

# **LARGE CITIES UNDER STRESS: CHALLENGES AND OPPORTUNITIES**

**A report prepared for the  
External Advisory Committee on Cities and Communities**

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## Executive Summary

Canada's future is increasingly linked to the fortunes of its largest cities and emerging city regions. These cities are under stress. This report focuses on the changing role and character of large cities and city regions in Canada and their importance to the future of the country. It reviews alternative definitions of what a large city is, constructs a hierarchy of Canadian cities and then illustrates how the characteristics of the largest cities differ from those of smaller places. It then identifies the key trends, challenges and opportunities of large cities, compares the performance rankings of Canadian cities with those of cities abroad, and suggests what is needed for those cities to be successful. The final section reviews and evaluates alternative models of governance for large city regions.

### ***Growth is increasingly concentrated: Large cities and city regions are important.***

As much as 80 percent of the country's economic and population growth over the next few decades will occur in only six broadly-defined city regions: the Greater Toronto Area, Vancouver and the lower mainland, Montreal and its environs, Ottawa-Gatineau, and the Calgary and Edmonton regions. What happens in these six urban regions will define the country's future, both positively and negatively. If our large cities succeed, the country will prosper; if they fail, the consequences will be severe for everyone and every region of the country.

### ***City size matters: Large cities are different.***

It is clear that large cities are different from their smaller counterparts. This is particularly the case for urban regions with populations over 500,000. They are powerful magnets for the young and highly educated, as well as the disadvantaged, they are the dominant gateways for new immigrants, the command and information centres for the economy, and the focal points of global connections. They offer more diverse employment opportunities and higher incomes than smaller places; and they provide the critical mass of talent, productive capacity and specialized services that underlie innovation and continued urban growth in the new economy. They are more socially and ethnically diverse, and at the same time are more expensive as places to live (notably for housing). They also exhibit, on average, higher levels of traffic congestion, environmental pollution, social segregation, income inequalities and cultural alienation. In short, big cities offer both opportunities and policy challenges that are often distinct from those of smaller cities.

Although the focus of this study is on the challenges facing the country's largest cities, it also acknowledges that our large cities and the rest of the country are intensely integrated and becoming more so. The variety and intensity of the flows, linkages, and exchanges between the large cities and smaller cities and rural areas suggests that their futures are increasingly interdependent.

***Large cities are under stress.***

All cities in Canada face challenges with respect to their economic, social, cultural and environmental sustainability, but the pressures are felt more intensely in the larger cities. Large cities and urban regions face both continued population growth and an increase in their share of national growth, bringing associated benefits and costs. Large cities are the main destinations of immigrants and therefore bear a substantial portion of the costs of settlement assistance and social integration. The under-funding of infrastructure is also particularly evident in large cities. Higher operating costs are another characteristic of large cities, not because they are inefficient, but because their size, density and diversity pose additional costs for everything from transit to social housing, welfare, education, policing, fire protection, and building inspection. Large cities also suffer from higher levels of air pollution and their growth imposes negative impacts on natural ecological systems.

***On the international scale, Canadian cities perform better on measures of social and cultural sustainability than on measures of economic and environmental sustainability.***

A review of the international literature suggests that large Canadian cities are meeting the sustainability challenges (economic, social, cultural and environmental) faced by large cities with mixed success. Compared to other cities around the world, Canada's large urban regions rank relatively high on a number of social and cultural indicators (for example, immigration, cultural diversity, the breadth of cultural activities and quality of life), but are confronted by serious challenges on the economic front (in terms of measures such as revenues, wages and income). With respect to environmental sustainability indices, the ranking on air quality, for example, varies across cities.

Despite the absence of longitudinal data on most indices of sustainability, cities in Canada still rank fairly high on many indicators, but they may be slipping. Furthermore, to the extent that social and cultural sustainability depend on economic sustainability, these rankings could deteriorate further in the future. The considerable variation among large Canadian cities in terms of their ranking on most of these indicators means that the challenges they face and the policy solutions to address those challenges will have to be different for different cities.

***Effective region-wide governance is needed to meet the complex challenges facing large cities.***

The sustainability challenges that metropolitan areas face are characterized by both strong inter-dependencies and by externalities among local jurisdictions and thus need to be tackled on a coordinated and region-wide basis. A regional structure is needed to resolve issues of transportation and land use coordination, as well as to ensure continued economic competitiveness, social cohesion, environmental sustainability, and the fiscal viability of city regions. Although the need for a regional structure is clear, the precise form it should take will vary with local circumstances. Different models (e.g. one-tier or two-tier governments, voluntary cooperation, special districts, provincial role) have

worked successfully, to varying degrees, in different cities. More important than the precise model of governance chosen for a city region is that some form of effective regional governance is in place.

***Many factors determine the success and sustainability of large cities.***

No one has the answer to the question of what specific conditions, attributes and factors determine whether or not a city is successful. Nor it is clear what success means and how it should be measured. Nevertheless, a number of factors seem to resonate with assessments of the relative success of cities. One is the ability to adapt to change; to minimize the negative consequences and to take advantage of the opportunities that change provides. A second consideration is the ability of a city or city region to attract inward investment and to attract and retain talented people. A third consideration is effective local and regional governance, as set out above.

These responses require, among other things, effective leadership, sound government, sufficient fiscal capacity, coordinated public policies, high quality social services, enhanced cultural facilities and physical infrastructure, and an attractive natural environment. It also helps if cities have a mixed or diverse economy, proactive local agents of change and lower levels of income inequality and environmental pollution. These goals will not be met without concerted actions by all three levels of government.

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## INTRODUCTION

Canada's future is increasingly linked to the fortunes of its largest cities and its emerging city regions. Over 80 percent of Canadians live in the country's urban areas (those with populations of more than 10,000) and over 60 percent reside in the 27 census-defined metropolitan areas (with populations over 100,000). Those proportions, and thus the scale of metropolitan concentration, are increasing, and are likely to continue to do so in the future. Recent research (Statistics Canada 2004; Simmons and Bourne 2004; Heisz 2005) suggests that as much as 80 percent of economic and population growth will occur in only six broadly-defined city regions: the Greater Toronto Area, Vancouver and the lower mainland, Montreal and its environs, Ottawa-Gatineau, and the Calgary and Edmonton regions. What happens in these large cities and urban regions will define the country's future both positively and negatively. If our large cities succeed, the country will prosper; if they fail, the consequences will be severe for everyone and for every region of the country.

This report focuses on Canada's large cities and city regions and their importance to the future of the country. It identifies the key trends, issues and opportunities facing Canadian large cities and suggests what is needed for them to be successful. The report is divided into four sections:

- The first section reviews different definitions of large cities and applies these definitions to Canadian cities. The focus is on functionally-based definitions that are intended to encompass the local economy and the daily life of residents rather than municipally-based definitions which are based on political boundaries.
- The second section identifies key factors affecting Canadian cities—demographic transition, economic restructuring, social and cultural change, increasing ethno-cultural diversity, technological change and the communications revolution, the environmental movement and sustainability, the changing distribution of income and income inequalities, fiscal pressures and the infrastructure gap. It looks at

specific issues arising from these trends and identifies key variables that will determine the relative success of cities.

- The third section assesses how well Canada's large cities are performing relative to other cities around the world on four measures of sustainability – economic, social, cultural, and environmental. This analysis is based on a review of studies and measures of performance that currently exist in the literature and is thus not intended to provide a comprehensive assessment. It does, however, provide some impressions, on the relative performance and health of Canadian cities.
- The fourth section addresses governance structure, which is important to the success of large cities and city regions. It sets out a series of criteria for evaluating local governance structures and applies them to different governance models in large cities and city regions (one-tier governments, two-tier governments, voluntary cooperation, special districts, and a provincial role).

Our focus here on the challenges facing the country's largest cities does not imply a downgrading of the importance of small urban places and rural areas in Canada's future. Rather, while it recognizes the increasingly prominent role of the large cities in accommodating, managing and shaping economic growth, environmental sustainability and social change in the country, it also acknowledges that our large cities and the rest of the country are intensely integrated. Our largest cities are the organizing nodes of the economy, the financial system and for the media, and they serve as the dominant milieus of social and cultural change. They are the primary gateways for global linkages and flows of information, capital and ideas, which they then diffuse to smaller cities and rural areas. As cities become bigger they also extend their networks of linkages – their markets for goods and services and areas of influence - over larger slices of geographical territory. The rest of the country, in turn, is drawn into those areas of influence as consumers and as suppliers of labour and commodities. The variety and intensity of the flows, linkages and exchanges between the larger cities and smaller cities and rural areas suggests that their futures are increasingly interdependent. Indeed, the prosperity of small cities, town

and rural areas depends on the continued vitality and sustainability of the country's large city regions.

## **1 DEFINITIONS OF A LARGE CITY**

There is no single widely accepted definition of what constitutes a large city. Nor is there agreement on the attributes that might be used to characterize a large city. Nevertheless, there is a considerable body of knowledge that allows us to formulate a set of arguments on what attributes typically define a large city, and why size matters. In this section we examine a number of alternative approaches to defining large cities, in Canada and abroad, identify a set of specific definitional criteria, and then offer a brief assessment of the merits and limitations of each approach. The section concludes with a summary and a set of recommendations on what might be the most appropriate approach, or approaches, to apply in the Canadian context.

Both theory and practical observation indicate that city size does matter. Large cities are not simply small towns multiplied by some exponent. Winnipeg, for example, is more than fifteen cities of Brandon stapled together; Toronto is not ten cities of London side-by-side. Although all cities share some obvious attributes, large cities also contain high-order functions, specialized business services and cultural activities not found elsewhere. Their social landscapes and working environments are shaped by processes that are different in scope and scale from, or are at least more intense than those in small cities. The outcomes of these attributes and processes, and the challenges to sustainability they present, also differ. To illustrate the point, larger cities tend to have more intense competition for land and location, and thus higher densities and higher land values, as well as sharper gradients in land values. They also have, on average, more homogeneous and specialized land use zones and more diverse and highly segregated social spaces. They attract more human capital and offer settings that encourage innovation and subsequent experimentation. At the same time, they exhibit – again on average - higher levels of traffic congestion, environmental pollution, social isolation and cultural alienation. In other words, big cities offer both opportunities and policy challenges that are often distinct from those of smaller places.

## 1.1 Alternative Definitions

Based on a review of the literature, there are a number of alternative definitions available of what a large city is. There are four underlying components to all such definitions. One is the need to establish a minimum size threshold for large cities; the second involves a decision on how size is to be measured; the third asks whether we use municipal (political) boundaries or functional boundaries, such as those used by the Census; and the fourth is based on a definition of the actual margin or boundary of the cities under study. The first two components are discussed in more detail below, but the third and fourth are interrelated and pose particular challenges for anyone monitoring urban growth and change.

Where, and how, one draws the boundary around an urban area is crucial. That decision will in many instances dramatically alter not only the size of the area in terms of population, land use, and the economy, but will also shape our images of the salient characteristics, growth rates and policy challenges facing such regions. As one example, where do Toronto, Vancouver and Montreal end? Where should we draw the urban boundary? How do we interpret references in the media to “Toronto” or “Montreal”? The answer is - with caution. In many instances we do not know what geographical area is under discussion. Is it the political municipality or some unspecified larger region that incorporates the suburbs and exurbs? The widespread decentralization and suburbanization of population and jobs has created huge urban regions with highly dispersed patterns of development, economic links and social interaction. Improved transportation has made it possible to work in one suburb or exurb and live in another. In more densely populated parts of the country the suburban margin of one urban area can and does begin to merge with the next urban area. As a result, it has become increasingly difficult to say where any single urban area ends and another area – whether urban or rural - begins.

In the Toronto case, admittedly a particularly complex example, a hierarchy of definitions of the urban area of interest is currently in use. These vary from the City of Toronto (population 2.6 million in 2005), to the census metropolitan area (CMA population 4.8 million), the Greater Toronto Area (or GTA, 5.2 million), the Greater

Toronto-Hamilton Area (GTHA, 5.9 million), to the Greater Golden Horseshoe (GGH, 7.3 million). Obviously a focus on the City of Toronto produces a very different set of images, issues and policy priorities than one based on the GTA or the entire urban region – the GGH region. The latter region extends from Peterborough in the east to Barrie in the north, Kitchener-Waterloo-Guelph in the west, and to St. Catharines and Niagara in the south.<sup>1</sup> A similar scaling of alternative definitions can be applied to the Vancouver and Montreal metropolitan areas and to most other large cities.

