



# Rural and Small Town Canada ANALYSIS BULLETIN



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## RURAL YOUTH MIGRATION BETWEEN 1971 AND 1996

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### Highlights

- ◆ All provinces lost youth from their rural areas between 1971 and 1996. The greatest loss was in Saskatchewan and in the four Atlantic Provinces, particularly in Newfoundland and in Prince Edward Island. The provinces with the smallest loss of rural youth were Alberta and British Columbia.
- ◆ Urban areas gained youth in all provinces except in the Atlantic Provinces. Urban areas in Alberta showed the largest gains. In the Atlantic Provinces, urban areas lost youth in Newfoundland and in Prince Edward Island, but only in some age groups. In Nova Scotia and New Brunswick, the urban youth population appears stable.
- ◆ Alberta had the strongest rate of provincial in-migration of young adults. Ontario and British Columbia also have provincial in-migration of young adults.

### Introduction

Although youth migration has been a popular subject in recent years, little research has focussed on the migration between rural and urban areas. Most of the research has concerned inter-provincial migration. In this bulletin, we consider the magnitude of both rural-urban migration and inter-provincial migration between 1971 and 1996 using population pyramids

The age structure of a population reflects the results of birth rates, death rates and migration rates in a particular geographic area. The age structure of the population in a given geographical area is typically driven by the number of births over time as the number of births is usually greater than the number of deaths and the rate of migration.



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**Note of appreciation**

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

The impact of migration is often difficult to determine by looking at a population pyramid at a given point in time. However, if we compare population pyramids between two points of time, we can infer the impact of migration. The purpose of this paper is to compare the population age structure over time to determine the impact of migration on the population age structure in rural and small town areas.

**Definition of Rural and Small Town (RST) Canada**

RST refers to the population living outside the commuting zones of larger urban centres (LUC) - specifically, outside Census Metropolitan Areas (CMAs) and Census of Agglomerations (CAs). A CMA has an urban core of 100,000 or over and includes all neighbouring municipalities where 50 percent or more of the work force commutes into the urban core. A CA has an urban core of 10,000 to 99,999 and includes all neighbouring municipalities where 50 percent or more of the work force commutes into the urban core. Thus, RST Canada represents the non-CMA and non-CA population. It includes all the residents outside the commuting zones of larger urban centres.

Note that the geographic boundaries of rural and small town areas are changing over time (Mendelson and Bollman, 1998a and 1998b). Thus, we will show the population pyramid in terms of the proportional structure of the population (i.e. by taking each bar as a percent of the total) rather than by showing each bar in terms of the absolute number of individuals.

## **Population pyramids**

A population pyramid is a common way to portray the age structure of the population in a given area. Each (horizontal) bar shows the percent of the population in each age group, with each gender shown at the end of each bar. In a growing population, the lower bars (i.e. the younger age groups) are longer because there are more young people than older people. If all the bars were essentially the same length, then the population would not be growing because each younger age group would be replacing an older age group of (essentially) the exact same size.

## **Population pyramids for rural and small town Canada**

When we compare the population pyramid for the rural and small town population to the population pyramid for the overall population, we can offer a few general conclusions:

- first, in both rural and small town areas and in the total population, there was a baby boom of individuals – aged 30 to 50 in 1996, or born between 1946 and 1966 (Figure 1);
- we can see that rural and small town areas have fewer individuals of a given age group relatively to the population as a whole. For example, by comparing the population structure for RST areas in 1996 to the overall Canadian population structure, one sees that the RST population has a smaller proportion of individuals who are 20 to 24 and 25 to 29 years of age (Figure 1). Is this due to migration?<sup>1</sup> Will these individuals return to RST areas?

