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Urban Perspectives and Measurement

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Urban Perspectives and Measurement

Henry A. Puderer

1.0 Introduction

The term “urban” is widely used and one that people intuitively understand – a concentration of population at a high density. It is the opposite of rural where population is not concentrated but dispersed at a low density.

The intuitive perspective readily identifies the extremes of what is really a continuum. What is not so intuitive is how to segment the continuum. Where does urban start or rural begin? Are there different degrees of urban and rural? Is there something in between urban and rural – a transition between the two if you will?

How individuals see this continuum at any one time is a product of their experiences and needs. One perspective may be a basic construct which sees urban as large metropolitan regions. Another may see urban as cities or towns. More complex views may segment the urban-rural, or settlement, continuum into multiple parts using labels such as metropolitan, large urban, small urban, hamlets, localities, rural places, rural farm, rural non-farm and remote.

With so much variation is there a right way or at least a preferred way to distinguish urban and rural? The short answer is no. There is no right or wrong perspective. Rather it depends on the issues being analysed and how to best structure the assessment process.

With no single universally accepted perspective of the urban-rural continuum how does a statistical agency serve the national interests? Statistics Canada supports different approaches that measure urban and rural. This provides a flexible platform upon which different definitions of the urban-rural continuum can be built to best meet the analytical needs of the issue being examined. This article reviews some of the different approaches and measures that Statistics Canada supports in order to help users when assessing the Canadian urban-rural landscape and its issues.

2.0 Different Perspectives and Measures

2.1 The “Administrative” Perspective

Canada like so many other countries is organized into incorporated municipalities to establish governance and administer the provision of local services. This need has resulted in an array of different types of incorporated municipalities in response to the different services and service levels required at the local level. These include cities, towns, villages, hamlets, townships, rural municipalities, and many other types of municipalities. For the 2006 Census there were 55 different municipality types identified (see www12.statcan.ca/english/census06/reference/dictionary/geo012a.cfm).

Although not the intended purpose, the array of municipal types that has evolved has a natural ordering reflecting the urban-rural continuum. As a result many Canadians perceive an implicit urban-rural dichotomy based on municipal types.

In the early 1900s the demarcation between urban and rural was clear. Urban was comprised of cities, towns and villages regardless of size and rural was the rest. This perception was a product of the time when “going to town” meant hitching up the horse and buggy and going to the nearest city, town or village to get your provisions.

Until the 1950s, as part of the national census, Statistics Canada explicitly defined urban based on three municipal types (city, town and village). All other types were considered rural. This uncomplicated approach was consistent with the view that urban and rural distinctions were mirrored in the municipal structure and their types.

As the use of the automobile expanded, the distinction between urban and rural municipal types became less clear as development leaped over the municipal limits of cities and towns. The closest village could be by-passed in favour of the larger town further away which offered more choice in goods and services. The urban status of smaller villages and towns was in doubt. The clear distinction previously associated with municipal type was disappearing, and the administrative perspective of urban and rural was increasingly insufficient to properly describe the Canadian landscape.

Statistics Canada no longer explicitly uses municipal types to describe the urban-rural continuum. However, the information required to segment the urban-rural continuum to differing degrees of detail depending on the analytical needs of the user is available.

2.2 The “Form” Perspective

When we refer to the form perspective we are talking about physical form – what you can see on the ground. The bricks and mortar attributes relating to physical form include population concentration, population density and land use (e.g. residential, commercial, industrial, transportation network development, farming, and open space). The values of these attributes are perceived as being opposites at either end of the continuum. The urban end has high population concentration and density, intensive transportation development, residential, commercial and industrial land use but little if any farming and open space, and the land use is for the most part fixed, with little opportunity for change. Rural is the opposite.

The form perspective began to be widely accepted after World War II and was in part a reaction to the limitations of the administrative perspective. Aspects of the form perspective were slowly introduced into the administrative approach over the 1950s and 1960s.

By the 1970s, Statistics Canada no longer explicitly included any administrative considerations in the definition of urban. At that time a statistical approach based only on form was introduced. This methodology essentially identifies areas with a population concentration of at least 1,000 and a minimum population density of at least 400 per square kilometre as urban. All other areas

are considered to be rural. Incremental change occurs each census as the urban areas are updated by adding areas meeting the density thresholds to existing urban areas or creating new urban areas where criteria are met.

Statistics Canada continues to produce a measure of urban using a methodology based on the form perspective of the urban-rural continuum for the dissemination of census data – called the urban area program. For the most part the methodology has remained stable since its introduction for the 1971 census. This provides the user with consistency to support longitudinal analysis and flexibility to set thresholds to structure the continuum as required. The table below illustrates how these urban areas can be classified into population size groups for purposes of analysing the urban-rural continuum. As a result, users are able to employ different thresholds to define urban population for their analytical purposes, for example, areas with a population of 100,000 or more represent 59% of the Canadian population, while areas with a population of 50,000 or more represent 64.2% of the population. This flexibility to set different thresholds is important given the variety of perspectives on the demarcation between urban and rural – what is seen as the “mushy” middle. So although Statistics Canada has consistently used the 1,000 threshold to maintain a baseline urban structure, many users alter this threshold and recompile census data to better suit or test their view of urban or other aspects of the urban-rural continuum.