### *Political vs. Functionally-based Definitions*

In this study we propose to concentrate on functionally-defined urban areas rather than political municipalities. By functional definitions we mean urban areas whose boundaries are defined by the organization of daily life, such as commuting to work, shopping, schooling and social visiting. These areas are often called *daily urban systems*. Cities generically then become the equivalent of regional labour markets and regional housing markets within which people can change place of residence without changing their work locations, or vice versa. This is precisely how Statistics Canada defines its census metropolitan areas (CMAs) and smaller census agglomerations (CAs). Typically, these composite urban areas are constructed by combining a central city or municipality with those adjacent suburbs and exurban communities that are closely integrated with the urban core through commuting to work and other indicators of social interaction and interdependence. This is now the dominant approach to defining urban areas used by government agencies in almost all countries as well as by international organizations such as the United Nations.

The limitation of functionally-based approaches is that while people do live their daily lives at this scale there are usually no formal governments that correspond to metropolitan areas, or what we now call *city regions*. Many urban areas do have special purpose agencies that deliver one or more services (e.g. water, transportation) at the regional scale, but they are not governments. In other words, functionally-defined regions

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<sup>1</sup> This is the region currently in use by the province of Ontario in its efforts to develop new regional growth and conservation plans for the greater Toronto region.

typically have no voters, budgets, politicians or special interest groups lobbying for a larger share of the national pie. Notable exceptions to this generalization in Canada are the Greater Vancouver Regional District (GVRD), which is described in the final section, and to a lesser extent the Montreal Urban Community.<sup>2</sup>

On the other hand, definitions and urban classifications based on municipalities are also useful for certain purposes, as recent studies by the Federation of Canadian Municipalities (FCM) illustrate.<sup>3</sup> This is particularly true for specialized studies of public finance and services delivered through municipal governments and local community organizations. In most regions, however, municipalities do not conform to the realities of the daily spaces used by current urban residents. Frequently, development has spread well beyond the administrative area of the central municipalities in the region, leading to a politically fragmented urban landscape. People may live in one municipality, work in another and shop in still another municipality. This is most obviously the case in the largest and most complex metropolitan areas, notably Toronto, Montreal and Vancouver, which are the principal focus of this study.<sup>4</sup>

## 1.2 Criteria for Defining Large Cities

Beyond boundary questions, the definition of a large city can be approached in several ways. In this study, eight different possibilities are identified, based on the following criteria: 1) absolute or numerical size, 2) relative position in the country's urban

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<sup>2</sup> In a few other cases the municipal government area for a large city encompasses most of the built-up urban area, as in Calgary, Winnipeg and Ottawa (Ontario part only). Perhaps the best example of a metropolitan government covering almost all of the urbanized region is Metro Toronto circa 1954.

<sup>3</sup> FCM's studies have generally included a larger number of places than is the case here. For example, the Quality of Life Reporting System has 20 municipalities, including some of Canada's largest urban centres, many of the suburban municipalities surrounding them, as well as small and medium-sized municipalities in seven provinces ([www.fcm.ca](http://www.fcm.ca)). The Big City Mayors's Caucus recognizes 22 cities. The size of FCM's membership (over 1,000 municipalities), and the requirement for regional representation, presumably dictates that a larger sample be used.

<sup>4</sup> The Toronto region is a particularly difficult case. There are 34 municipalities in the GTA and over 100 in the Greater Golden Horseshoe. Moreover, the region contains three municipal governments that have over one million population (the City of Toronto, and the regions of Peel and York), and three other municipalities with over 500,000 population (Cities of Hamilton and Mississauga and the region of Durham). Mississauga, as a local municipality, has over 700,000 people, roughly the same size as the metropolitan areas of Quebec, Winnipeg and Hamilton.

hierarchy, 3) relative contribution to the national economy, 4) role in their region or province, 5) metropolitan character and culture, 6) the urban environmental or ecological footprint, 7) urban form and the dynamics underlying the internal or structural organization of that urban area, and 8) regional representation. All of these criteria are described and evaluated in the paragraphs to follow.

### *Size of Population and the Urban Economy*

It is axiomatic that large cities are identified by their size. But on what criteria is size defined? And, what size threshold constitutes a “big” city? The first step here is to acknowledge that these definitions are arbitrary and conditional. That is, they are dependent on our perceptions of what cities are, and they are relative, with respect to where they are located. A city of a million people in Canada, we would all agree, is a major metropolis; but in India and China such a city would be considered small or medium size. Nonetheless, size is typically gauged by one of several metrics: population size, the size of the economy (in number of jobs, gross domestic product (GDP), or output), or market size (e.g. in terms of total income or consumption). Since data on local economies are often of marginal quality, or simply not available, total population becomes the conventional surrogate measure of city size. This measure can be more-or-less easily modified to accommodate differences in household or per capita income; the advantage being that income translates directly into levels of personal consumption (e.g. retail sales activity), average house prices, capital investment and local government revenues.<sup>5</sup>

### *Position in the National Urban Hierarchy*

Second, cities can be analyzed in terms of their position within a national urban hierarchy. The concept of a hierarchy simply recognizes that cities can be ordered or ranked by the functions they perform within the country, the services they provide, and

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<sup>5</sup> For example, city X with 4 million people may be 33 percent larger than city Y with 3 million people, but if city X has average incomes 20 percent higher than Y, it would as a market be over twice as large.

the networks of linkages they maintain with other cities and regions (Bunting and Filion 2001). Large cities, by definition, hold prominent positions within the hierarchy of cities. Each city's relative position could be measured through their role as providers of high-order (specialized) services for the country, as office and corporate headquarters, as centres of the financial, cultural and media industries, as communication centres, as nodes of air traffic, and so forth.

But population size itself is not necessarily an accurate guide of relative position or influence. As examples, the Hamilton, Quebec and Winnipeg metropolitan areas are roughly the same size (700,000), but Hamilton occupies a lower ranking in the country's urban hierarchy with respect to most of these indices because it lies within the long shadow cast by much larger Toronto. Quebec City and Winnipeg act as service centres for relatively large regions, although both have seen their tributary areas shrink as a result of the growth of Montreal and Calgary, respectively. As another example, Halifax holds a higher position in the urban hierarchy than either London or Windsor, which are roughly similar size, because it is relatively isolated from larger cities and functions as the service centre for the entire Atlantic region.

#### *Contribution to National and Regional Economies*

The third and fourth criteria measure size on the basis of economic output (GDP) and productivity at the national and regional levels respectively. Both measures are useful, and both provide insight into the relative power and influence of cities of different size. They would show, as does the income measure, that some cities are considerably stronger economically than they are in terms of population alone. Some have higher levels of GDP per capita, others make larger contributions in terms of generating revenue flows to provincial and federal governments.

Again the limitation is that data on output, by quantity and value, at the city or urban region scales are of poor quality, or non-existent. Part of the problem is that urban economies are so tightly integrated with those of their surrounding regions, and with other smaller cities, through commuting and the flows of goods and services, that it is difficult to determine where one economy begins and the other ends. Moreover, when

such data are available the geographic units do not usually conform to the functional urban regions as defined above.

### *Metropolitan Character and Culture*

The fifth criterion argues that large cities can be identified based on their assumed “metropolitan” character or culture. Statistics Canada has already attempted to develop such indices, as have many marketing agencies and places-rated studies that are intended to inform – or influence - the investment and tourism industries. In this case, metropolitan character typically refers to specialized services and facilities that only big cities have in abundance. Examples may include the presence of large international airports, the headquarters of national and multi-national corporations, major museums and other cultural establishments of global significance, national television stations, newspapers, professional sports facilities, Michelin restaurants and so forth. The limitation here is the lack of availability of comparable information and the simple fact that the perception of what is either relevant to the exercise, or world-class, varies widely among observers and different communities of interest.

### *The Urban Ecological Footprint*

Another approach is to define a large city by the extent and intensity of the ecological footprint that the city leaves on the natural environment of its site and tributary area. Scholars have for some time attempted to measure the ecological shadow cast by cities – the area from which it extracts resources and to which it sends goods, services and waste - but with limited success to date. By definition, we would expect that shadow to be roughly proportional to population size, but more accurately proportional to the size of the market (e.g. income and consumption), the economy (e.g. GDP), and related to the type of industries housed in that city.

Yet the overall ecological footprint of our cities, especially our large cities, is increasingly national, if not global, in its reach. Our food, raw materials and consumer products come from almost every corner of the globe and we export our goods and waste

products almost as widely. Aside from such obvious measurement problems, this approach has particular appeal to the environmental movement and to public policy designed to reduce the negative externalities of urban growth and metropolitan concentration. Although useful, it also does not, however, translate into explicit guidelines that can be used for identifying the needs of larger cities.

### *Urban Form and Spatial Organization*

Seventh, and following on our discussion of theory above, the researcher could focus on the underlying processes that shape urban form and the spatial structure – the organization - of large cities and city regions. That is, a large city is defined as one that displays systematically different organizing principles – for example, a highly competitive land market that places significant premiums on location and accessibility - compared with much smaller places. The geographical extent of that city is then defined, in theory, as the area over which those organizing principles effectively operate.

The most common analytically based definition of the threshold population necessary to qualify as a large city is the population figure of 100,000 which serves as the basis of the definition of metropolitan areas used in Canada, the United States, the United Nations, and by many other international statistical agencies (United Nations 1996). The assumption underlying this differentiation, although seldom made explicit, is that cities – or urban regions – of 100,000 or more are different from smaller (or non-metropolitan) places in terms of their complexity, intensity, diversity and internal spatial dynamics. Large cities tend to have much higher land values, steep land value gradients and relatively homogeneous land use zones; and they typically cast a long shadow of speculative value over the surrounding rural countryside.

Most national and international statistical agencies further subdivide their metropolitan areas into size categories, typically identifying a population size of one million as major metropolitan areas and those over 5 million as mega-cities or mega-metropolitan areas. Such classifications are also based on the assumption that there are qualitatively different processes of spatial organization and location specialization operating within each of these metropolitan size categories. The problem is that no one

has systematically evaluated whether these size categories do in fact represent significant break-points in the growth and spatial organization of urban regions.

### *Regional Representation*

Finally, if the frame of reference for research or policy formulation is defined as “the region,” and if regional representation is a requirement in our designations of size, then a large city becomes simply the biggest city in that region. Thus, Halifax (390,000) becomes a large city simply because it is the largest city by far in the Atlantic region. And, by the standards of residents of Saskatchewan, Saskatoon (230,000) is a large city. In proportional terms, Winnipeg (700,000) and Charlottetown (65,000) are the most dominant cities in their respective provinces. The problem here is that there is no limit to the demand for regional representation, and no obvious logic behind the selection of regionally representative examples. In the remote context of the Yukon Territory, Whitehorse (20,000) is a large city.

### **1.3 Canadian Cities: Attributes and the Size Distribution**

Urban Canada, or what we prefer to call the *Canadian urban system*, consisted in 2001 of 139 urban centres. This system included 27 census metropolitan areas (CMAs) with populations over 100,000 and 112 census agglomerations (CAs) with populations between 10,000 and 100,000. All of these are defined on functional criteria by Statistics Canada and include a central city and adjacent suburbs and exurbs that send workers to the urbanized core (Bunting and Filion 2001). At the time of the 2001 Census, the ordering of urban places by population size shows a number of distinct (or natural) breaks. In 2001 there were four metropolitan areas with more than a million people (Toronto, Montreal, Vancouver, Ottawa-Gatineau), two others with close to one million (Calgary and Edmonton), and three others with populations of roughly 700,000 (Quebec, Winnipeg, Hamilton). Six other smaller CMAs had populations between 300,000 and 450,000. By 2005, both the Calgary and Edmonton metropolitan areas exceeded the symbolic threshold of having more than one million people.

Based on population and position in the urban hierarchy, there are clear and important *natural breaks* in the city-size distribution. First, there is the break between the three national/global metropolitan areas and the three smaller metros with populations (in 2005) over one million (Ottawa-Gatineau, Calgary, Edmonton). These three, although much smaller than the national metropolises, are all rapidly growing and all three serve important national functions, but in quite different ways. In the next decade, Calgary is likely to pass Ottawa to become the nation's fourth largest metropolitan centre. The second obvious break is between these three and the three mid-size metropolitan areas (Quebec, Winnipeg, Hamilton). All three are major service centres, but at the regional rather than national scale, and all are relatively slow-growing. The third cluster of mid-size metros, much smaller again, includes London, Kitchener-Waterloo, St. Catharines-Niagara, Halifax, Victoria and Windsor. These six individually exhibit a complex mix of different growth rates and widely diverse roles within their respective regions and within the nation's urban hierarchy. Among these six, the Kitchener-Waterloo metropolitan area shows the most sustainable long-term growth potential, followed by London, Halifax and Victoria.<sup>6</sup> By 2005, the Oshawa metropolitan area (296,000 in 2001)<sup>7</sup> will have joined this size group. Otherwise, the overall urban hierarchy (e.g. city size distribution) in Canada is relatively stable.