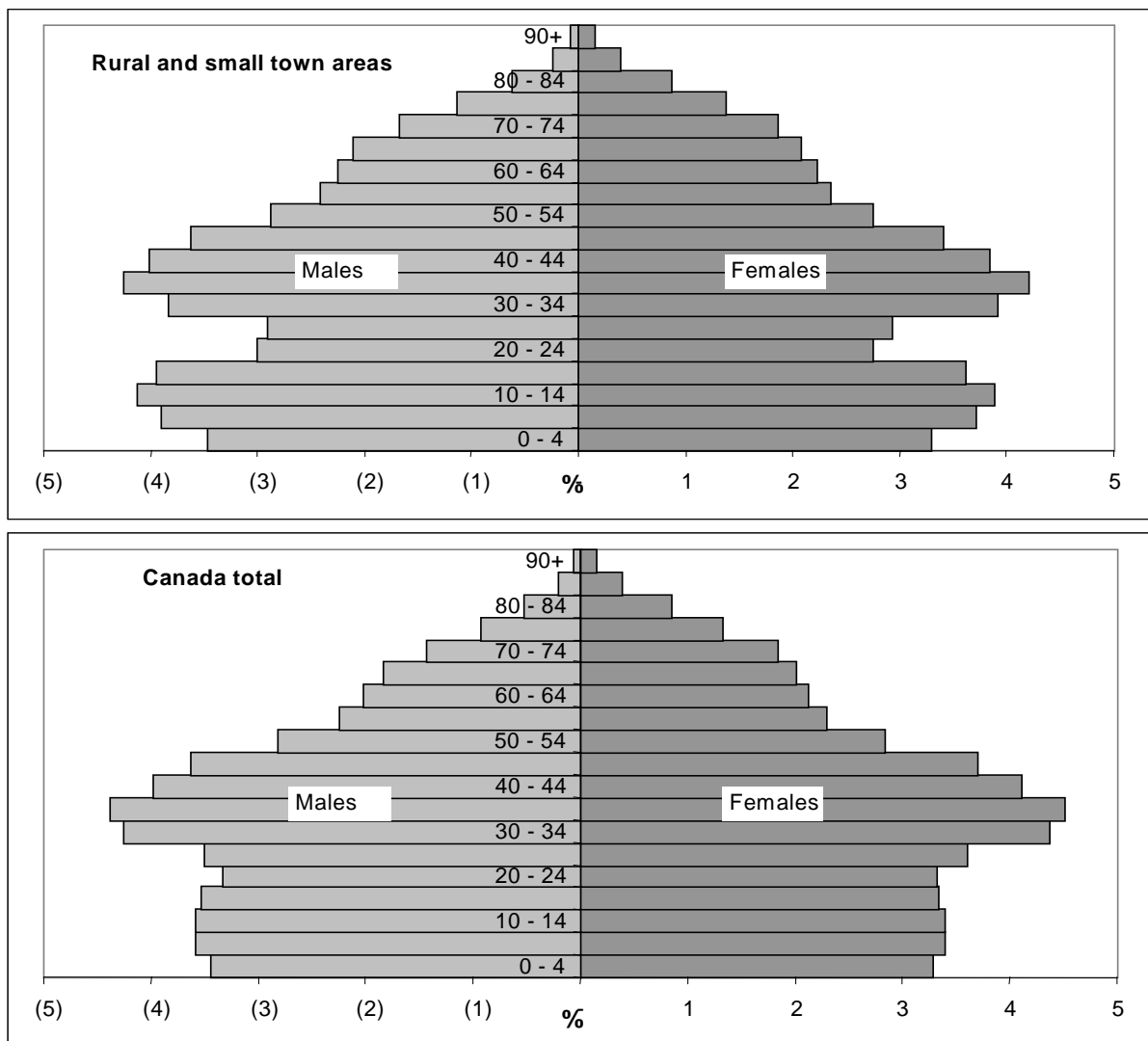
Although we can see that rural areas tend to have relatively fewer young adults than urban areas, it is difficult to determine the size of the magnitude of this apparent gap without further analysis. Specifically, how many young adults would we have expected to find in RST areas?

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<sup>1</sup> If we had only one pyramid to analyse, we could not rule out the possibility that lower rural birth rates were a factor.

