MESA L-SLIS RESEARCH BRIEF #9

Large Urban, Small Urban and Rural Students

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Large urban, Small urban and Rural Students

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Contents

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Part I: Introduction

Major Findings

Policy makers are particularly interested in the experiences of students from rural backgrounds who often encounter a unique set of challenges upon entry to PSE. The Longitudinal Survey of Low Income Students (L-SLIS), created to measure the effects of the Canada Millennium Scholarship Foundation's Access Bursary, offers a unique combination of information pertaining to students' post-secondary education (PSE) experiences and methods of financing PSE. This research brief uses the L-SLIS to compare students from three different categories of community size:

1. Less than 10, 000 people ('rural' for short),
2. Between 10,000 and 100,000 people ('small urban' for short),
3. Greater than 100, 000 people ('large urban' for short).

For the low income students represented in the L-SLIS data, the major findings are:

1. Large urban students are significantly less likely than rural or small urban students to leave PSE in first or second year without graduating; small urban students are the most likely to leave.
2. Students of smaller communities are noticeably more likely than others to have personally saved for PSE. Among university students, students from larger communities are more likely to have family members who saved.
3. Large urban students are more likely than rural or small urban students to live at home with their parents while in first year of PSE and more likely to plan on living with their parents until they can pay back some or all of their debt.
4. Large urban students spend more time than others commuting to and from school.
5. Large urban students report considerably lower amounts of government aid and summer employment income compared to rural or small urban students. Of the three groups, large urban students have the smallest average amount of total funding in each year.

The urban locations of most PSE institutions in Canada probably explain why large urban students are comparatively more likely to live with their parents while in PSE. For many students from rural or small urban communities, living away from home implies greater costs of living and different strategies when it comes to financing PSE. It must be noted that large urban, small urban and rural students have many different individual and family characteristics that could be driving the results of this report and for this reason one must be

careful when imputing causality between any factors. Note that the findings of this brief apply specifically to the low income students represented by the L-SLIS and we cannot say if our findings hold for other low income students or for the student population in general.

Survey Data and Sample Selection

The L-SLIS is constructed from administrative data and from surveys (carried out during the early months of 2007, 2008 and 2009) of students who entered PSE in fall 2006. The sample used for this report includes only students who enter PSE for their first time (the target group of the Millennium Scholarship Foundation's Access Bursary), and is further reduced to single dependant students, as defined by provincial student aid systems. Only students with parental incomes below the National Child Benefit (NCB) line have been included in this analysis in order to allow for consistent samples across provinces. Due to provincial differences in bursary programs, only students from Newfoundland and Labrador, Nova Scotia, New Brunswick, Ontario, Manitoba or British Columbia are included. Note that all respondents are recipients of government aid in their first year. For further sample details, see Appendix I.

The Community Size Variable

In the first year of the survey students are asked: 'How big was the community in which you last attended high school?' Respondents are given six categorical responses to choose from; for simplicity, those six have been reduced to three:

1. Less than 10, 000 people ('rural' for short),
2. Between 10,000 and 100,000 people ('small urban' for short),
3. Greater than 100, 000 people ('large urban' for short).