#### **1.4 Differences Between Canadian Cities: Large and Small**

How different are the big cities in Canada compared to their smaller counterparts? It is widely recognized that Canadian cities, like the regions (and histories) of which they are a part, are remarkably diverse. That diversity is based not only on their relative sizes but on their different ages or periods of construction (St. John's and Victoria), their diverse

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<sup>6</sup> It is often suggested that Kitchener-Waterloo, Guelph and Brantford be considered as a new and emerging large city region, called the Grand River conurbation, with a combined population (in 2001) of 635,000. Others have gone further to link Kitchener-Waterloo-Guelph to Woodstock and London in a new southwestern Ontario conurbation with almost 1.1 million people.

<sup>7</sup> As previously noted, it is also frequently argued that Oshawa should be considered as part of a re-defined Toronto census metropolitan area. The same suggestion is often made for Hamilton. In the US Census, for example, the Toronto, Hamilton and Oshawa metropolitan areas, given their close economic and social integration, would be formally recognized as a single consolidated metropolitan area with three components.

physical settings (Halifax and Regina), their distinctive urban economies and industries (Ottawa and Calgary), and their contrasting local cultures and ethno-cultural mixes (Montreal and Vancouver). But how important is size in differentiating the characteristics of cities, and have these differences been increasing or decreasing over time? To answer these questions we examined 29 characteristics for 116 urban centres in 1971 and 2001 and then compared the nine largest places (with populations over 500,000) with all of the others.<sup>8</sup> The characteristics include demographic (age) measures, household size and structure, migration and immigration, language and ethnicity, labour force participation rates, percent employment by industry and occupation, per capita income, and housing price and stock characteristics.

The results of this study indicate that larger cities differ from smaller cities with respect to a number of key attributes, and for 21 of the 29 attributes these differences have increased over time. The most prominent characteristics that differentiate the nine largest cities from the others in our analyses are: 1) the proportion of population born abroad (percent recent immigrants), 2) average population growth rate, 3) percent whose language at home is not English or French, 4) the level of participation in the labour force, 5) the proportion employed – or the employment ratio, 6) the proportion of employment in commercial and business services, 7) income per capita, and 8) average housing prices. In each case, the largest cities recorded higher values than the smaller cities. In a reversal of long-standing historical patterns, large cities also had higher rates of natural population increase, due to their younger populations and the presence of recent immigrants, and slightly larger family household size.

It is interesting to note that large cities also had significantly lower proportions of their populations over age 65, due primarily to out-migration among the retirement populations, and lower proportions employed in both manufacturing and the public sector. As for manufacturing, high land costs and transportation difficulties have forced many firms to move out to suburban and exurban locations, or outside the country. The lower proportion of government employees in large cities is the combined result of the

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<sup>8</sup> There are only 116 urban centres that appear in the censuses of both 1971 and 2001 in Statistics Canada's files. Some smaller places with populations above 10,000 in 1971 dropped below that population figure by 2001 and were eliminated from Statistics Canada's list of census agglomerations. Several other places previously separate were merged by 2001. See Simmons and Bourne (2004).

higher rate of growth of private sector employment in those cities and the tendency for senior governments to locate (or relocate) their offices and employees to smaller cities and the country's peripheral regions as part of a regional development and equalization strategy.

## 1.5 Conclusions

It seems clear that large cities are different from their smaller counterparts. This is particularly the case for cities – or, more appropriately, urban regions – with populations over 500,000. They attract migrants, especially the young and highly educated, and they are the dominant gateways for new immigrants and other global influences. They also offer more diverse employment opportunities and on average higher incomes. They are more socially and ethnically diverse, and at the same time are more expensive as places to live (notably for housing). They display the *critical mass* of talent, productive capacity and specialized services that underlie continued urban growth. These are, in other words, the outcomes of the same traditional agglomeration economies that, despite such obvious diseconomies as pollution and congestion, created large cities initially. City size does matter, but it is not in itself a guarantee of continued success.

Even in the age of the web and the IT revolution, when the costs of communication – the friction of distance - have been dramatically reduced, people and firms still concentrate in the large cities and increasingly in their immediate environs. Those environs, measured by commuting to work, may now extend as much as 75 kilometers or even 100 kilometers from the urbanized core. Thus, it seems that job opportunities, higher incomes, better services and life style attract migrants to the large city regions, while higher costs and diseconomies drive many of those people to the outer suburban margins of those regions. This dual process of a *concentration* of opportunity at the national and provincial levels with the widespread *decentralization* of jobs and population at the local or city region level is likely to continue and to pose challenges for local, provincial and national governments.

The final question is what size threshold and criteria should be used to identify large cities for purposes of analysis and policy formulation? The simple answer is that there is no single threshold that is applicable in all cases and suitable for all purposes.

Based on the arguments outlined above, and the natural breaks in the city size distribution previously identified, it seems clear that there are three distinct groupings of large city regions in Canada.

These groupings are (with their estimated 2005 populations):

**A) Three national/global metropolises:**

1) The Greater Toronto/Oshawa Area	5.2 million
2) The Greater Montreal Region	3.6 million
3) Greater Vancouver and the Fraser valley	2.3 million

**B) Three smaller but emerging national centres with populations over one million:**

4) Ottawa-Gatineau (Ont.-Que.)	1.2 million
5) Calgary and environs	1.1 million
6) The Edmonton Region	1.05 million

**C) Mid-size metropolitan regions over 500,000:**

7) Quebec City region	700,000
8) Winnipeg region	700,000
9) Hamilton region	700,000

All other metropolitan areas are considerably smaller, and with the exception of the Kitchener-Waterloo-Guelph conurbation none is likely to reach the 700,000 population mark in the near future. It is also possible to argue, as suggested above, that as functional regions the Greater Toronto area, including the Oshawa and Hamilton CMAs at a minimum, should be treated as a single city region with a combined population of over 5.9 million.

The obvious disadvantage of using this single measurement criterion is that it leaves out representation from several major regions of the country, notably the Atlantic region, Saskatchewan and all of the north. At the same time it illustrates that one of the challenges facing the Atlantic region and the north is precisely the absence of large city regions with the critical mass, agglomeration economies and self-generating growth that such cities typically provide.

In an ideal world we could argue for a classification that blends all of the criteria listed in the previous section of this report. Such a classification might combine population size, market income, environmental impacts, metropolitan character, urban

form and regional/provincial representation. This multi-dimensional approach, in addition to being excessively complicated, would, however, not likely significantly change the classification or the ordering of large places presented here.

## **2 LARGE CITIES: KEY TRENDS, CHALLENGES AND OPPORTUNITIES**

All cities and regions in Canada, regardless of size, are under pressure in that they face an unprecedented number of forces of change. These same forces, in turn, also offer opportunities for growth and prosperity. Some of those forces derive from events and decisions that originate from sources that are external to the country, others are largely of internal origin. Some are reshaping the country as a whole; others are more concentrated in urban areas and in particular regions. Many of those pressures are also more intense, or at least more visible, in the larger cities.

This section examines the key sets of forces and factors that are reshaping the country and its major cities and identifies the consequences of those trends for local, provincial and federal governments. In each case we highlight the links and relationships between these forces and the kinds of stresses they produce. The section concludes with suggestions as to which factors might influence the relative success of cities in adapting to the challenges and opportunities provided by rapid change in an era of political and economic uncertainty.

### **2.1 Key Factors: A Summary**

Most of the key factors that are reshaping our cities are well known; however, their implications and long-term consequences for urban sustainability and prosperity have yet to be assessed. Among the currently dominant transformative factors perhaps the most obvious derive from the domains of demography, the economy, social and cultural change, technology and the environment, the changing distribution of income, and fiscal conditions. They are ordered below in terms of scale – from the universal (e.g. demography and the economy) to the sector-based and more place-specific:

- the demographic transition, population aging and the changing components of growth;
- economic restructuring, productivity trends, commodity prices (e.g. energy), trade liberalization and intense global competition;

- social and cultural change, including changes in life styles, preferences and living arrangements;
- increasing ethno-cultural diversity;
- technological change and the communications revolution;
- the environmental movement and sustainability;
- the changing distribution of income and income inequalities;
- fiscal pressures and the infrastructure gap

None of these factors can be treated here in detail; each would require a separate and lengthy report. In this section we provide selected examples of the impacts of trends in each set of factors on our larger cities. Specific issues of governance and the management of large urban regions are discussed in Section 4.

#### *Demography and the Components of Population Growth*

The first set of key factors in the social domain, and certainly the most obvious and unambiguous, include the ongoing consequences of the demographic transition (Foot and Stoffman 1996). Demography has changed the nation, and its cities, and will continue to do so. The last half century has witnessed a massive post-war baby boom – roughly from 1946 to 1963 – and then beginning in the 1970s, a dramatic decline in fertility rates – the baby-bust generation. This boom-bust cycle has produced population age cohorts of very different size, which in turn has reshaped almost every aspect of urban life from the consumption of housing and education to the growth of the labour market and the demands for market goods, health and other public services. As in other advanced industrial countries, fertility rates have dropped well below replacement rates to reach levels not seen since the 1930s. There is no evidence that this situation will be reversed.

The demographic transition has several obvious implications for this study. First, the overall growth rate of the population – at the national scale and for urban areas – will continue to decline, and within a decade will be negative (excluding immigration). Second, even if the birth rate stabilizes the population will continue to age and the proportion over 65 years old will double by 2015. This will gradually shift aggregate

demand for goods and services from youth to late middle-age groups and the elderly. Third, as fertility rates decline, the relative importance of the other two components of population growth – migration and immigration – will increase. Fourth, these components each have a different set of determinants and consequences, and exhibit a different geographical pattern within the country and among cities. They are also the most volatile and least predictable components of growth.

The critical consideration is that these trends have uneven impacts on the country's regions and its cities, both large and small. During the last census period (1996-2001), for example, 40 percent of the 139 urban communities (as defined in the previous section) declined in population (Simmons and Bourne 2003, 2004). Canada, of course, has always had growing and declining communities, but the proportion undergoing decline during the last decade is unprecedented, and it includes several of the smaller metropolitan areas (e.g. Chicoutimi, Saint John, Sudbury, Thunder Bay). As expected, population decline was most prominent among smaller cities and most emphatically among rural and remote communities. Outside of the major metropolitan areas and their zones of influence the country recorded widespread population declines. There are a few small places that are growing as exceptions to this generalization, notably in Alberta and BC, but not many. Most of the other small places that are growing are within striking distance of a large metropolitan area – that is, they are within the economic shadow or sphere of metropolitan influence.<sup>9</sup>

More obvious perhaps, the older demographic structures of most small and remote communities – excluding the aboriginal communities - means that future population declines are built-in. For example, declining communities have on average over 15 percent of their population over 65, compared to less than 12 percent for the nine largest cities. Low rates of natural increase almost everywhere indicate that the period of guaranteed population growth has ended. For a city to grow and prosper it must attract (and retain) in-migrants, especially the young; if it does not it will certainly decline. Of course, population decline is not necessarily a problem, although it is usually

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<sup>9</sup> It has been shown, as part of an analysis of zones of metropolitan influence (called MIZ zones), that population growth rates for small urban places decrease with increasing distance from a larger metropolitan area (see Bourne and Simmons 2003).

accompanied by a decline in jobs, in services and in local government revenues, but it is a challenge. The problem is that we have very little idea how to manage a downsizing of such communities in a humane and efficient manner.

For Canada's large cities a somewhat different set of population dynamics is at work. The country's large metropolitan areas as a group actually lose migrants on balance (i.e. in terms of net migration) to the rest of the country. Their growth is driven by slightly higher rates of natural increase, by in-migration from other parts of the country, and notably from immigration.<sup>10</sup> Yet each large city has a different combination of sources of growth. For example, Calgary has a young population, and attracts migrants from every region of the country as well as from overseas. Montreal, in contrast, has an older population, loses migrants to the rest of the country and gains from immigration. Toronto and Vancouver gain overwhelmingly from immigration but lose populations to their surrounding regions.

In other words, the social and demographic futures of our large cities, although individually different, all depend on continued immigration – which is a national policy (and political) decision, and thus, unlike population aging, not a certainty. Immigration also places specific pressures on government services in large gateway cities that domestic migration typically does not. If immigration is curtailed, or declines for other reasons, the larger cities will face an uncertain demographic future.

