

TRENDS

IN MARITIME HIGHER EDUCATION

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OUTCOMES OF RURAL AND URBAN MARITIME UNIVERSITY GRADUATES

Highlights

Maritime universities appear to be equally accessible to youth from rural and urban communities.

Within the Class of 2003, graduates from both rural and urban origins are present in numbers representative of the general population. This suggests that access by rural youth to universities in the region may not be the issue it appears to be elsewhere in Canada, with access improved by the number and geographical distribution of campuses in the region.

Urban graduates are more likely than rural to have parents who have attained a university degree.

There is a difference in the educational attainment level of urban and rural populations, with urban populations tending to be more highly educated than rural. This trend in the general population is likely an important factor explaining the finding that urban graduates are more likely than rural to have parents who have attained a university degree.

Rural or urban origin does not have an important impact upon the likelihood of returning for further study, the nature of the transition to the work world, or graduate mobility.

There is a small difference between urban and rural graduates in their choice of academic program, with urban graduates slightly more likely to have chosen liberal arts & sciences programs rather than applied/professional programs. Once this variable (well known as a predictor of outcomes) is taken into account, differences initially observed in graduates' transitions to further study and employment based on community type (i.e., rural vs. urban) disappeared - there were no significant differences between the two groups in employment rates, type of position (permanent, contract, temporary or casual) or wages. Finally, the post-graduation mobility patterns of urban and rural graduates were not significantly different.

Graduates from rural communities are more likely than urban to borrow, and borrow more to finance their degree.

With equal success in outcomes in terms of employment and likelihood of pursuing further education documented here, it would appear the only substantial difference in outcomes between graduates of rural and urban origins is that rural graduates are more likely to borrow and to borrow more on average. This may be partly explained by rural graduates being more likely to incur the greater costs associated with having to move away from home. In addition, more rural graduates would be eligible for student financial assistance because of the distribution by parental educational attainment (more rural graduates of lower socioeconomic status).

INTRODUCTION

According to the most recent Statistics Canada Census numbers, slightly less than half (48%) of the Maritime population lives in rural areas. A comprehensive review of the literature shows that young people from rural areas tend to be less likely than their counterparts in urban areas to aspire to, or participate in postsecondary education. There are many reasons behind this trend, including the issue of overcoming the distances to postsecondary institutions and strong community ties.

In addition, socioeconomic status (SES) tends to be lower in rural areas, and parents' educational attainment and family income are well known to be strong predictors of participation in postsecondary education (those with higher SES are more likely to participate). Amid these other issues, the higher cost of attending postsecondary is also an important factor affecting participation, with one study estimating that out-of-town students pay on average \$5,000 more per year to cover costs such as rent and utilities.

And, although much is known about the influence of the urban/rural dichotomy on access and participation, far less is known about the outcomes of graduates based on their geographic origin.

E. Dianne Looker of D. Looker Social Survey Research and Analysis, conducted an in-depth analysis of the outcomes of Maritime university graduates of the Class of 2003 based on urban versus rural residency at the time of high school graduation. This article is an executive summary of the full draft report prepared by Dr. Looker.



WHY THIS STUDY WAS CONDUCTED

Access to, and success in, postsecondary education by rural populations is a concern of governments. And while this study does not look at access directly, it does provide strong evidence about access by these populations. This study also fills a gap in current knowledge: Are urban and rural graduates equally successful in their transitions to further study and the work world?

Maritime universities appear to be equally accessible to youth from rural and urban communities

This study is based on a survey of graduates, and therefore does not directly address the question of accessibility. However, because the Maritime rural population is well represented within the Class of 2003, the evidence for good access to Maritime universities (and persistence) by the region's rural populations is nevertheless quite strong: Of the 3,086 graduates included in this (weighted) sample, 43% had attended high school in a rural community in the Maritimes. This proportion is similar to that of rural 15-24 year-olds (40%) (Figure 1).

Looking at the breakdown by province (Figure 1), graduates from rural areas of the Maritimes are over-represented (compared to Census data) in NS and PEI, and somewhat (8 pts) under-represented in NB. The reasons behind these provincial differences have not been explored but might be related to differences in the number of campuses (e.g., NS with 11 and NB with 7) and their geographical distribution and/or differences related to language, all of which would require further research.