Part II: The Analysis

Individual, Family and Other Background Characteristics

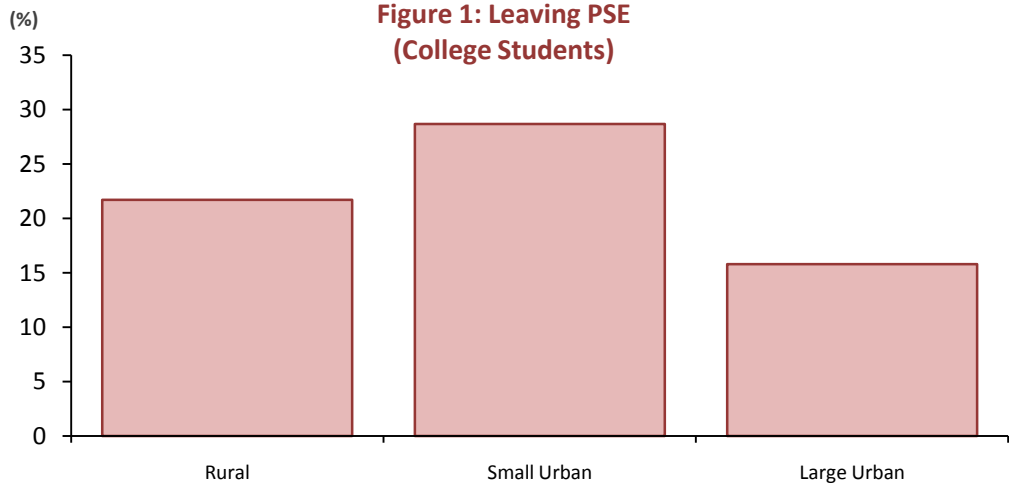
Only 16.5 percent of rural students in this sample are visible minorities (Table A1). Meanwhile, 69.6 percent of large urban students are visible minorities, as are 31 percent of small urban students. Also, only 10.6 percent of rural students are immigrants while 20 percent of small urban students and 53.8 percent of large urban students are immigrants. Rural students are the most likely to have parents with no more than a high school education (Table A1).

In this sample, rural students have somewhat higher parental incomes than small urban students, while small urban students have slightly higher parental incomes than large urban students (Table A1). Recall that these differences exist within the population of low income students that the L-SLIS represents. Also of note, small urban students are less likely to be from two parent households than rural or large urban students.

Leaving PSE

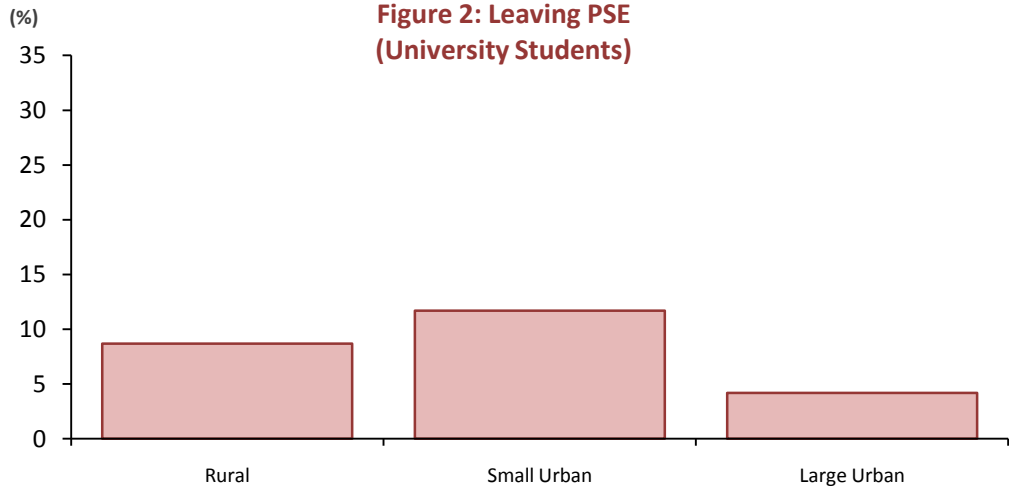
Large urban students are significantly less likely to leave PSE in their first or second year without graduating, compared to small urban or rural students. For both college and university students, small urban students are the most likely to leave PSE without graduating. About 28.7 percent of small urban college students leave PSE in their first or second year; meanwhile, only 21.7 percent of rural and 15.8 percent of large urban college students leave PSE in their first or second year (Figure 1). University Students leave PSE at lower rates than college students, but their patterns are similar (Figure 2).

Figure 1: Leaving PSE (College Students)



Source: Table A2. Figure represents the percentage of students who leave PSE during first or second year without graduating.

Figure 2: Leaving PSE (University Students)



Source: Table A2. Figure represents the percentage of students who leave PSE during first or second year without graduating.