Figure 1

Population pyramids, Canada, 1996



Source: Statistics Canada. Census of Population, 1996.  
 «Rural and small town» refers to the population outside the commuting zone of Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs).

Comparing population pyramids over time

For countries or regions with constant boundaries, analysts typically can compare the absolute numbers of individuals in each age cohort<sup>2</sup> over time to determine the impacts of death, in-migration and out-migration. Due to the changing boundaries of rural and small town areas (see Mendelson and Bollman 1998a and 1998b), in order to do our analysis, we

<sup>2</sup> An « age cohort » refers to the group of individuals born during a specific time period. For example, the individuals who were born during the 1961 and 1966 time period would be 5 to 9 years of age in 1971 and 30 to 34 years of age in 1996 – these individuals are members of the same age cohort.

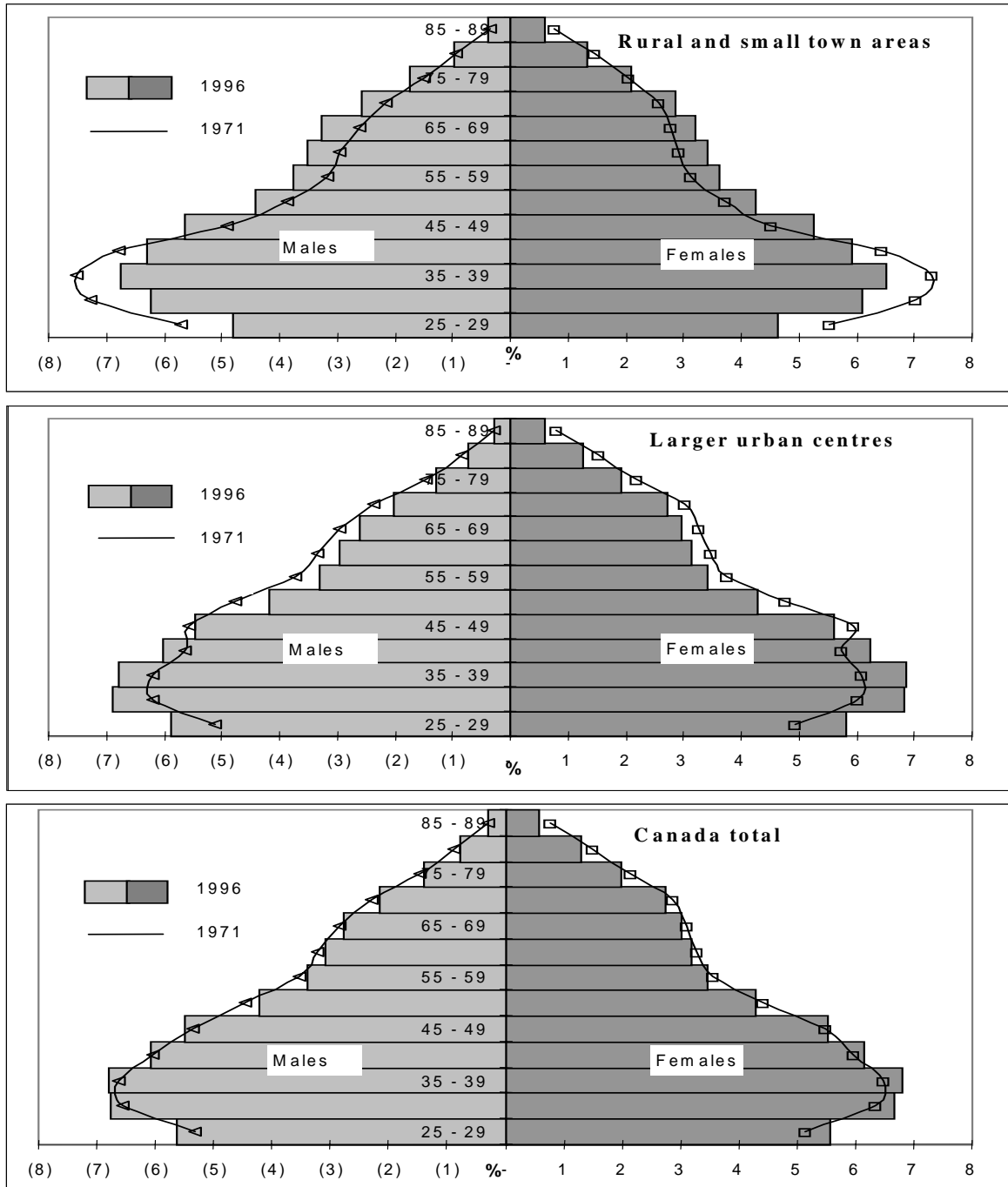
have calculated the relative or proportional age structure in rural and urban areas for two periods. Specifically, we use the 1971 age structure to indicate or to predict the age structure in 1996 (see box for details of this calculation). We superimposed the “expected” 1996 age structure (as calculated from the 1971 data) (represented by the lines in Figure 2) on top of the actual structure for the 1996 individuals who were over 25 years of age (see the bars in Figure 2).