Much of the literature available on rural-urban differences with respect to postsecondary education focuses on predictors of participation. These studies consistently find that fewer rural as compared to urban youth expect to attend postsecondary education (PSE) in general and university in particular.

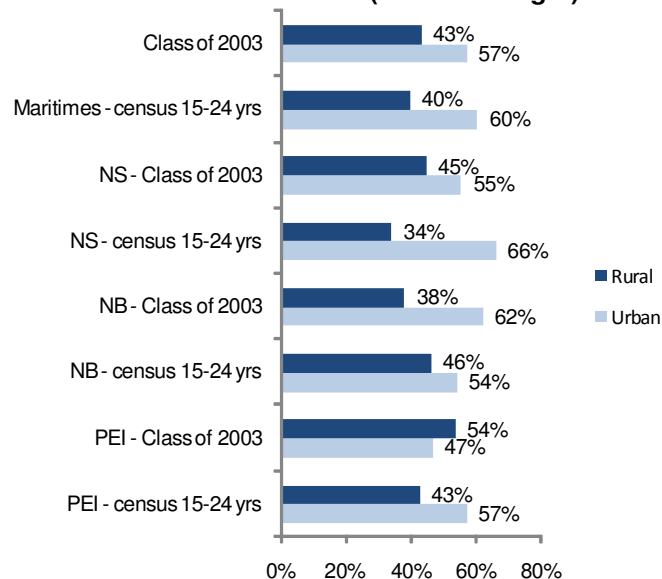
Two important factors identified as having a negative effect on PSE aspirations and thus helping to explain these differences include rural families tending to have lower socioeconomic status, and rural youth tending to have stronger ties to their communities.

How do the findings from this study compare to others in the literature? According to a number of studies, in Canada, it seems to be that rural youth are as likely to attend PSE but less likely to attend university. Based on the fact that the distribution of graduates from rural and urban origins is close to the rural/urban distribution of the general population, rural youth in the Maritime region appear more likely to attend university than rural youth elsewhere. Having the number and widely distributed range of universities available to rural, as well as urban students in the Maritimes may be increasing accessibility for these rural youth.

urban families, which has been identified as one of the factors contributing to the reduced aspirations and attendance at postsecondary education by rural youth. And indeed, this study shows that among the Class of 2003, family educational background does differ significantly between the two groups. Of graduates from urban areas, 55% came from families where the highest level of parental educational attainment is below a bachelor's degree, compared with 66% of those from rural areas. A detailed discussion of the distribution of parental educational attainment of the Class of 2003, and its trend over the last decade is provided in *Two Years On: A Survey of Class of 2003 Maritime University Graduates in 2005*.

The fact that parental educational attainment is an element of rurality that has a negative impact on access/participation in PSE, however, begs us to pay closer

Figure 1: Geographic origin [community type - urban vs. rural] by province based on Census 2001, age 15-24 cohort, and graduates of the Class of 2003 (Maritime origin)



Source: Survey of Maritime University Graduates, Class of 2003 in 2005 and Statistics Canada Census 2001

Urban graduates more likely to have parents who had attained a university degree

It is well known in the literature that rural families tend to have lower socioeconomic status (SES), in terms of both parental education and household income than do

attention to the ratio of rural to urban graduates in this study. Figure 2 shows the distribution by community type (i.e., urban vs. rural) within the three levels of parental educational attainment and the class as a whole. When compared to the distribution for the entire Class, graduates from urban areas are over represented in

the bachelor's degree or greater category and rural graduates over represented in the postsecondary education below bachelor's category.

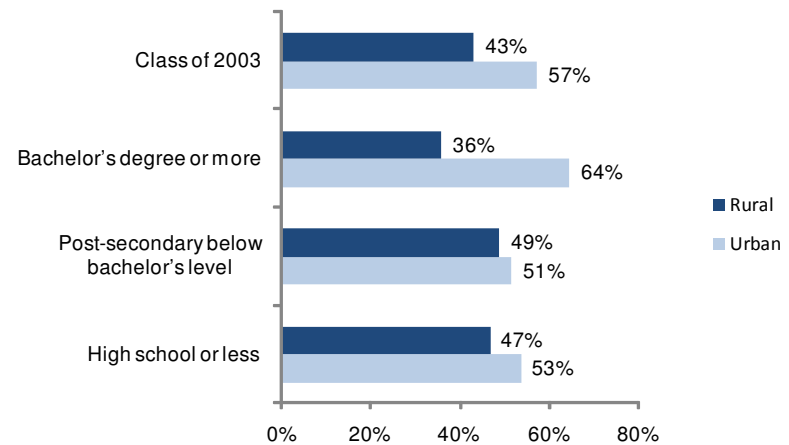
Part of the explanation for these observations is no doubt due to differences in the educational attainment level of urban and rural populations. The rural-urban divide in educational attainment is well documented with the level of education consistently lower in rural regions as compared to urban¹. For example, a recent Canadian report showed that 24% of urban residents held a university degree, as compared to 9-12% of rural residents.²