### *The Economy*

The second set of transformative factors emanates from the economic sphere. Here we will provide only a brief summary, again stressing the implications of economic change for large cities and city regions. A combination of widespread economic restructuring (e.g. sectoral shifts) and shifting demand/supply and commodity price relationships, all enhanced by intense global competition, continue to affect the economies of large cities. Although these economies are on average more diverse than those of smaller cities, and

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<sup>10</sup> For example, over 50 percent of the country's population growth, and over 70 percent of growth in the labour force, are now attributable to immigration. For large metropolitan areas the proportions are even higher. Over the last census period more than 75 percent of population growth in the greater Toronto region is due to immigration.

thus are better able to withstand a sudden shock in any single economic sector, they are also heavily committed to exports and thus are vulnerable to foreign competition. These export sectors – what the literature calls the basic sector – are the drivers of economic growth. They bring income into the community, and generate jobs in the local goods and services sector. They also increase vulnerability and import uncertainty in that demand and supply decisions are overwhelmingly made outside the urban region, indeed outside the country, and thus are largely beyond the influence of the national government.

On the other hand, large cities also tend to have relatively high levels of human capital, services and inherited infrastructure which give them the edge in terms of encouraging innovation and adapting to change (Gertler 2001; Heisz 2005; Bradford 2005). Their size, for example, permits the development of geographical clusters of similar industries and related services that offer supportive milieus for enhancing production and productivity. Larger cities may also be able to absorb higher oil, gas and energy costs to the extent that they exhibit higher average population densities than smaller cities and because of the greater access they provide to employment and to public transit.

In the Canadian context these economic dynamics are played out on an unusually diverse geographical canvas. Canadian cities tend to exhibit relatively high levels of economic specialization, which increases the challenge to economic sustainability. Some cities specialize in manufacturing, others in resource exploitation and processing, others in service sectors and still others function as transportation and regional service centres (Bunting and Filion 2001). Some are also political capitals, and thus have more stable employment, but generally large cities on average have lower levels of employment in the public sector than do smaller cities. This high level of specialization means that as global markets, trade flows and commodity prices shift, different cities become economic winners and losers. Thus, for example, if the prices of commodities such as oil and gas increase then cities in the west, notably in Alberta and BC, grow rapidly. If manufacturing is doing well then cities in southern Ontario and Quebec prosper; if manufacturing suffers a relative decline the effect is felt immediately in those cities and especially in Toronto and Montreal and their immediate environs.

*Social and Ethno-cultural Change*

The dramatic shifts in life styles and living arrangements that have accompanied the demographic transition have reshaped the social landscapes of our cities. Specifically, life style and fertility choices, combined with rising real incomes, have created far more households – 50 percent more in 2001 - than was anticipated by policy planners in the 1960s. Average household size has shrunk (to 2.5 persons), and as the retirement population grows over the next decade that average will decline still further. This shrinkage in household size has had the effect of thinning-out the populations of many established communities and older neighbourhoods, thus reducing densities. Lower population densities, in turn, mean fewer consumers within a given market area, fewer workers and potential riders of transit, and fewer taxpayers.

It is worth recalling that households are the principal units of collective consumption: for example, the number and type of households determines the composition of the demand for housing and social services, by type and location. The baby-boom population drove the initial suburbanization process with their demands for family-raising housing and living environments; young singles drove the apartment boom of the 1960s; and small households (both young and old) are defining the condo boom that is currently reshaping city centres. Older households will drive the next wave in the housing market. Where will this huge retirement cohort chose to live? Will they age in place or migrate, and if the latter, where will they move to? Will they leave the large cities for small cities and towns, and in so doing overwhelm the resources of those towns? Or will they move back into the cities to remain close to family, friends and critical medical services?

A related but distinct transformation is increasing ethno-cultural diversity, largely a function of growing immigration from non-traditional sources. These immigrant flows are changing the face and character of the nation (Abu-Laban and Derwing 1997; Bourne and Rose 2001; Anisef and Lanphier 2003). Since immigration is concentrated in only a few mostly large cities that serve as the gateways, its imprint is equally focused on those gateways. Over 80 percent of immigrants go to just five city regions; Toronto-Hamilton, Montreal, Vancouver, Ottawa and Calgary-Edmonton. Most of the rest of the country

receives few if any immigrants. Despite efforts to disperse those new populations more widely across the country, the concentration of immigrants has continued. The result is that the gateways are being dramatically transformed - ethnically and culturally - in a remarkably short period of time. In contrast, most of the rest of the country, notably rural areas, but also the Atlantic region and most of Quebec outside of greater Montreal, remains remarkably homogeneous.

This trend poses two interesting and serious political and policy challenges. One is the massive task facing the gateway cities in responding to the demands of a growing and highly diverse population for jobs, social services and education, and for effective inclusion in political decision-making and the process of governance writ large. This inflow has certainly added to the social and fiscal stresses facing local governments. The second challenge is bridging the communication gap attributable to the divergence in characteristics between the multi-cultural immigrant gateways, most of which are large cities, and the relatively culturally homogeneous, aging and declining cities that are not gateways. Given current trends this communication gap is likely to increase. Who will speak for the increasingly multi-cultural gateway cities in the nation's political and policy-making arenas?

### *Technology and Environment*

Both of these factors require little elaboration here. In the first case, technology has affected essentially all aspects of urban life and technological innovation has underlined our economic progress over a wide range of sectors and industries. The most relevant dimension of the ongoing technological revolution for present purposes is the penetration of new communication technologies into every corner of the economy and society writ large. The diffusion of electronic communications also has the potential first to redesign our employment and occupational structures and second to reduce the need for large agglomerations of people and concentrations of firms – that is, they could reduce the need for cities, especially large cities. An obvious expression of the former impact is the reduction in demand for commercial office space in the core areas of most Canadian cities due to reductions in space requirements and the desire to cut costs. These effects, in

turn, are magnified by outsourcing, widespread suburbanization of people and jobs, and the enhanced ability to work at home online.

In other words, the technological and IT revolutions have the potential to undermine the agglomeration economies that maintain big cities and to enhance the prospects for small and peripheral communities that offer lower costs, a more relaxed life style and in some instances easier access to environmental amenities. This led some authors to speculate in the 1980s and 1990s about the “end of big cities” and the end of urban civilization, accompanied by a rural and small town renaissance. More recently, Joel Kotkin (2005) has asked the question “Will Great Cities Survive?” threatened as they are by the forces that created them in the first place.

The evidence to date, however, as pointed out earlier, is that the communications revolution has had the reverse effects. IT seems to have strengthened the role of large cities and the regions around them. This trend seems to reflect the importance of cities as milieus of innovation, as pools of capital and talent, as well as the continued need for face-to-face contact and social interaction (Gertler 2001). Cities are social constructions as much as they are creations of economic forces.

The environment is now high on the agendas of every level of government and a critical component of any definition of sustainability. Rather than an external cost of economic development the environmental impacts of growth and change are now increasingly internalized in the decision-making process and in the calculation of social and economic accounts. The environmental movement writ large has had particularly prominent effects on cities, notably the large and growing cities where the natural environment is under considerable stress. Planners and developers have had to redesign their buildings and subdivision constructions to address environmental concerns, in water quality, land preservation, waste management and energy conservation. And they have to build-in measures that will facilitate the long-run sustainability of urban ecosystems, and they are compelled to do so at a regional scale rather than on a piece-meal basis. Obvious examples of these regional initiatives include the Livable Region strategy in Vancouver and the lower mainland, the new Greenbelt designation in the greater Toronto area and the long-term sustainability plan for the growing Calgary region.

The challenge is to implement such schemes while at the same time not undermining other dimensions of a sustainable urban life, including productivity, economic efficiency, cultural vitality and social equity. On the other hand, cities that have taken seriously the importance of improving environmental quality have found that it can pay economic and social benefits, not least in terms of attracting the foot-loose firms and mobile human capital (i.e. skilled people) that generate further wealth and opportunities (Gertler 2001; Florida 2005).

### *Social and Income Inequalities*

One of those critical dimensions of urban life, and a frequent source of stress within communities, revolves around the issues associated with inequalities in income and access to services and job opportunities. Large cities do relatively well, on average, in providing access to a wide and diverse range of services, including health services and cultural facilities, and access to employment opportunities. As pointed out in the previous section, large cities typically have higher proportions of their populations in the labour force, and higher proportions of their labour force in paid employment, than do smaller cities and rural areas. They also tend to have higher per capita incomes.

At the same time, large cities also usually have higher levels of income inequalities and more intense spatial segregation of households by social status (O'Connor et al. 2001; Bourne 2002). There is further evidence that such inequalities have increased over the last decade (Kazemipur and Halli 2000; Myles, Picot and Pyper 2000; Ross et al. 2005). Such inequalities are attributable to several factors, including locality-specific factors and the different histories and geographies of individual cities. Some cities show concentrations of disadvantaged populations in their inner cities (e.g. Winnipeg, Vancouver); others exhibit a more scattered pattern (e.g. Montreal); still others have witnessed a relative suburbanization of poverty (e.g. Toronto). At the national level, the principal explanatory factors seem to be the contrast between the most highly-skilled and highly-paid occupations and the relatively low-paid occupations in the larger cities, combined with the concentration of recent immigrants and refugees, and the in-migration of poorer migrants from elsewhere in the country. A higher level of spatial segregation,

even when largely voluntary, poses challenges for public policy agencies faced with the responsibility of servicing those populations. Spatial separation may also lead to increased levels of concentrated poverty, to social isolation and to a lessening of social cohesion and a reduced sense of community and social responsibility (CCSD 2000; Bourne and Rose 2001). Such issues face all cities, but are typically more pronounced in the larger cities where there is a critical mass of under-privileged populations.<sup>11</sup> This trend, in turn, imposes additional burdens on local social service agencies, on police and the health care system, and thus on the limited financial resources of municipal governments.

There is increasing awareness that social cohesion and sustainability may be influenced more by the level of inequality in a city or community than they are by the actual level of income in that city. The reasons for this relationship are not entirely clear, and the empirical research to date is very limited, but they are likely related to the fact that the presence of highly visible inequalities within a community is more socially divisive, undermining trust and a collective sense of belonging, than simply having lower incomes. Since larger cities tend to have higher levels of income inequality the issue is more crucial in those cities. If this relationship is confirmed by subsequent research then the challenge facing large cities in terms of enhancing social sustainability will also increase.

### *Fiscal Pressures and the Infrastructure Gap*

The fiscal challenges facing large cities flow primarily from the factors that have been identified above. On the economic front, cities have to provide the range and quality of services needed to be competitive and to attract business and skilled labour. These services include not only transportation and communication infrastructure but also services that enhance the over all quality of life, such as schools, social services, parks, recreational and cultural facilities, policing, health care and air and water quality. With

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<sup>11</sup> There is a substantial literature on the growth of concentrated poverty and income inequalities among neighbourhoods in individual cities in Canada. One of the most widely quoted of the recent studies is by the United Way of Greater Toronto (2005).

respect to social challenges, as noted above, large cities attract a disproportionate share of low-income populations in search of employment, who may also require a wider range of services than is commonly available in small cities and towns. Large cities also attract a high proportion of immigrants, and while the long-run benefits of this inflow are obvious, the short-run costs to local governments of settlement assistance and social integration can be significant.

The magnitude and complexity of local government expenditures in large cities also differ from those typical of smaller municipalities, for several reasons. These include not only the absolute size and heterogeneity of the population but the concentration of particular groups with special needs. For example, the higher concentrations of poverty in large cities necessitate greater expenditures on housing and social services, as well as police services; higher building densities means more specialized training and equipment for fire-fighters; and so on. Large cities spend more on transportation because they are more likely to have comprehensive transit systems with subways or light rail and integrated bus networks. Cultural facilities (such as opera houses and art galleries) are usually only economically viable in large cities or their environs because they require a minimum market size to make provision feasible. In addition, people from outside those cities make use of the such cultural facilities, as well as social services, but do not directly contribute to the support of those facilities.

At the same time that large cities are facing severe pressures on the expenditure side, there has been no parallel diversification of their revenue sources. Municipalities in Canada continue to rely primarily on property taxes and user fees to finance service provision. Property taxes, however, are a strikingly inelastic source of revenue – that is they do not increase directly with growth in the economy, as do income and sales taxes. Although property values do increase when the economy grows, assessments increase with a lag. Furthermore, due to the visibility of the property tax (it is not deducted at source in the same way as the income tax, for example), an increase in property values usually results in a reduction in property tax rates so that the property tax burden does not increase significantly. Canadian municipalities are increasingly relying on user fees to pay for services but they tend to use average cost pricing rather than marginal cost pricing. Greater use of marginal cost pricing would not necessarily increase municipal

revenues but it could reduce the demand for some services and infrastructure and thus reduce future expenditures.