***Steps to calculate the “predicted” 1996 age structure from the 1971 data:***

1. Individuals over 65 years of age in 1971 were removed from the calculation as they would be over 90 years of age in 1996 and a very small proportion of the population lives to be 90 years of age. Thus, the 6 oldest age groups have been removed from the 1971 pyramid.
2. Individuals under 25 years of age in 1996 were removed from the calculation as they would not have been born in 1971. Thus, the youngest 5 age groups have been removed from the bottom of the 1996 pyramid. We also removed the people aged 90 years and more in order to have the same number of age groups in each of the 1971 and 1996 pyramids. Also, the group of individuals over 90 years of age is an open-ended class with a small number of individuals making the estimates less precise.
3. For each 1971 age class from 25-29 years of age to 60-64 years of age, we calculated, at the national level, the share of individuals within each age and gender class who died between 1971 and 1996. This allowed us to more closely “predict” the age structure in 1996, including the impact of deaths but excluding the impact of migration. We applied this Canada-level “mortality rate” (i.e. the share of individuals in each 1971 age and gender class that had died by 1996) to both the LUC and the RST populations in each province.
4. In each of 1971 and 1996, we used the data that had been corrected for census under-coverage.

**Figure 2**

**Comparison of the actual 1996 population pyramid and the “predicted” 1996 population pyramid (based on the 1971 structure, adjusted for death rates but excluding the impact of migration), Canada**



Source: Statistics Canada. Census of Population, 1971 and 1996.

Note: The 1996 bars indicate the actual population structure. The lines labelled “1971” represent the predicted 1996 population structure, where the 1971 population structure has been adjusted for age and gender specific deaths. Thus, the difference between the lines and the bars is an indicator of migration (rural versus urban migration plus inter-provincial migration plus international migration).

It is common for rural youth in age classes from 15 to 25 years of age to leave their communities to pursue further education or to obtain employment experience. By choosing to compare two periods that are 25 years apart, we hope to avoid the impact of temporary or voluntary out-migration by rural youth. For example, a 25 year time span will essentially compare the proportion of individuals 0 to 4 years of age (in 1971) with the proportion of individuals 25 to 29 years of age (i.e. 25 years later in 1996). This will indicate the degree of “permanent” out-migration from RST areas.

## **Rural youth exodus**

In rural and small town areas, the lines (i.e. the expected 1996 structure calculated from the 1971 structure) show that more young adults (25 to 44 years of age) are expected in the 1996 population than are found in 1996 (Figure 2). Thus, there was a rural youth exodus (net out-migration from RST areas) for youth who were under 19 years of age in 1971. These individuals would be young adults (25 to 44 years of age) in 1996 and we find proportionally fewer than would be expected from the 1971 population structure.