Rural or urban origin does not have an important impact upon the likelihood of returning for further study, the nature of the transition to the work world, or graduate mobility

In this study, academic programs were divided into two categories based on orientation: liberal arts & sciences, and applied arts & sciences/professional. Among first degree holders, although urban graduates were significantly more likely than rural to have taken liberal arts & sciences programs, the difference is small (5 pts). The reason for this difference is likely due to the influence of parental educational attainment – those graduates from the most highly educated families (more prevalent among urban graduates) tend to be somewhat more likely to choose liberal arts & sciences programs.

In the examination of employment related outcomes, controlling for program orientation (a significant and well-known predictor of employment outcomes) erases all significant differences between urban and rural graduates in: labour force status (whether they are employed, unemployed, or out of the labour force at the

Figure 2: Geographic origin [community type - urban vs. rural] of graduates, Class of 2003 and by parental educational attainment



Source: Survey of Maritime University Graduates, Class of 2003 in 2005 and Statistics Canada Census 2001

time of the survey); type of employment (whether the job is permanent, contract, temporary or casual); job status (whether the job is full-time or part-time); or wages. As previously reported in *Two Years On: A Survey of Class of 2003 Maritime University Graduates*, among first degree holders, the employment rate two years after graduation was 95%, and average annual earnings were \$34,853.

In addition, two years after graduation, 45% of Maritime university graduates (55% of first degree holders) have returned for further study, with no significant differences in level or field of study chosen attributable to urban vs. rural origin. Finally, the post-graduation mobility patterns of urban and rural graduates were not significantly different.

Graduates from rural communities are more likely than urban to borrow, and borrow more to finance their degree

Considering only the financing for the 2003 degree, we find that graduates from rural areas (69%) were significantly more likely to have borrowed than their urban counterparts (59%), all sources combined (Figure 3). Rural graduates were particularly more likely than urban graduates to have borrowed from government sources (58% vs. 44%). Both groups were equally likely (differences shown not statistically

significant) to have relied on funds borrowed from financial institutions, family members and other sources.

On average, rural graduates borrowed a total of \$25,652 for their 2003 program, nearly \$5,000 or 24% more, than those from urban areas.

There are at least two factors at play underlying these differences. First of all, although not actually demonstrated in this study, it is likely that more graduates of rural origin would incur higher expenses as they moved away from home to pursue their education. Secondly, as noted earlier in this paper, rural graduates are more likely to come from households where the highest level of educational attainment is below a bachelor's degree; given the link between parents' education and income, these students are also more likely to meet the eligibility requirements for government student loan programs, and to be eligible to borrow greater amounts of money.

If we further widen the scope to include financing of any post-2003 education, we find that the percentage borrowing increases somewhat (74% of rural and 67% of urban graduates borrowed from any source) and that the statistically significant differences observed for the 2003 degree remain. Total average borrowing reached \$30,247 for graduates of rural origin and \$24,968 for their urban

1 Burns, A., Bruce, D., and Marlin A. 2007. Rural Poverty Discussion Paper. Prepared for: Rural Secretariat Agriculture and Agri-Food Canada.

2 Rothwell, N., and Turcotte, M., July 2006. The influence of education on civic engagement: differences across Canada's rural-urban spectrum. Rural and Small Town Canada Analysis Bulletin. Statistics Canada Catalogue no. 21-006-XIE. Note: two statistics are provided for rural residents because the paper utilizes two categories to further define the term rural.

counterparts, a difference of 17 percentage point points. In fact, nearly one-third of rural graduates vs. one-quarter of urban owed at least \$30,000, for their 2003 degree and any subsequent education, two years after graduation.