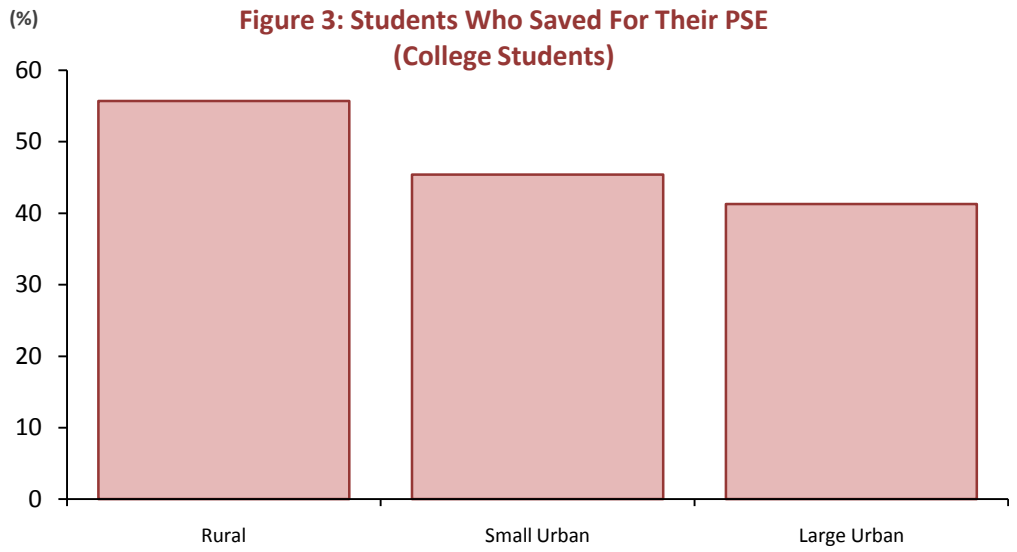
Regression analysis has also been used to measure the relationship between community size and students' likelihoods of leaving PSE. Table A4 shows the differences in leaving rates for students from different community sizes, with and without controlling for other factors (gender, province, community size, family structure, parental education, parental income and high school grades) that affect leaving rates and that may also be correlated with students' community sizes.

Among college students, large urban students become significantly less likely to leave PSE than rural students once the controls are added to the model (Table A4). For university students, the difference becomes insignificant once controls are added.

Saving For PSE

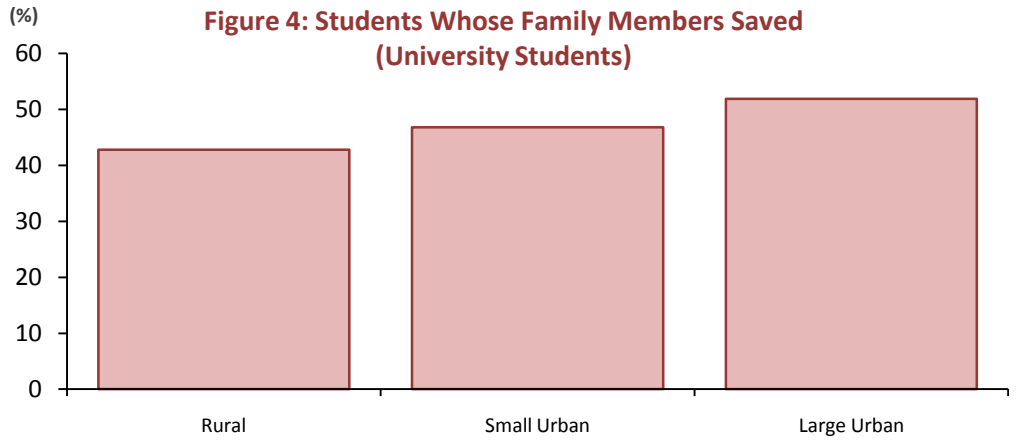
In their first year of PSE, respondents are asked whether they had personally saved for PSE and/or whether their family members saved. Among college students, students from smaller community sizes are more likely to have personally saved. Rural college students are the most likely to have saved for PSE (55.7 percent) followed by small urban students (45.4 percent) while large urban college students are the least likely to have saved (41.3 percent) (Figure 3).