Note that the lines in Figure 2 show that fewer older folks are expected than the actual bars show for 1996. This is partly a statistical artefact. If we find proportionally fewer young adults in 1996 than we expect, then we *must* find proportionally more older adults in 1996 (because our percent calculation adds to 100 percent). However, part of this result may also be due to the (return) migration of older adults to RST areas.

At the Canada level, we see an exodus from rural and small town areas for each of the four youngest age groups, and especially for the three youngest age groups (Figure 2). The exodus is similar for men and for women, which is not the case in all provinces. As expected, the pattern for larger urban centres is the inverse of the RST pattern. In the Canada total graph, we see some international immigration into the younger groups, with a similar pattern for men and for women. However, international immigration has a much smaller impact than inter-regional (i.e. rural to urban) migration.

## **Differences in rural-urban migration among the provinces<sup>3</sup>**

A similar analysis for each province indicates (see Tremblay (2001) for details):

### **Newfoundland, Prince Edward Island and Saskatchewan:**

- These provinces have the strongest rural youth exodus in the 1971 to 1996 period.
- There is some youth exodus from larger urban centres.
- Thus, there is net out-migration of youth from these provinces in the 1971 to 1996 period.

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<sup>3</sup> A recent article by Dupuy, Mayer and Morissette (2000) found similar overall conclusions, but some of their findings differ by province. Our analysis looks at rural youth in 1971 and considers their 1971 to 1996 migration patterns whereas Dupuy, Mayer and Morissette look at rural youth in 1986 and in 1991 and look at their 5-year migration pattern (plus they look at 1987 to 1997 return migration).

### **Nova Scotia and New Brunswick**

- Rural youth out-migration, but not as strong as in the other Atlantic Provinces.
- Stable youth population in larger urban centres.
- Thus, there is net out-migration of youth from these provinces in the 1971 to 1996 period.

### **Québec, Ontario and Manitoba**

- These provinces tend to mirror the Canada-level findings.
- There is rural youth out-migration.
- There is youth in-migration to the larger urban centres.
- At the province level, Ontario shows youth in-migration but in Québec and Manitoba, the rural youth population structure appears stable.

### **Alberta and British Columbia**

- There is a small rate of out-migration of rural youth.
- There is a strong rate of in-migration of youth into larger urban centres.
- At the province level, there is in-migration of youth in the 1971 to 1996 period.

## **Summary and conclusions**

All provinces lost youth from their rural areas between 1971 and 1996. The greatest loss was in Saskatchewan and in the four Atlantic Provinces, particularly in Newfoundland and in Prince Edward Island. The provinces with the smallest loss of rural youth were Alberta and British Columbia.

Urban areas gained youth in all provinces except in the Atlantic Provinces. Urban areas in Alberta showed the largest gains. In the Atlantic Provinces, urban areas lost youth in Newfoundland and in Prince Edward Island, but only in some age groups. In Nova Scotia and New Brunswick, the urban youth population appears stable.

Alberta had the strongest rate of provincial in-migration of young adults. Ontario and British Columbia also have provincial in-migration of young adults.

We have reviewed a 25-year period. This time period would allow individuals under 19 years of age in 1971 to “temporarily” leave rural areas to pursue education and to gain job experience. We looked to see if they had returned by 1996, when they would have been 25 to 44 years of age. They had not returned. There was a (net) exodus of youth from rural and small town areas in each province during the 1971 to 1996 period.



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For background details, refer to the research paper: **Rural youth migration between 1971 and 1996** (Ottawa: Statistics Canada, Agriculture and Rural Working Paper Series, Cat. No. 21-601-MIE) which will soon be available free at [www.statcan.ca](http://www.statcan.ca). To order a paper copy, phone 613-951-6325 or the Regional Reference Centre at 1-800-263-1136. Juno Tremblay prepared this paper during a student work assignment at Statistics Canada. Questions may be addressed to Ray D. Bollman at 613-951-3737 ([bollman@statcan.ca](mailto:bollman@statcan.ca)).