Canadian cities are not permitted to incur a deficit in their operating budgets and they are constrained by provincial regulations in terms of how much debt they can incur to meet capital requirements. At one level, this high degree of provincial government control means that there simply cannot be a “fiscal crisis” at the local level. The only way to achieve a balance between revenues and expenditures, however, is by reducing expenditures or by raising property taxes. Neither prospect bodes well for meeting the economic and social challenges, such as those outlined above, facing large cities and city regions.

One of the most common ways that cities have been able to balance their budgets and limit their debt, other than seeking provincial hand-outs, is by systematically under-investing in infrastructure, both hard and soft infrastructure (e.g. transportation, roads, water, sewers, recreational facilities, community services, etc.). A number of Canadian studies have attempted to measure the magnitude of the “infrastructure gap” or deficit and they have come up with wide ranging estimates.<sup>12</sup> Unfortunately, it is difficult to draw firm conclusions from these studies because some cover all municipal infrastructure while others cover only specific types of infrastructure such as water and sewers; some separate replacement and rehabilitation from investment needs while others do not; and most obtain their data from surveys. Nevertheless, there is an emerging consensus that there is a substantial infrastructure deficit in Canada’s cities, especially in its larger cities, and that this deficit is becoming a serious competitive disadvantage (The Toronto Board of Trade 2006; TD Economics 2004).

## **2.2 Key Factors in the Success of Cities: A Summary**

No one has the answer to the question of what specific conditions, attributes and factors determine whether a city is successful or not. Nor is it clear what success means and how it should be measured. Can, for example, a city undergoing zero growth or even

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<sup>12</sup> For a detailed description and evaluation of the numerous studies that have attempted to estimate the infrastructure gap in Canada, see Kitchen (2003).

population decline still be considered relatively successful? Do cities have to grow to be successful? And, how is success to be defined – is it simple numerical growth in population and jobs, or is it an improvement in real income levels, the types and quality of jobs, housing and living conditions, and overall quality of life? And, can cities be considered successful and sustainable if population and jobs are increasing while income inequalities, social stress, crime, the infrastructure gap, levels of air and water pollution and traffic congestion are increasing? Are measures of success different for our large and growing cities?

There are no simple answers to these questions. Prominent scholars from Sir Peter Hall, in his classic book on the history of cities, *Cities and Civilization* (1998), to Richard Florida in his most recent study *Cities and the Creative Class* (2005), have provided stimulating perspectives on what makes a city successful. But their results are somewhat ambiguous, as Hall readily admits, and thus difficult to evaluate empirically. Success seems to depend on a complex combination of circumstances, events, policy decisions by all three levels of government, the city's economic mix and demographic structure, local community initiatives, as well as timing and chance.

Nevertheless, a number of factors seem to resonate with evaluations of the relative success of cities. One is the ability to adapt to change – to minimize its negative consequences and to take advantage of the opportunities it provides. A second consideration is the ability of a city or city region to attract inward investment and to attract and retain talented people. A third consideration, and the subject of Section 4, is effective local and regional governance. These responses require, among other things, effective leadership, sound government, sufficient fiscal capacity, coordinated public policies, high quality social services, cultural facilities and physical infrastructure, and an attractive natural environment. It also helps if cities have a mixed or diverse economy, proactive local agents of change, lower levels of income inequalities and reduced environmental pollution.

It is not possible to say which of these factors is most important in any particular city since conditions differ widely. What can be said, however, is that meeting these challenges and facilitating the success of our cities requires actions on all fronts, and considered and coordinated policies from all three levels of government. In some

instances the primary responsibility lies with the federal government (e.g. immigration, the national economy, income inequalities), in other cases with the provinces (e.g. planning and public services such as education and health), and in still other cases, especially in the delivery of local services, with municipal governments. In the following section we examine the performance – the relative success – of Canadian cities in a comparative international context.

### **3 ASSESSMENT OF THE RELATIVE PERFORMANCE OF LARGE CITIES**

This section of the report assesses the relative success of Canada's large cities using existing research on global urban performance. It should be noted at the outset that there are several shortcomings with the existing research. In particular, there is not a precise definition of what is a "large" city. The definition depends on the purpose and breadth of each individual study. Some studies investigate urban regions, while others focus on political or census boundaries, and still others are vague in their geography. The research also suffers from a lack of consistent data and methodology.

Given the problems with the available literature, this review blends information from various sources to discuss the findings for each identified pillar of sustainability – economic, social, cultural and environmental. It is acknowledged, however, that the very nature of sustainability means that there will be overlap among each of its dimensions. Moreover, this review approaches the measures and indicators on the basis of what data are readily available for international comparison rather than from the perspective of the most appropriate indicators. Although it is not possible to form a clear picture of how Canadian cities are doing relative to other cities around the world, there is sufficient material available to begin to form at least some preliminary impressions.

#### *Data Sources*

Much of the development of comparative urban statistics, particularly on measures of sustainability, remains focused at the level of world regions. The European Union undoubtedly leads the way in this field, but there are also notable pan-Asian efforts underway. Canada suffers in this context because its world region comprises only one other country. The sheer size of the United States leads it to a focus on domestic statistics, although there has been increasing interest among sustainability researchers in including Canadian cities in the mix (e.g. Portney 2003).

The available studies can be categorized into several types: 1) rankings exercises generated by private consultants, including magazine surveys; 2) data gathered by

regional authorities or large municipal governments for the purpose of direct comparison with competing cities; 3) academic research on the nature of urbanization and globalization; and 4) government and NGO sustainability indicator projects. A brief discussion of the merits of these different sources precedes a discussion of their findings.

Perhaps the most controversial rankings are the popular rankings exercises such as in *The Places Rated Almanac*. This source was the first attempt to popularize the flourishing work on urban indicators in the 1970s. First published in 1981, this rating of amenities in US cities enjoyed such success that business magazines soon picked up on the trend, with magazines such as *Fortune* and *Money* ranking US (and as a bit of an afterthought, sometimes international) cities on their desirability for businesses and their employees. As the popularity of such surveys increased, more specific or more elaborate surveys and rankings of cities were conducted by consulting firms, usually to assist firms and individuals in location decisions.

From the serious to the silly, there has been an explosion in magazine city-rating to the point that most specialty magazines (and, increasingly, companies looking for some public attention for their product) have a place-ranking edition. For example, *Men's Health* ranks America's fattest cities; *Axe Deodorant Spray* ranks America's best cities for dating; and Sanofi-Aventis Pharmaceuticals sponsors a study of America's worst cities for respiratory infections. The appropriateness of even the most serious and detailed rankings exercises to guiding policy has been quite convincingly discredited from very early on (Landis and Sawicki 1988). Until such time as there more rigorous statistical comparisons, however, these popular rankings are the most available source of comparisons. Moreover, the extensive media attention that they receive means that policy professionals and politicians ignore them at their peril (McCann 2004; Moore-Milroy et al. 1999).

Lending even more visibility to ranking exercises is the slightly more recent trend of products that are marketed directly to international firms or local governments as a means of assessing the performance of particular places. Although the rigour of some (but certainly not all) of these studies may make them more convincing than the magazine surveys, the pertinence of such measures in a sustainability context may be most directly related to their impact on public perceptions. The absence of more

substantial international comparative urban research means that, for better or worse, the trends established by these ranking studies play a more significant role in the overall picture of urban performance than would otherwise be warranted.

Data gathered by local authorities is a useful, if incomplete, source of comparison between cities. Generally, information consists of a single indicator used to illustrate a particular point about the jurisdiction's performance. Academic research papers often produce a similar result, offering a useful concatenation of data from a variety of sources, to address one very particular question, often for only one moment in time. Some academic work, notably that of Richard Florida and his followers on US cities (Florida 2005), straddles the line between academic research and place-ranking exercises by drawing on survey and focus group techniques to supplement a ranking of indicators.

Finally, there are indicator studies assembled by governments and NGOs. Although some initial work on indicators has been done by organizations such as the World Bank and the United Nations, these studies often focus on national level data or on a particular target group of cities. Or, as is the case for the United Nations Human Settlements Programme's Global Urban Observatory database, the massive undertaking involved necessitates including only one city from a particular country (UN-Habitat 2001). In the case of Canada, for example, Hull was the only city involved in the 1998 database and Toronto the only Canadian city for 1993.

National level city organizations provide another source of studies but, not surprisingly, these studies tend toward national level analyses. Sustainability indicators are by their nature most effective when they are local because they mean something to the communities that they measure (such as the inclusion of wild salmon counts in the Sustainable Seattle's indicators) (Maclaren 1996). National level analysis obviously frustrates the development of specific sustainability-based comparisons between cities, let alone between cities in different countries. As a result, comparative urban work has focused more on case studies than on quantitative assessments.

Finally, all of these sources have an inherently different approach to the scalar definition of a city. Reputation surveys for the most part do not specify a geographic boundary but rather ask their respondents about an assumed urban space—the space rated is whatever comes to mind at the mention of an “Ottawa” or a “Singapore”. Where

statistics are used, statistical agency (most often census) boundaries are almost always used but occasionally political boundaries are preferred, especially for the most explicitly locally-based policy-oriented work.

The following sections set out the indicators that have been found for each of the four pillars of sustainability. The choice of indicators reflects what was available. Where possible, global comparisons were used but, where these were not available, smaller contexts were relied on. Longitudinal comparisons, while clearly vital to examining trends in city performance, are only available for a very limited number of indicators. The list of indicators that include Canadian cities is even smaller. The Millenium Cities database (Kenworthy and Laube 2001) is perhaps the one rigorous study that is international in scope and urban in scale and that provides various data points over time. Because different indicators will experience different degrees of variability over time depending on the nature of what they measure, general trends cannot be extrapolated from the few specific temporal examples. For this reason, this report focuses on the most recent observations available for Canada's large cities.

### **3.1 Economic Sustainability**

Available data on economic sustainability allows comparisons to be made on a variety of measures, including the prosperity and earnings of workers, the connectedness of a city to other cities around the world, the level of innovation that takes place in a city, and business cost competitiveness.

#### *Prosperity and Earnings*

One obvious measure of the economic vitality of an urban region is the relative size of its economy. When income levels are compared, such as was done by the Montreal Metropolitan Community for selected North American cities for 2003, Canadian urban regions lagged well behind their counterparts in the US in terms of prosperity (measured by Gross Domestic Product). Specifically, there is a 22 percent gap in average prosperity per worker. For non-metropolitan areas, the gap is only 3 percent (CMM 2004a).

As Table 1 shows, of the 26 largest metropolitan regions in Canada and the US, the four Canadian cities included occupy four of the bottom five places. Montreal is at the very bottom and Toronto is the highest ranked Canadian city with a ranking of 22, edging out only one American city, Miami. All four of the largest Canadian cities were well behind the leaders: Boston, San Francisco, Denver and New York.

**Table 1 GDP Rankings for Selected North American Cities, 2003**

<i>City</i>	<i>Gross Domestic Product per capita, est. (USD)</i>	<i>Ranking (out of 26)</i>
Boston	51,405	1
San Francisco	50,564	2
Denver	49,348	3
New York	49,006	4
Toronto	36,002	22
Miami	33,123	23
Ottawa	32,370	24
Vancouver	29,833	25
Montreal	29,139	26

(Source: CMM 2004b)

A survey of earnings and purchasing power conducted by the Swiss financial firm UBS, also for the year 2003 (UBS 2003), confirms these findings for Toronto and Montreal (see Table 2). This survey, however, allows for a global comparison, expressing wage rates indexed to those of Zurich (which is set at 100). Toronto's gross wage index is 52.6 and Montreal's index is 50.1, placing well back of most Northern European cities. Toronto ranks just behind Paris but trails even the poorest performing US city (Miami).

Canadian cities do, however, rank ahead of most southern European cities as well as ahead of Sydney and Auckland. If earnings after deductions for taxes and social security contributions are considered, Toronto and Montreal both see significant lowering as compared to Zurich, although their ranking among the 70 cities is unchanged. It is worth noting, however, that of the four American cities included in the survey, the largest

two (New York and Chicago) fell in rank when moving from gross to net wages, while more predictably, Miami and Chicago experienced an increase in their relative rankings.