For university students, a slightly different trend is found; rural and small urban students are about equally as likely to have personally saved (around 54 percent) while large urban students are much less likely to have personally saved (43.6 percent) (Table A2).



Source: Table A2.

For university students, community size has a positive relationship with whether students' families saved for PSE. Over 50 percent of large urban students have family members who saved while only 46.8 percent of small urban and 42.8 percent of rural students have family members who saved (Figure 4). For college students, small urban students are more likely than large urban or rural students to have family members who saved (Table A2).

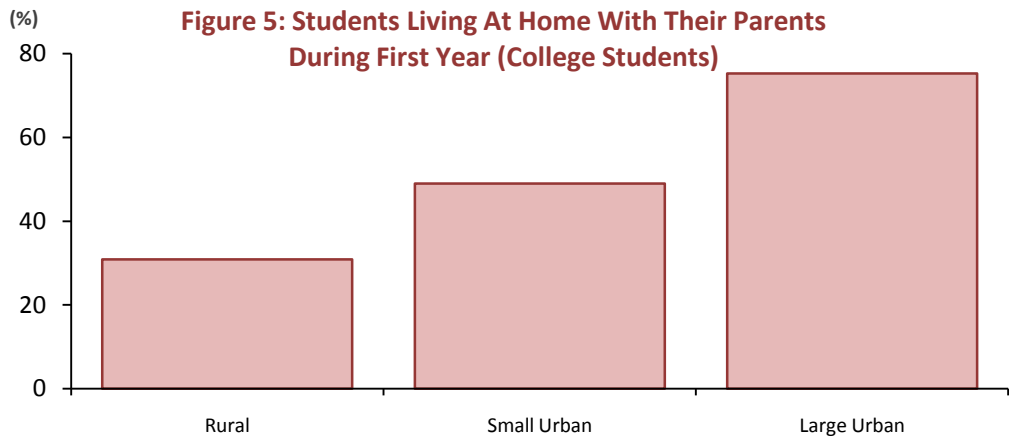


Source: Table A2.

Living at Home and Commuting

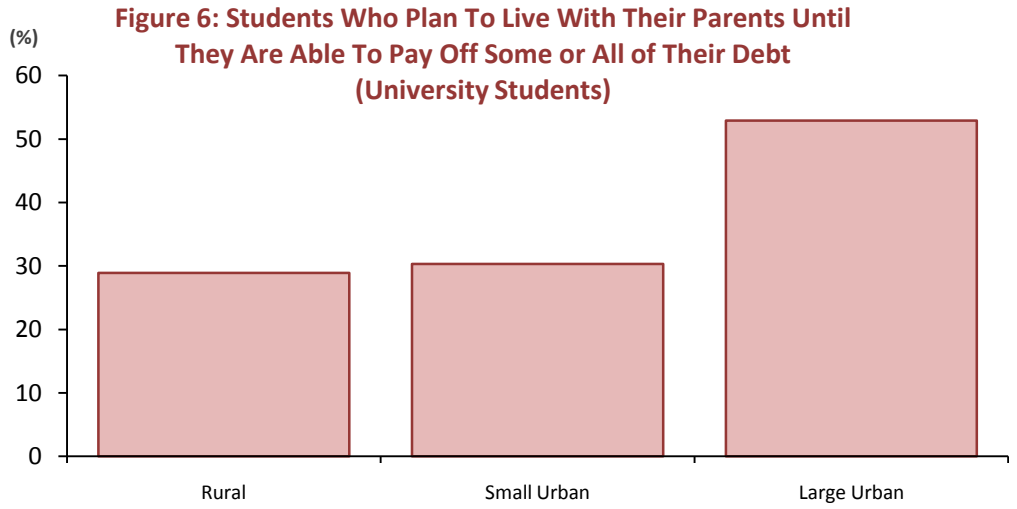
Large urban students are much more likely than small urban or rural students to live at home with their parents during their first year of university. This finding presumably reflects the locations of PSE institutions in Canada. Among college students, over 75 percent of large urban students live with their parents (Figure 5). Meanwhile, only 49 percent of small urban students

and 30.9 percent of rural students live with their parents in first year. The same general pattern is observed for university students as well (Table A2).