Table
Example of selected population size groups for urban areas, 2006 Census

	Population				Count of urban areas	
	Total	% of total urban population	% of total Canadian population	Cumulative % of total Canadian population	Count of urban areas	% of total, count of urban areas
Population size groups						
1,000,000 and over	10,022,987	39.5	31.7	31.7	3	0.3
500,000 to 999,999	4,660,213	18.4	14.7	46.4	6	0.7
100,000 to 499,999	3,973,453	15.7	12.6	59.0	20	2.2
50,000 to 99,999	1,653,109	6.5	5.2	64.2	23	2.6
10,000 to 49,999	2,760,072	10.9	8.7	72.9	131	14.6
5,000 to 9,999	960,734	3.8	3.1	76.0	136	15.2
2,500 to 4,999	695,905	2.7	2.2	78.2	198	22.1
1,000 to 2,499	624,270	2.5	2.0	80.2	378	42.2
Total other	6,262,154	...	19.8
Total	31,612,897	...	100.0

... not applicable

2.3 The “Functional” Perspective

The functional perspective is more abstract than the form perspective in the sense that you cannot see the settlement limit as easily and because it can include what in the form perspective would be both urban and rural areas. The functional perspective is based on linkages between where a person lives and where they work, shop, access health care, recreate, what can be called a person’s activity space. When the activity spaces of many people are aggregated a socially and economically integrated area can be defined. This is referred to as a “functional area”.

These functional urban areas include a central urban core and highly integrated outlying areas that can extend beyond a single municipality and often includes more than one adjacent incorporated area. In general, the larger the central urban core, the stronger its influence over surrounding areas and the larger the functional area.

In practice the functional perspective is the basis for defining metropolitan areas or large urban centres in many countries including Canada. The interaction between the outlying areas and the central urban core and the intensity of this interaction is measured using the relationship between where a person lives and works. In this context, the functional area is perceived as the main labour market of these large urban centres.

In Canada, this approach has been used since the 1970s to define large and small functional urban centres respectively called Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs) - a CMA has a core of at least 50,000 while a CA has a core of at least 10,000 (see www12.statcan.ca/english/census06/reference/dictionary/geo009a.cfm).

2.4 Combination Perspectives

As with social, economic and demographic issues the urban-rural landscape is complicated and diverse. When confronted with these issues it is common practice to cross-classify various socio-economic measures to gain insight and a better perspective rather than trying to address the situation using only one measure. This approach is not as common when dealing with geographic concepts. Nonetheless, there are examples where different perspectives have been combined. Fundamentally, this results in using a cross-classification of geographic concepts.

A number of examples can be found within census releases. There are tables cross-classifying urban areas with municipalities and urban areas with CMA and CA. In fact, in the latter case a further refinement of the urban and rural areas within CMA/CAs is often used to highlight the differences: urban core – the central urban area of a CMA or CA; urban fringe – the urban areas outside the core but within the CMA or CA; and rural fringe – the rural areas within the CMA or CA.

One of the more recent combinations involves the use of Census Metropolitan Influenced Zones (MIZ). MIZ is an extension of the CMA/CA concept to better show the influence of metropolitan accessibility on non-metropolitan areas. Statistics Canada has combined the MIZ classification

with the CMA/CA concept to produce the Statistical Area Classification. This classification has been cross-classified with urban-rural to further disaggregate the urban-rural continuum. For example see, 2006 Census Highlight tables, Population and Dwelling Counts, Statistical Area Classification (SAC) or *Factors Driving Canada's Rural Economy* by Ray D. Bollman, Agriculture and Rural Working Paper Series, 2007-02-13 (21-601-MIE2007083).

3.0 How to Choose

As stated in the introduction there is no right or wrong choice and there is no single preferred recommendation. Nonetheless, some guidance can be suggested.

If the objective is to look at broad based economic issues for major urban centres then the CMA is a good starting point since the functional perspective provides a nationally comparable framework and identifies functional areas that extend beyond single municipalities. The CMA is also the geography of choice for releasing the results of the labour force survey, housing statistics by Canada Mortgage and Housing Corporation and a number of business periodicals reflecting the perspective of a market economy.

If the focus is on an individual municipality then an administrative perspective is the probable choice. This is often the case because comparative statistics are sought to measure the performance of a particular municipality. This can be done by selecting similar municipal types – other cities, towns. Additional comparability can be achieved by further selecting only similar type municipalities of similar population size, similar urban-rural population distributions, or whether or not they are CMA/CA components or in accordance with the degree to which they are influenced by CMA/CA (i.e. the metropolitan influenced zone).

When the area of interest is on smaller settlements (e.g. less than 10,000) a sub-municipal level may be advised. The flexibility to change thresholds using this approach is available and offers another way to address the mushy middle between what is urban and what is rural. This may also be a preferred choice where longitudinal comparisons are required to track the population change or the land area consumption. Where a more contextual perspective such as access to CMA or CA is sought, then a combination approach can be selected.

4.0 Conclusion

Although there is no universally accepted measure of urban, Statistics Canada has been using a definition that is based on both population density and concentration criteria. The main advantage of consistently using this definition is the ability to support historical continuity analysis of changing population settlements. However, this measure is not intended to be a definitive view of urban. Indeed, with the evolution of Canadian society, other views may be more suitable for some users.

In the absence of a definitive one size fits all perspective of the urban-rural continuum, Statistics Canada has sought to ensure that users have at their disposal various options to define the urban-rural dichotomy or an urban-rural continuum that suits their specific analytical and policy related needs. The options available provide significant flexibility and users are encouraged to define their own construct of urban that best serves their analytical needs. Users should contact their nearest Statistics Canada Regional Office, if needed, for additional clarification and for guidance on what data is available or could be produced.