**Table 2 Wage Rankings for Selected Global Cities, 2003**

<i>City</i>	<i>Gross Wage Index (Zurich =100)</i>	<i>Ranking (out of 70)</i>	<i>Net Wage Index (Zurich =100)</i>	<i>Ranking (out of 70)</i>
Zurich	100.0	1	100.0	1
Copenhagen	98.9	2	74.8	9
Basel	97.7	3	95.8	2
New York	84.7	6	78.6	7
Chicago	82.5	8	81.0	6
Los Angeles	72.2	9	72.9	10
Miami	62.4	19	56.6	14
Paris	53.4	22	52.2	22
Toronto	52.6	23	48.8	23
Montreal	50.1	24	48.0	24

(Source: UBS 2003)

When wage rates are compared in terms of domestic purchasing power (see Table 3), Canadian cities perform better. Toronto's index rises to 81.8, placing only behind the Swiss cities and three of the four US cities (which also see a significant rise in their standing). The US exception is New York, whose index remains at 78.9. Montreal, at 72.3 has only Tokyo between it and the leading Swiss and North American cities.<sup>13</sup>

### *Connectivity*

Globalization and World Cities (GaWC), a research group located at Loughborough University, derived a measure of connectivity for 315 world cities based on the branch

<sup>13</sup> The survey was conducted again in 2005 with similar, although slightly improved results for Canadian cities and slightly diminished results in American cities, due largely to the changing performance of the national currency in both countries (UBS 2005). The results shown here are for 2003 to enable a direct comparison between the two studies for the same year.

location strategies of 100 global service firms in the year 2000 (see Table 4).

Connectivity is measured in this study by the presence of offices of a particular firm in a city. If a particular firm has an office in a city, it is “connected” to all other cities in

**Table 3 Domestic Purchasing Power for Selected Global Cities, 2003**

<i>City</i>	<i>Annual income purchasing power index (Zurich = 100)</i>	<i>Ranking (out of 70)</i>
Zurich	100.0	1
Basel	98.0	2
Geneva	95.2	3
Los Angeles	93.9	5
Miami	85.6	7
Chicago	84.0	8
Toronto	81.8	9
New York	78.9	10
Tokyo	74.7	12
Montreal	72.3	13

(Source: UBS 2003)

**Table 4 Connectivity Rankings for Selected Global Cities, 2000**

<i>City</i>	<i>Connectivity Score</i>	<i>Ranking (out of 315)</i>
London	63,354	1
New York	61,859	2
Hong Kong	44,799	3
Toronto	37,680	10
Montreal	25,215	47
Vancouver	20,296	65
Calgary	14,148	104
Edmonton	8,476	187
Winnipeg	8,298	192
Ottawa	8,230	194

(Source: Taylor 2000)

which this firm has offices. The larger the office, the greater the connectivity, and the more multi-national firms with offices in a city, the more globally connected is that city. This measure includes activities such as law, accountancy, advertising, banking, insurance, and management consulting.

According to this measure, Toronto is highly connected, ranking as the 10<sup>th</sup> most connected city in the study. Montreal ranks 47<sup>th</sup>, Vancouver 65<sup>th</sup>, Calgary 104<sup>th</sup> and then Edmonton, Winnipeg, and Ottawa are all tightly grouped together around the high 180s-low 190s. The surprise here is the low ranking of Ottawa's connectivity. Perhaps being squeezed between Toronto and Montreal has made it a less important location for global service firms. Also worthy of note is the strong hierarchical relationship in the connectivity of the Canadian urban system. Toronto, Montreal, Vancouver, and Calgary all have very different levels of interaction with the global network of cities, and as such will face a different intensity of challenges from their global connectedness.

### *Innovation*

Increasingly, knowledge, and its role in innovation, is a vital measure of a city's economic strength. Patent data is frequently used as an indicator of the level of innovation in a city. The City of Toronto's Economic Development Office reports on patent data for the cities listed in the GaWC's hierarchy of world cities (see Table 5). Over the 8-year time frame of the data, there is a great deal of consistency, with only a few of the cities showing a dramatic change in ranking. The actual number of patents being issued has risen dramatically. Toronto's near tripling of patents from 2002 to 2004 thus led to only a modest rise from 18<sup>th</sup> to 14<sup>th</sup> in the overall rankings. Montreal has seen a less rapid growth in patents and so has fallen in ranking from its peak of 10<sup>th</sup> in 1998 to 19<sup>th</sup> in 2002 before rising back to 17<sup>th</sup>. International cities in approximately the same range as the only two Canadian cities listed include Los Angeles and Frankfurt, as well as Singapore, Moscow, and Beijing. Tokyo is by far the star in this field, with over twice the number of patents of its nearest competitor, Osaka, which is still in a class of its own above a group of much more closely bunched cities that include Paris, London, Seoul, New York, Houston, and San Francisco (City of Toronto 2005).

**Table 5 Patents Issued for Selected Global Cities, 2004**

<i>City</i>	<i>Patents Issued</i>	<i>Ranking (out of 40)</i>
Tokyo	10851	1
Osaka	4777	2
Paris	2897	3
London	2440	4
Seoul	2083	5
Toronto	620	14
Montreal	431	17

(Source: City of Toronto 2005)

### *Business Costs*

Canada has been heavily involved in international surveys of business costs undertaken by the consulting firm KPMG. This survey (now known as “Competitive Alternatives”) has been progressively expanded in geographic scope so that it now includes most large North American and Australian cities as well as many European cities and some Japanese cities. The findings of this survey have consistently shown Canadian cities to be the least expensive locations in the study to do business (see Table 6). The cost advantage, however, is sensitive to currency fluctuations. The 2004 report found that the cost advantage of Canadian over US cities would effectively disappear in the event that the US dollar were to depreciate by 20 percent against the Canadian dollar.<sup>14</sup>

In summary, the economic experience of Canadian cities presents a significant sustainability challenge and, as noted below, perhaps the greatest of all of the sustainability challenges. A decaying cost advantage for business and a lag in urban GDP means that advantages in other dimensions of sustainability will come under threat if there are no longer sufficient financial resources to achieve them. This threat seems particularly strong for the most globally integrated of Canada’s cities.

<sup>14</sup> The exchange rate at the time of these calculations was 1 USD = 1.3328 CAD. As of early January 2006, the U.S. dollar is trading at around CAD 1.16, so a good deal of the advantage seen in 2004 might well have disappeared.

**Table 6 Business Costs for Selected Global Cities, 2004**

<i>City</i>	<i>Cost Index (US avg. = 100)</i>	<i>Ranking (out of 98)</i>
Quebec City	89.1	5
Edmonton	89.2	6
Adelaide	90.4	10
Winnipeg	90.5	11
Montreal	91.3	14
Calgary	91.4	15
Ottawa	92.0	17
Melbourne	92.1	18
Toronto	93.2	20
Vancouver	93.6	21
New York	109.8	91
London	115.1	93

(Source: KPMG 2004)

### **3.2 Social Sustainability**

The economic challenges faced by Canada's cities have to be balanced with the relative success of Canada's social institutions. As shown below, Canada's cities perform well on many measures of social sustainability, an element that could be as important as business costs or cultural attractiveness in a talent-focused economy. Although there are no readily comparable urban measures for some aspects of social sustainability, measures are available that compare the performance of cities with respect to quality of life, cost of living and housing, and health care.

#### *Quality of Life Indices*

A series of executive hardship surveys conducted annually since 1999 by Mercer Human Resources have received considerable media coverage. Canadian cities have consistently

performed well in these surveys, which have come to be regarded as a measure of the ‘best’ place to live (Mercer HR 2005). In reality, the intent of the survey is to help employers devise appropriate remuneration schemes for their executives. Its billing as an index of quality of life, however, has meant that the results are often interpreted more broadly. Mercer Human Resources themselves note that their survey does not address the cultural ‘spice’ that can come from living in the largest cities, a feature that may offset the slightly less welcoming conditions of cities like New York, London, or Tokyo (which all rank in the mid to high 30s in the more than 250 cities ranked). With this caveat in mind, however, Canada’s large cities offer some of the lowest levels of hardship in the study (see Table 7).

The survey compares cities around the world on the basis of perceptions of cultural, social, economic and political environment, medical and health facilities, recreation opportunities, consumer goods, housing, the quality of education, public services, and transportation, and the natural environment. Over its six years of existence, the survey has shown remarkable consistency for many of the cities in its rankings. Vancouver is a perennial contender for the top spot along with Geneva, Zurich and Vienna. Canada’s other four largest cities all rank in the top 25 (see Table 7). The strong showing by Canadian cities is attributed to levels of social and cultural infrastructure similar to US cities combined with appreciably higher levels of personal security and safety.

The Mercer Quality of Living report has competition from a rival survey conducted by the Economist Intelligence Unit (EIU), which has broadened its own hardship research into a Liveability Ranking Index (EIU 2005). The four Canadian cities included in that survey perform even better under this ranking (see Table 8). Of the top ten spots, three were held by Canadian cities, four by Australian cities, two by Swiss cities, and one by an Austrian city. Again, the low levels of crime, and particularly less fear of terrorism, in Canadian cities were seen as the reason why they outperformed their US counterparts.

**Table 7 Quality of Life for Selected Global Cities, Mercer HR Ranking, 2005**

<i>City</i>	<i>Mercer HR QoL Index (New York = 100.0)</i>	<i>Ranking (out of 144)</i>
Geneva	106.5	1
Zurich	106.5	1
Vancouver	106.0	3
Vienna	106.0	3
Frankfurt	105.5	5
Munich	105.5	5
Dusseldorf	105.5	5
Toronto	103.5	14
Ottawa	103.0	20
Montreal	102.5	22
Calgary	102.0	25

(Source: Mercer HR 2005)

**Table 8 Quality of Life for Selected Global Cities, EIU Ranking, 2005**

<i>City</i>	<i>EIU Rating Percent</i>	<i>Ranking (out of 127)</i>
Vancouver	1	1
Melbourne	2	2
Vienna	2	2
Geneva	2	2
Perth	3	5
Adelaide	3	5
Sydney	3	5
Zurich	3	5
Toronto	3	5
Montreal	3	5
Calgary	5	16

(Source: EIU 2005)

These analyses serve as an important reminder of the subjective nature of survey-based rankings. Canada's overall crime rate, for example, has not been significantly lower than the crime rate in the US in recent years (although the violent crime rate has been significantly lower) (Gannon 2001). Because these rankings are based on surveys, they are vulnerable to a change in international perceptions of the risk of violent crime in Canada (or other countries).

### *Cost of Living and Housing*

The cost of living is often higher in large cities as a result of the agglomeration of many competing activities. The results of recent cost of living studies performed by the Mercer Human Resources Group (indexed to New York =100) are shown in Table 9. Ottawa ranked 122<sup>nd</sup> out of 144 cities around the world, and Montreal 107<sup>th</sup>. Calgary at 98<sup>th</sup> showed a notable rise from 114<sup>th</sup> in 2004 and Vancouver at 87<sup>th</sup> was up from 96<sup>th</sup>. Toronto was the most expensive city in Canada, but still well down the list of international cities in 82<sup>nd</sup> spot.

**Table 9 Cost of Living in Selected Global Cities, Mercer HR, 2005**

<i>City</i>	<i>Mercer HR CoL Index (New York = 100.0)</i>	<i>Ranking (out of 144)</i>
Tokyo	134.7	1
London	120.3	3
Oslo	105.3	10
New York	100.0	13
Toronto	76.2	82
Vancouver	74.3	87
Calgary	72.5	98
Montreal	70.7	107
Ottawa	66.4	122

(Source: Mercer HR 2005)

A 2005 UBS Financial survey for a slightly smaller number of cities and using a somewhat different measure (and ranked against Zurich =100) placed the only two Canadian cities it ranked, Toronto and Montreal, in the middle of the rankings at 31<sup>st</sup> and 32<sup>nd</sup> respectively (see Table 10). If rental costs are also included, however, Toronto rises slightly and Montreal falls both in index value and in ranking. These results show an increase in cost of living from 2003, at least compared to Zurich, when Toronto's indexes were 66.6 without rent and 67.9 with rent included in the calculation. Montreal's measures were 65.6 and 60.7, respectively.<sup>15</sup>

**Table 10 Cost of Living in Selected Global Cities, UBS, 2005**

<i>City</i>	<i>Index(excl. rent) (Zurich = 100.0)</i>	<i>Ranking (out of 70)</i>	<i>Index(incl. rent) (Zurich = 100.0)</i>	<i>Ranking (out of 70)</i>
Tokyo	101.3	3	104.6	4
London	99.0	5	122.4	1
Oslo	115.5	1	109.4	2
New York	91.8	12	105.0	3
Toronto	73.0	31	74.3	30
Montreal	71.9	32	66.7	37

(Source: UBS 2005)

The cost of living measure for Montreal reflects the rental market a number of years ago. As shown in Table 11, a recent survey of rental vacancy rates conducted by the Metropolitan Community of Montreal, however, noted a considerable tightening of the rental housing market in the region as well as in other Canadian urban centres (CMM 2005). Although Montreal had seen vacancy rates among the highest of the major urban centres in Canada and the US in the previous decade, the vacancy rate in 2003 was only 1 percent. It rose to 1.5 percent in 2004 where it was eclipsed only by Vancouver at 1.3

<sup>15</sup> The Economist Intelligence Unit also prepares rankings of the cost of living in cities but they have not been used in this study because both UBS and Mercer make public a greater level of detail in terms of both the information available and the methodology applied in their rankings. Since all three sets of rankings focus on expatriate executive compensation, it is important to keep in mind that currency exchange rate variations affect the rankings in ways that local residents of these cities would not necessarily experience. For example, recently reported rises in the EIU's ranking of Canadian cities (EIU 2006) reflect that these cities have become more expensive in US dollars.

percent. Ottawa and Toronto had vacancy rates of 3.9 percent and 4.3 percent respectively. Los Angeles was the only US city with a vacancy rate comparable to the four Canadian cities listed, at 3.8 percent in 2004. Vacancy rates were 5.2 percent in New York and 6.0 percent in Boston. Of the 29 major cities surveyed, Atlanta had the highest vacancy rate at 18.5 percent.