Source: Table A2.

In the third year of the survey, students are asked whether they plan to live with their parents until they are able to pay back some or all of their debt. We do not report college students' responses as most college programs end after two years. Among university students, large urban students are much more likely than small urban or rural students to say that they will live with their parents until at least some of their debt is paid (Figure 6).

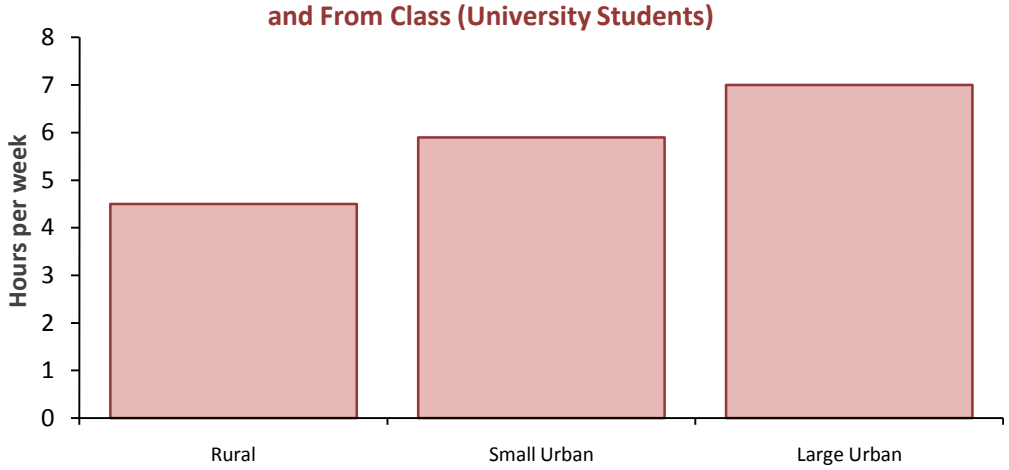


Source: Table A2.

On average, students from large urban communities spend more hours per week commuting to and from class. Among university students, large urban students spend around 7 hours a week commuting while small urban students spend about 6 hours (Figure 7). Rural students spend the least number of hours per week commuting, 4.5 hours on average. The same general pattern holds for college students (Table A2). Note that extra hours of commuting do

not appear to take away from hours of studying; large urban students spend the most hours per week studying as well (Table A2).

Figure 7: Hours Per Week Spent Commuting To and From Class (University Students)



Source: Table A2.

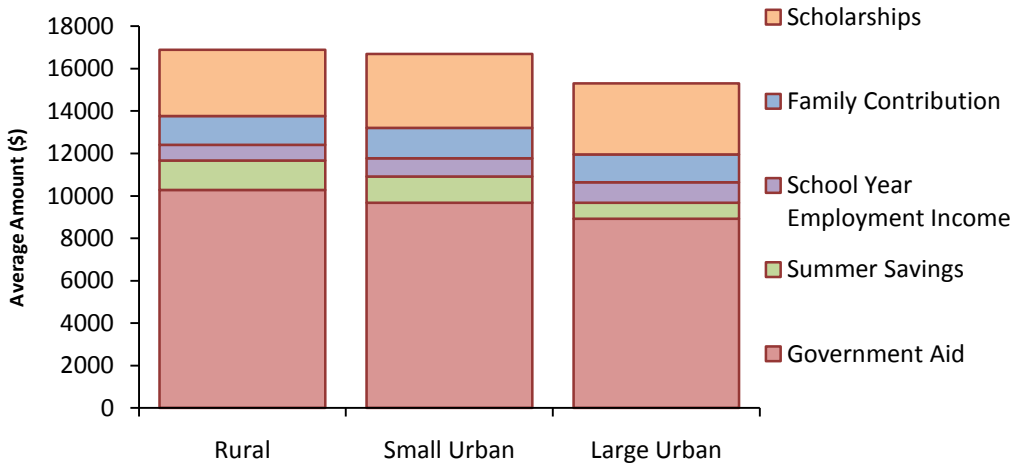
Funding PSE

For the following analysis of PSE funding, all means include students who have zero amounts. For all figures, only students who continue through all two years of analysis are included. Also note that government aid includes student loans and Access Bursaries and that due to the nature of the sample, no students have zero government aid in year one. Average government aid amounts are taken from administrative data in year one and are taken from survey data in year two. We cannot say to what extent differences in government aid amounts over these years are attributed to differences in data sources.

