2001, what was the total amount you owed on bank loan, a line of credit or loans from parents or family to fund your education.?
- Between January 2000 and December 2001, had you used money from other sources to fund your education, such as personal savings, a government program, or other?
- During the last two years, from which source did you receive the most money?

- Money from parents or partner
- Money from other people
- Money from jobs
- Money from trust funds, RESPs or RRSPs
- Money from Scholarships, awards or prizes
- Money from grants or bursaries
- Loans from government, family or directly from a bank
- Money from other sources
- Between January 2000 and December 2001, have you applied for a government sponsored student loan to fund your education?
- What is the main reason you have not applied for a government-sponsored student loan?
  - Did not need one
  - Not going to college/university
  - Think would not qualify / Parents, respondent income too high
  - Don't know how to apply
  - Loans not available for program/institution of interest
  - Don't meet residency requirements
  - Not willing to borrow / go into debt
  - Not able to borrow enough
  - Prefer to borrow elsewhere
  - Other
- Do you know where to get information about the government student loan program?
- Were any of your student loan applications approved between January 2000 and
- December 2001?

- Why was your application for a government student loan turned down?
  - Parents income too high
  - Respondent income too high
  - Did not meet residency requirements
  - Loans not available for program/institution of interest
  - Waiting for decision on approval
  - Other
- Did being turned down prevent you from attending the school you wanted to attend?
- Were the loans that you received between January 2000 and December 2001 as large as you would have liked?
- Did the amount of the loan prevent you from attending the school you wanted to attend?
- Is there anything standing in your way of going as far in school as you would like to go?
  - None
  - Financial situation (needs to work / costs too much)
  - Not able to get into program/marks too low / not accepted
  - Not enough interest or motivation
  - Wants to stay close to home
  - Takes too long
  - Wanted to work
  - Caring for own children
  - Own health
  - Not sure what to do
  - Other

- In 2001, did you receive money from scholarships, grants or bursaries?
- How much was that?
- Did you receive money from your parents or other people that you do not have to repay?
- How much was that?