**Table 11 Rental Housing Vacancy Rates for Selected North American Cities, 2004**

<i>City</i>	<i>Vacancy Rate (percent)</i>	<i>Ranking (out of 29)</i>
Vancouver	1.3	1
Montreal	1.5	2
Los Angeles	3.8	3
Ottawa	3.9	4
Toronto	4.3	5
New York	5.2	6
Boston	6.0	7
Atlanta	18.5	29

(Source: CMM 2005)

### *Education*

One of the most popular indicators used in studies of global competitiveness is the number of adults with a university degree. In many surveys, including the work of Richard Florida, this measure is used as a proxy for talent even though it is acknowledged that basic literacy skills are probably a better predictor of economic growth (Coulombe et al. 2004). International literacy tests, however, have only been compared at the national level and not at the city level, so the limited inter-city education comparisons that do exist tend to focus on university education only.<sup>16</sup> Educational attainment, measured by the

<sup>16</sup> The United Nations did include literacy levels in its Global Urban Observatory indicators data set. These data were largely incomplete, however, and were collected for a limited selection of cities (UN-Habitat 2001).

number of bachelor's degrees, is an area in which Canadian cities fall behind their US counterparts (Gertler et al. 2002), although Canada's largest cities generally have the highest concentration of university graduates in the country.<sup>17</sup>

Other surveys rank universities by their reputation. The Times Higher Education Supplement rates Canadian universities well (see Table 12): McGill ranked 24<sup>th</sup> in 2005, not far off its 21<sup>st</sup> place in the inaugural report of 2004, and the University of Toronto and the University of British Columbia both moved up significantly from their 2004 rankings: U of T moved from 37<sup>th</sup> to 29<sup>th</sup> and UBC moved from 46<sup>th</sup> to 38<sup>th</sup>. Another ranking study performed by researchers at Shanghai Jiao Tong University emphasized faculty research performance more than reputation (also shown in Table 12). It ranked the University of Toronto at 24<sup>th</sup>, UBC 36<sup>th</sup>, McGill 61<sup>st</sup>, and Hamilton's McMaster University 90<sup>th</sup>.

**Table 12 University Ranking for Selected Global Cities, 2005**

<i>University</i>	<i>City Region</i>	<i>Times Higher Ranking (out of 200)</i>	<i>Shanghai Jiao Tong Ranking (out of 500)</i>
Harvard	Boston	1	1
MIT	Boston	2	5
Cambridge	Cambridge	3	2
Stanford	San Francisco	5	3
McGill	Montreal	24	61
U of Toronto	Toronto	29	24
U of British Columbia	Vancouver	38	36
McMaster	Hamilton	184	90

(Source: Ince 2005; Shanghai Jiao Tong University 2005)

### *Health Care*

As is the case for many of the sustainability measures, the performance of health care systems is generally discussed on a national level. For this reason, we have turned to the

<sup>17</sup> Measuring only recipients of university degrees also fails to reflect the value of other forms of post-secondary education, such as Canada's strong system of community colleges, which should also be measured in a more robust definition of educational attainment.

Places Rated Almanac. The Almanac ranks cities on the basis of a composite index that includes per capita availability of general practitioners, medical specialists, surgical specialists and short-term hospital beds as well as the presence of certified teaching hospitals. Their findings suggest that health care provision is a particular strength for Canadian cities as compared to their US counterparts (see Table 13). Canada's four largest cities (plus Quebec City) have ranked in the top 35 cities in North America for all three of the editions in which Canadian cities are included (1993, 1997, 2000).<sup>18</sup> Indeed, over the decade of the 1990s, Canadian cities saw their performance on health care rankings improve relative to US cities. By 2000, Vancouver ranked first on the continent and Calgary was the only one of Canada's nine largest cities that ranked outside of the top 35 cities overall on health care.

**Table 13 Health Care Rankings for Selected North American Cities**

<i>City</i>	<i>Ranking 1993 (out of 343)</i>	<i>Health Care Index, 1997</i>	<i>Health Care Index, 2000</i>
		<i>(50.0=average; 100.00 = best)</i>	
Atlanta	93	88.86	57.22
Boston	7	92.42	94.90
Calgary	74	82.08	83.56
Edmonton	48	91.99	97.16
Los Angeles	6	99.93	67.98
Montreal	13	98.82	98.58
New York	2	99.94	92.06
Ottawa	23	94.00	95.18
Philadelphia	3	99.64	85.55
Toronto	21	98.61	96.60
Vancouver	16	99.03	100.00

(Source: Boyer and Savageau 1993; Savageau and Loftus 1997; Savageau 1999)

<sup>18</sup> In the 1997 edition, the Places Rated Almanac switched from a pure ranking method to a scaled index, where 50 would represent the average score and 100 the highest score for all cities.

One area of social sustainability not well addressed in the literature, at least not in terms of direct comparisons between cities, is the increased pressure on social relations that large globally connected cities are facing. As noted in Section 2, the changing economy tends to polarize economic outcomes and disrupt social cohesion. These effects, however, have not been adequately quantified for international comparison. Many studies conducted for Canadian cities show that they have experienced increasing income polarization in recent years.<sup>19</sup> With respect to polarization of disposable income, however, Canadian households have fared better than their US counterparts as a result of the greater redistributive role played by governments in Canada (Wolfson and Murphy 1998).

### **3.3 Cultural Sustainability**

Cultural sustainability is not as well defined in the literature as are the other three pillars of sustainability. The position of Canadian cities is compared with other cities on the basis of immigrant population, cultural infrastructure, cultural industries, and city brand value.

#### *Immigrant Population*

Cultural diversity has been shown to contribute greatly to the development of urban areas and immigrants are an important feature of any city with global connections. Canadian cities perform very well on this measure. Rather than a simple measure of foreign born population, Benton-Short et al. (2004) create an Immigration Index that mixes both percentage and total numbers of immigrants with measures of the diversity of the immigrant population and distance traveled from home country. In so doing, they create a measure of the importance of each city as a node in the global network of immigration. Under this classification (shown in Table 14), Toronto ranks second only to New York, and Vancouver ranks 7<sup>th</sup> behind Dubai, Los Angeles, London, and Amsterdam. Sydney,

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<sup>19</sup> A good review of the literature can be found in the Federation of Canadian Municipalities' Quality of Life Report on Income (Arundel 2003).

Miami, and Melbourne round out the top ten, which are all designated as first-tier cities. Montreal is considered a second-tier city in this scheme, and Ottawa, Calgary, Edmonton, and Winnipeg are all rated as third-tier cities. Quebec City is the only Canadian city included in the study that is not considered to hold some global importance for immigration.

**Table 14 Immigration Index Issued for Selected Global Cities, 2004**

<i>City</i>	<i>Immigration Index</i>	<i>Ranking (out of 116)</i>
New York	2.11	1
Toronto	1.92	2
Dubai	1.89	3
Los Angeles	1.79	4
London	1.28	5
Vancouver	1.08	7
Montreal	0.49	17
Calgary	0.30	23
Chicago	0.25	26
Ottawa	0.21	27
Edmonton	0.19	28
Winnipeg	0.13	30
Quebec City	-0.32	57

(Source: Benton-Short et al. 2004)

### *Cultural Infrastructure*

The best available data on cultural infrastructure comes from the Places Rated Almanac. The Almanac compares cities using an index that measures the breadth of cultural activities present in a city, including museums, galleries, symphonies, opera, ballet, theatre, and library holdings. Canada's largest cities perform well by this measure (see Table 15). Toronto consistently rated near the top throughout the 1990s and Montreal was never far behind. Vancouver and Calgary moved up over the course of the decade. Ottawa, however, saw a downgrading of its ranking, rating higher than Vancouver in

1993 and then dropping significantly in 1997 before rebounding slightly at the end of the decade.

**Table 15 Arts Facilities Ranking in Selected North American Cities**

<i>City</i>	<i>Ranking 1993 (out of 343)</i>	<i>Arts Index, 1997</i>	<i>Arts Index, 2000</i>
		<i>(50.0=average; 100.00 = best)</i>	
Atlanta	26	95.97	94.62
Boston	7	99.42	98.59
Calgary	46	84.44	88.11
Edmonton	106	77.14	82.72
Los Angeles	2	99.84	99.44
Montreal	11	98.21	96.89
New York	1	99.99	100.00
Ottawa	32	73.97	81.02
Philadelphia	8	99.15	98.31
Toronto	5	99.72	98.87
Vancouver	34	94.58	95.76

(Source: Boyer and Savageau 1993; Savageau and Loftus 1997; Savageau 1999)

### *Cultural Industries*

In his text on world cities, Abrahamson (2004) follows the designation used by the GaWC group to attempt to shift the primarily economic focus of cultural infrastructure to the realm of global cultural industries. In ranking the global influence of cities in three sectors (music, television, and cinema), Abrahamson considers the firms and activities that are present in each city and assigns a rank to any cities thought to be influential enough to be considered a global player. As shown in Table 16, Toronto ranks as a third-tier city in all three categories. It is alone in this category and falls behind the top tier which includes only New York and a secondary tier which includes London, Los Angeles, Paris and Tokyo, and also Sydney. Cairo, Hong Kong, Luxembourg, Manila, Mexico City, Mumbai, Nashville, and Rio de Janeiro all fall slightly lower on the list by virtue of registering significant influence in some but not all three categories. The final

grouping (Brussels, Miami, Washington, DC, and Montreal) includes cities that have received a fourth-tier ranking in only one of the industries. Montreal is on the list because of its role as a producer of French-language television.

**Table 16 Global Cultural Industries Hierarchy**

<i>City</i>	<i>Cultural Industries Composite Index</i>	<i>Ranking (out of 19)</i>
New York	30	1
Los Angeles	21	2
Paris	21	2
Tokyo	21	2
London	18	5
Sydney	18	5
Toronto	12	7
Montreal	1	16

(Source: Abrahamson 2004)

### *City Brand Value*

International image is another way to look at global cultural relevance. In a recently released survey of over 17,000 participants, the inaugural Anholt-GMI city brands index ranked Toronto (the only Canadian city in its study) 12<sup>th</sup> out of the 30 cities included in the rankings (see Table 17). Sydney, Australia, achieves perhaps the most surprising result, ranking 3rd behind London and Paris. Anholt-GMI cites an “Olympic Effect” that helped Sydney to its lofty perch (all of the top 10 cities have at one time hosted the summer Olympic Games).

Interestingly, Anholt-GMI also runs a nation brands index in which Canada placed second to Australia. Canada’s weakest performance was in the culture category. Indeed Toronto’s brand is weakest when it comes to attributes such as “things to do,” “have you visited it,” and “how important a contribution has it made to the world over the last 30 years.”

**Table 17 Anholt-GMI City Brands Ranking,  
Selected Global Cities, 2005**

<i>City</i>	<i>Ranking (out of 30)</i>
London	1
Paris	2
Sydney	3
Rome	4
New York	7
Toronto	12

(Source: Anholt-GMI 2005)

In summary, Canada's biggest cities, with their large immigrant populations and strong cultural infrastructure, have a strong base but face the challenge of proving themselves to be distinctive in a crowded cultural marketplace.

### **3.4 Environmental Sustainability**

Although much time and effort have been spent on developing appropriate indicators for sustainable development, international comparability of these measures has been difficult to find. There are, however, a couple of points for comparison of environmental concerns in cities around the world: air quality and automobile dependence are two measures discussed below.