Funding Sources in First Year of University

In their first year of university, large urban students have considerably lower average amounts of government aid and savings from summer employment income compared to rural and small urban students (Figure 8). As a result, large urban students have the lowest average total amount of funding in year one. This pattern is likely due to aid being related to whether students live at home.

Figure 8: Funding In First Year (University Students)

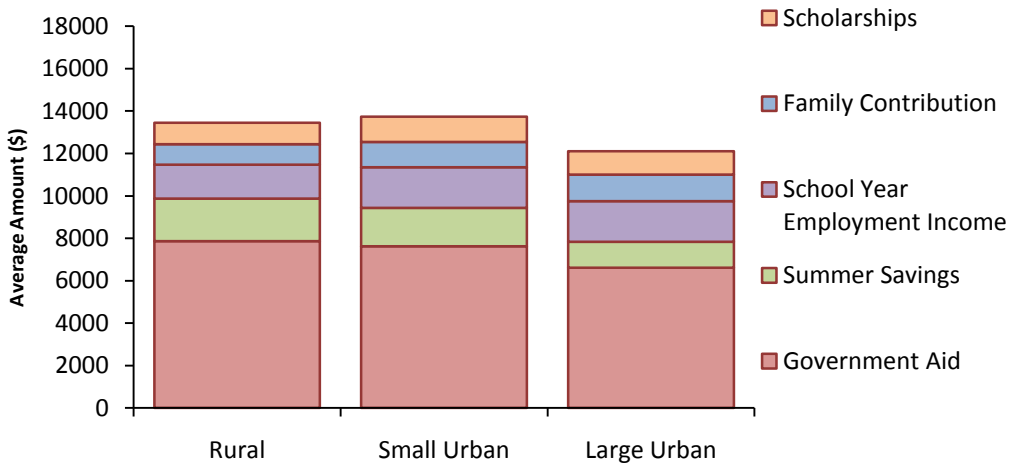


Source: Table A3. Only students who continued through two years of PSE are included. Averages include zero amounts.

Funding Sources in Second Year of University

All three groups of students see decreases in their average amount of government funding in their second year of university (Figure 9). Recall, we cannot say to what extent differences in government aid amounts over these years are attributed to differences in data sources. Also, all groups see sizable decreases in their average scholarship amounts and increases in their average summer savings and school year employment income in second year. As in first year, large urban students report the smallest average amount of total funding in second year. In second year, large urban students have substantially lower average amounts of government aid and summer savings compared to other students.

Figure 9: Funding In Second Year (University Students)



Source: Table A3. Only students who continued through two years of PSE are included. Averages include zero amounts.

Very similar patterns are observed for college students across groups and over time, though college students report lower levels of total funding, on average (Table A3).

Part III: Conclusion

When it comes to preparing financially for PSE, the three groups have different approaches; students of smaller communities are noticeably more likely than others to personally save for PSE. Among university students, students of larger communities are more likely than others to have family members who saved.

Students from large urban communities are much more likely than others to live at home with their parents in first year of PSE. Large urban students' comparatively greater commuting hours are very likely a result of their living arrangement. Large urban students' tendencies to live at home may also explain why they report lower levels of government aid and total funding. Further analysis should explore these results using regression analysis.

Also of importance, small urban students of these data have been identified as a group that is particularly vulnerable when it comes to leaving PSE.