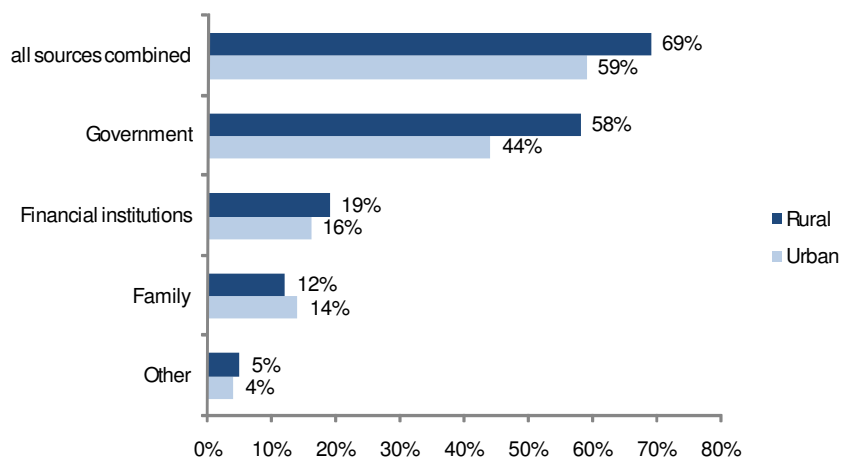
Provincial level differences within the rural-urban dichotomy were not assessed; however, we know from *Two Years On: A Survey of Class of 2003 Maritime University Graduates* that there were no significant differences in borrowing patterns by province among first degree holders.

CONCLUSION

The distribution of graduates from rural and urban origins is close to the rural/urban distribution of the general population. Compared to what is known from the literature, this finding suggests that rural youth in the Maritime region are more likely to attend university than rural youth elsewhere. Having the number and widely distributed range of universities available to rural as well as urban students in the Maritimes may be increasing accessibility for these rural youth.

With equal success in outcomes in terms of employment and likelihood of pursuing further education documented here, it would appear the only substantial difference in outcomes between graduates of rural and urban origins is that rural graduates are more likely to borrow and to borrow more on average. This may be partly explained by rural graduates being more likely to incur the greater costs associated with having to move away from home. In addition, more rural graduates would be eligible for student financial assistance because of the distribution by parental educational attainment (more rural graduates of lower socioeconomic status).

Figure 3: Incidence of borrowing by source, to finance the 2003 degree



Source: Survey of Maritime University Graduates, Class of 2003 in 2005

WHAT YOU SHOULD KNOW ABOUT THIS STUDY

In the fall of 2005, MarketQuest Research Inc. interviewed a total of 4,310 Class of 2003 Maritime university graduates (representing ~ 30% of the entire graduating class). Of this group, 3,086 had originally attended high school in the Maritimes; this subset of graduates is the focus of this analysis.

Urban vs. Rural: All references to “rural” versus “urban” in this article refer to whether or not the graduate completed high school in a school that was located in a rural or urban area. This was determined based on the size of the community, as reported in the 2001 Census, in which that school is located; those communities with a population of 10,000 or more were designated “urban” and those with a population of less than 10,000 were designated “rural.” This follows the definition used by the Canadian Rural Information Service. Using this definition, 43% of the sample was “rural” and 57%, “urban.”

Tests of Statistical Significance: The margin of error for findings from this sample of 3,086 is ± 1.8 percentage points, 19 times out of 20. In all cases, the confidence interval determining significance was set at 95%. Main effects (ratio/continuous data) were tested using one-way ANOVA. Differences between groups were tested using the Student-Neuman-Keuls (S-N-K) test. Differences in proportions (ordinal/categorical data) were tested using Chi-Square (SPSS version 15). Notable differences were determined using adjusted standardized residuals.

For additional information on the survey methodology, and more in-depth discussions of trends in parental educational attainment and graduate outcomes, refer to *Two Years On: A Survey of Class of 2003 Maritime University Graduates in 2005*. This report is available for download from www.mphec.ca; copies are also available by contacting the MPHEC at (506) 453-2844; by writing to P.O. Box 6000, 401-82 Westmorland Street, Fredericton, NB E3B 5H1; or by emailing mphec@mphec.ca.

E. Dianne Looker’s draft report is available on request.