Appendix I: Survey Data and Sample Selection

Conducted as part of the Measuring the Effectiveness of Student Aid (MESA) project, the L-SLIS represents a longitudinal survey of recipients of the Canada Millennium Scholarship Foundation (CMSF) Access Bursaries[1]. The L-SLIS consists of a sample of students who entered PSE for the first time in the fall of 2006. Surveys were conducted, by telephone, in the early winter months of 2007, and then again in 2008 and 2009. Survey data have been linked to government aid administrative data. It is important to note that the eligibility requirements for the CMSF Access Bursaries were determined provincially and vary from province to province. The L-SLIS therefore represents somewhat different populations in different provinces.

Restrictions have therefore been made to the L-SLIS in order to create a consistent national sample. Due to the unique nature of the programs in Quebec, Saskatchewan and Alberta, students from these provinces are not included in this analysis. Prince Edward Island is omitted due to the absence of any administrative data. The following restrictions have been made in order to provide a consistent sample across the remaining provinces, which include Newfoundland and Labrador, Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia:

1. The sample is restricted to only students who enter PSE for their first time and are single dependant students, as defined by student aid systems.
2. Only students with parental incomes below the National Child Benefit (NCB) line are included.

Only low income students who apply for and receive government aid are included in the L-SLIS, therefore this is not a sample of all low income students in Canada. The resulting sample has 3354 observations (after deleting those few students who did not provide information regarding their community size). There are 927 rural students, 793 small urban students and 1634 large urban students. Roughly 64 percent of the students in the sample are from Ontario and roughly 15 percent are from British Columbia. The remaining four provinces together make up 20 percent of the sample and each have shares of around 2.5 to 10 percent. Due to small sample size, college students from Nova Scotia are not well represented in the data. Samples are weighted to take account of non-response and to scale up to the underlying populations of lower income students they represent.

[1] For some provinces, certain non-recipient low-income students are also included in the L-SLIS but they are not included in this analysis due to the income restriction placed on the sample (see below).

Appendix II: Detailed Tables

Table A1: Backgrounds (All Students)

	Rural	Small Urban	Large Urban
Gender (% male)	34.1	42.4	47.2
Family Structure			
Two Parents	63.5	54.0	60.4
Mother Only	29.8	39.3	34.0
Other	6.7	6.7	5.6
Total	100.0	100.0	100.0
Ethnic Background			
White	83.5	69.0	30.4
Aboriginal	2.3	2.1	0.9
Black	1.3	2.7	6.7
Latin American	0.5	0.6	1.8
Chinese	2.4	5.1	16.7
Other Asian	5.3	10.1	28.2
Arab	0.8	0.8	3.5
Other	4.0	9.7	12.0
Total	100.0	100.0	100.0
Visible Minority/Immigrant Status			
Non-Visible Minority, Born in Canada	83.0	66.8	24.6
Visible Minority, Born in Canada	6.4	12.7	21.6
Non-Visible Minority, Not Born in Canada	2.4	3.7	6.0
Visible Minority, Not Born in Canada	8.2	16.9	47.8
Total	100.0	100.0	100.0
Highest Level Of Parental Education			
Less Than High School	11.3	7.1	7.1
High School Completed	35.4	28.9	25.9
Some PSE	15.4	20.3	16.8
University-BA	26.3	28.6	19.0
University-Grad	8.8	10.9	17.3
Total	100.0	100.0	100.0
Parental Income			
$0 To $5 000	3.5	4.0	4.5
$5 000 To $10 000	8.3	7.0	10.0
$10 000 To $20 000	27.2	27.5	32.5
$20 000 To $30 000	32.7	35.8	32.4
$30 000 And Up	28.3	25.8	20.7
Total	100.0	100.0	100.0

Source: Longitudinal Survey of Low Income Students.

Table A2: PSE Experiences (College and University Students)

	College			University		
	Rural	Small Urban	Large Urban	Rural	Small Urban	Large Urban
Percentage Who Leave PSE in First or Second Year Without Graduating*	21.7	28.7	15.8	8.7	11.7	4.2
Saving (Percentage Which Responded 'Yes')						
Prior to The End of Secondary School, Did You Save Money For Your Own Education?	55.7	45.4	41.3	52.7	55.0	43.6
Did Other Members of Your Family Save For Your Education?	34.0	37.1	34.1	42.8	46.8	51.9
Living Arrangement in First Year						
Away From Home	69.1	51.0	24.7	75.4	61.9	42.2
At Home With Your Parent(s) or Legal Guardian	30.9	49.0	75.3	24.6	38.1	57.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage With Paid Jobs in First Year	34.1	45.0	53.4	23.8	31.7	32.7
Mean Hours Per Week in First Year						
Paid Work**	15.6	15.7	17.3	14.0	13.0	12.9
In Classes, Labs and Tutorials	24.6	22.7	22.1	18.3	19.1	20.1
Studying	12.2	12.2	12.7	14.7	15.5	16.7
Extracurricular Activities	4.0	4.7	4.0	4.7	4.9	4.6
Commuting To and From Class	4.6	5.0	6.4	4.5	5.9	7.0
Percentage Who Plan to Live With Their Parents Until They Can Pay Back Some or All of Their Debt (Third Year Students)				28.9	30.3	52.9

Source: Longitudinal Survey of Low Income Students. *Students are counted as leavers if they left PSE prior to their second interview, which took place in the winter of 2008, during their second year. ** Only students who worked every week, on average, and reported employment income are included.

Table A3: Average Amounts of PSE Funding (College and University Students)

	Rural	Small Urban	Large Urban
University Year 1			
Government Aid	$10,280	$9,680	$8,920
Savings From Summer Employment Income	$1,390	$1,230	$760
School Year Employment Income	$740	$860	$960
Family Contribution	$1,350	$1,430	$1,320
Scholarships	$3,130	$3,490	$3,350
University Year 2			
Government Aid	$7,870	$7,630	$6,620
Savings From Summer Employment Income	$2,000	$1,800	$1,220
School Year Employment Income	$1,600	$1,920	$1,910
Family Contribution	$970	$1,200	$1,250
Scholarships	$1,010	$1,180	$1,100
College Year 1			
Government Aid	$9,080	$8,460	$6,970
Savings From Summer Employment Income	$1,150	$1,040	$610
School Year Employment Income	$960	$1,520	$2,110
Family Contribution	$800	$960	$960
Scholarships	$1,660	$1,820	$1,530
College Year 2			
Government Aid	$6,960	$5,910	$5,070
Savings From Summer Employment Income	$1,510	$1,390	$950
School Year Employment Income	$1,580	$2,260	$3,130
Family Contribution	$730	$900	$700
Scholarships	$850	$680	$620

Source: Longitudinal Survey of Low Income Students. Only students who continued through two years of PSE are included. Government Aid includes student loans and Access Bursaries. All averages include zero amounts.

Table A4: Regression Results (College and University students)

	Rural	Small Urban	Large Urban
College			
Percentage Who Leave PSE in First or Second Year	21.7	28.7	15.8
Percentage Point Difference	NA (Baseline)	7.0	-5.9
Regression Estimate of Percentage Point Difference, Without Controls	NA (Baseline)	7.0	-5.0
Regression Estimate of Percentage Point Difference, With Controls	NA (Baseline)	4.8	-6.1***
University			
Percentage Who Leave PSE in First or Second Year	8.7	11.7	4.2
Percentage Point Difference	NA (Baseline)	3.0	-4.5
Regression Estimate of Percentage Point Difference, Without Controls	NA (Baseline)	2.6	-3.9***
Regression Estimate of Percentage Point Difference, With Controls	NA (Baseline)	3.7	-2.3

Source: Longitudinal Survey of Low Income Students. Students are counted as leavers if they left PSE prior to their second interview, which took place in the winter of 2008, during their second year.

*/**/*** indicates statistical significance at the 10/5/1% level.
Control variables were used to account for gender, province, family structure, parental education, parental income and high school grades.

Rural students were used as the base line group. The two other groups, consisting of small urban students and large urban students, were entered in a logistic regression as dummy variables. Marginal effects report the differences between the dummy variable groups and the baseline group.