#### *Air Quality*

Data on air quality for cities around the world are widely available. Unfortunately, however, there is no agreement on standards and the data are not consistent across studies. Ground ozone levels are particularly difficult to compare given the different methods and standards used around the world. Nevertheless, a comparison of maximum ground ozone levels for cities in Canada and Europe, as well as selected other cities around the world (Baldasano et al. 2003), shows that Canadian levels in 1999 tended

toward the high side, particularly in Toronto and Montreal (see Table 18). Although Canadian cities may be generally comparable with other European cities on this measure, almost every Canadian city exceeds acceptable levels of ozone.<sup>20</sup>

For a similar grouping of cities, Vancouver had the lowest overall measures of PM<sub>10</sub>, one of the more common measures of airborne particulate matter. Vancouver's world leading measure of particulate matter means that despite comparable levels of ozone and nitrogen dioxide, smog formation is a considerably smaller problem in Vancouver than for cities in the Windsor-Quebec City corridor.

A much larger number of cities from more varied locations reported data for the two dioxide pollutant measures. Reported levels of sulfur dioxide are more comparable across the Canadian cities and were consistently low, as levels are in most countries that have worked to reduce sulfur emissions from vehicles. This means that remaining emissions are mostly from the processing of ore and natural gas (Nugent 2002). Nitrogen oxide levels, reflective of fossil fuel combustion (mostly from vehicles and power plants), were high in Toronto and Vancouver, indicating a relatively high level of automobile use.

**Table 18 Air Quality Rankings for Selected Global Cities, 2005**

<i>City</i>	<i>Ozone (1 hour max) (out of 98)</i>	<i>Particulate Matter (out of 108)</i>	<i>Sulfur Dioxide (out of 183)</i>	<i>Nitrogen Dioxide (out of 197)</i>
London	21	61	36	145
Seattle	24	12	78	n/a
Ottawa	46	n/a	57	22
Melbourne	50	5	2	6
Vancouver	60	1	14	160
Toronto	73	15	64	149
Paris	76	29	42	125
Montreal	80	n/a	72	72
New York	89	38	117	175

(Source: Derived from Baldasano et al. 2003)

<sup>20</sup> Difficulties in finding consistent comparative data for air quality are illustrated by the different levels reported in the FCM's Quality of Life Reporting System data. The latter source suggests much lower levels of ozone. For this reason, the discussion in this report focuses on the rankings of cities rather than the raw data.

### *Automobile Dependence*

Much of the blame for the increasing number of smog advisories in cities such as Toronto rests with the growing dependence on the use of private automobiles. Automobile dependence is one measure for which there is a strong set of internationally comparable, time-series data and analysis.<sup>21</sup> Canadian cities have, like most cities around the world, witnessed massive increases in per capita vehicle ownership since the 1960s. Although Canadian cities are clearly more dependent on the automobile than European or Asian cities, when compared to US and Australian cities, however, their higher central and peripheral population density (roughly double in both locales) means they were significantly less automobile dependent (Kenworthy and Laube 1999). There is a regional variation, however; automobile dependency is higher in western Canada than in Winnipeg and Central Canada.

Canada's modest transit achievements (at least compared to Europe), however, were built on earlier infrastructure investments. Improvement in transit provision was on the rise in other cities but stagnant in Canada in the 1980s. In a study of the top ranked cities from the EIU's quality of life report, Toronto and Montreal were among the largest spenders on transport systems as a proportion of regional wealth (13.8 percent and 14.7 percent, respectively). Only Brisbane at 17.6 percent was higher. Vancouver was in the middle at 10.6 percent. Total infrastructure investment was only moderately higher and favoured road construction over public transportation to a higher degree than in all of the other top cities except for Geneva (see Table 19).

### **3.5 Conclusions**

This overview of the available literature has provided some comparisons of the performance of Canadian cities and urban regions with their counterparts around the world. Table 20 provides an overall summary of the rankings for large Canadian cities on the indicators that have been discussed in this report.

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<sup>21</sup> See, for example, the work of Jeff Kenworthy and his associates (Newman and Kenworthy 1989; Kenworthy and Laube 1999; and Kenworthy and Laube 2001).

**Table 19 Transport Infrastructure Investment, EIU Top-Rated Cities, 1993-1997**

<i>City</i>	<i>Road Investment (% of GDP)</i>	<i>Public Transport Investment (% of GDP)</i>	<i>Ratio of Road Investment to Public Transport Investment</i>	<i>Rank of Ratio</i>
Vienna	0.37	1.04	0.4	1
Sydney	0.72	0.49	1.5	2
Oslo	0.61	0.49	1.5	3
Brisbane	1.02	0.57	1.8	4
Stockholm	0.51	0.22	2.3	5
Helsinki	0.84	0.34	2.5	6
Perth	0.59	0.21	2.8	7
Copenhagen	0.45	0.15	3.0	8
Zurich	1.69	0.56	3.0	9
Melbourne	0.58	0.16	3.6	10
Toronto	1.10	0.26	4.2	11
Montreal	0.92	0.20	4.7	12
Vancouver	0.70	0.13	5.4	13
Geneva	1.41	0.18	7.9	14

(Source: Scheurer et al. 2005)

As noted at the beginning of this Section, not all of the measures in Table 20 are necessarily the best measures to use to evaluate how cities are faring with respect to the four pillars of sustainability. Rather, these measures are simply the best available. There are some obvious indicators that are missing from this Table because they were not available. For example, it was noted in Section 2 that social cohesion and sustainability are influenced by the level of inequality in a city. These types of measures could not be found on a comparative basis for cities around the world. Even though the comparisons are limited by the paucity of rigorous and comprehensive data, however, the findings do confirm that the challenges our cities face and the advantages they enjoy are indeed the ones that were set out in Section 2 of this report.

**Table 20 Summary of Rankings for Large Canadian Cities**

<i>Indicator</i>	<i>Total Cities</i>	<i>Region</i>	<i>TOR</i>	<i>MTL</i>	<i>VCR</i>	<i>OTT</i>	<i>CGY</i>
<b>Economic Indicators</b>							
GDP per capita	26	N. Am.	22	26	25	24	-
Net Wage Rankings	70	Global	23	24	-	-	-
Purchasing Power	70	Global	9	13	-	-	-
Connectivity	315	Global	10	47	65	194	104
Patents per capita	40	Global	14	17	-	-	-
Business Costs	98	West	20	14	21	17	15
<b>Social Indicators</b>							
Quality of Life (Mercer)	144	Global	14	22	3	20	25
Quality of Life (EIU)	127	Global	5	16	1	-	5
Cost of Living (Mercer)	144	Global	82	107	87	122	98
Cost of Living (rent incl.) (UBS)	70	Global	30	37	-	-	-
Housing Vacancy Rates	29	N. Am.	5	2	1	4	-
University Rankings (THES)	200	Global	29	24	38	-	-
University Rankings (Jiao Tong)	>500	Global	24	61	36	-	-
Health Care	343	N. Am.	21	13	16	23	74
<b>Cultural Indicators</b>							
Immigration Index	116	Global	2	17	7	27	23
Arts Facilities	343	N. Am.	5	11	34	32	46
Global Cultural Industries	19	Global	7	16	-	-	-
City Brand Value	30	Global	12	-	-	-	-
<b>Environmental Indicators</b>							
Particulate Matter	108	Global	15	-	1	-	-
Nitrogen Dioxide	197	Global	149	72	160	22	-
Transport Infrastructure Ratio	14	Global	11	12	13	-	-

These findings suggest that large Canadian cities as a group rank high on a number of social and cultural indicators (for example, immigration, arts facilities, and quality of life) but that there are serious challenges on the economics front in terms of such measures as wages and income. It is also important to note that there is considerable variation among large Canadian cities in terms of their ranking on most of the indicators. This variation means that the challenges faced by large cities and the solutions to meet them will have to be different for different cities.

Finally, many of these challenges will require strong local governments to provide the goods and services that will make them competitive internationally and enhance the quality of life in their communities. This means that large cities need adequate resources that match their revenue-raising tools to their expenditure responsibilities and they need local autonomy to make the choices that are appropriate to their circumstances. As noted

in Section 4 below, large cities and city regions also need a good local governance structure if they are to be successful at meeting the challenges ahead.

## 4 GOVERNANCE STRUCTURES

All cities in Canada face challenges with respect to economic, social, cultural, and environmental sustainability. As noted in section 2, however, these challenges (for example, income polarization, immigration, and economic competition) are more intense in large cities. Moreover, most of these challenges are inter-related and, for large cities, most need to be tackled on a coordinated and region-wide basis. Yet, many large city regions around the world are hampered from doing so because they are characterized by political fragmentation and physical sprawl. It is difficult, if not impossible, to address what are largely area-wide issues on a region-wide basis without some form of regional governance structure. Good local governance is critical to the overall success of our city regions.

Local governance (which includes, for example, local and regional governments, civil society, business associations, and non-profit organizations) not only shapes the physical and social character of city regions but also affects the quantity and quality of services, the efficiency with which services are provided, and whether costs are shared throughout the region in a fair and efficient way. The governance structure of a city region also has an impact on citizen access to government (the degree to which citizens are involved in decision-making) and government accountability to citizens (how responsive the city is to their demands).

This section of the report offers different perspectives on the role of local and regional governments, sets out the criteria for designing a governance structure in a large city or city region, and describes and evaluates how different models of governance work in practice, drawing on examples from metropolitan areas in Canada and around the world. The evaluation considers how well these models achieve coordination of service delivery over the entire city region, the extent to which they allow for the equitable sharing of costs of services throughout the region, and their ability to reduce negative or positive spillovers of service delivery across local boundaries. The results of this evaluation show that many forms of local governance institutions exist in large cities

around the world, reflecting both the inherent complexity and the considerable context-specificity of the underlying issues that have to be resolved (Bird and Slack 2004).

#### 4.1 Perspectives on the Role of Local/Regional Government<sup>22</sup>

There are a number of different perspectives on the role of local/regional governments in a democratic society. In *neoclassical economic theory*, the main purpose of local governments is to maximize individual welfare and, specifically, to deliver goods and services to their residents. The optimal or most efficient government, in this framework, is that which delivers a desired level of goods and services at the lowest cost. The specific criteria that are typically used to determine the best or optimal structure are drawn from this perspective and are outlined in more detail below.

Yet, all governments do more than deliver goods and services. They are, in *political theory*, a vehicle for facilitating the democratic process by providing direct access to political representatives and a sharing of political power. They are about the distribution of power, about political participation and representation, about seeking a voice in decisions and events that shape everyone's life. They are, in theory, about giving up certain individual rights and obligations and assigning them to a larger collective. That collective, in turn, both reflects and shapes the social nature of the community. The question then becomes one of what is the nature and size of the appropriate collective - that is, the most appropriate design of local structures of governance - and what functions should be assigned to it, in order to achieve the objectives of economic efficiency, democratic representation and a balance of power sharing.

There is also a *territorial argument*. All governments are territorial in the obvious sense that they have a specific location and usually require explicit and non-overlapping spatial boundaries in order to identify their constituents and to define their area of responsibility. The question then becomes how best to divide up a national or provincial territory so that it meets the above objectives. In theory, where and how we define the boundaries for sub-provincial governments also determines what kinds of communities

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<sup>22</sup> This section and section 4.2 draw heavily on Slack, Bourne and Gertler (2003).

we have. It also influences what baskets of goods and services are appropriate, how political power is distributed, how self-sufficient the unit of government is in terms of fiscal capacity, and who is included in or excluded from that government. There are frequent and well-known examples of where the delineation of municipal governments has been used to embrace desired land uses and populations and to exclude other less desirable uses and people.

Fourth, there is a different but parallel argument that the structure of local governments needs to both mirror and compensate for the tendency for people and production facilities to cluster in space. This process of *spatial clustering* occurs because there are obvious advantages for particular groups of people and firms to locate in close proximity.<sup>23</sup> Those advantages include conventional agglomeration economies for firms, as well as the social benefits of being close to individuals of similar attributes or attitudes. This means that local government structures are superimposed on a landscape that is already markedly uneven and characterized by distinct social and economic clusters. In this context, small local governments would tend to be more homogeneous in social terms than the larger governments.

There is a fifth and related line of argument that is embedded in a *social justice framework*. In a democratic and egalitarian society such as ours, there is an implicit social contract that accepts the premise that all citizens of the state have a right to equal access to services, housing and to opportunities for work and the sustenance of a good life. There is also a broad commitment to place-based mobility rights<sup>24</sup> in that the commitment applies to all citizens living anywhere in the province or country. Although there are obvious practical constraints, not to mention cost constraints, in meeting this goal in a country the size of Canada, it is nonetheless a principle that is relevant to designing local and regional governments. What is the best vehicle, the optimal level and form of government, for delivery of services under such conditions at a sub-national and sub-provincial level?

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<sup>23</sup> There may also be disadvantages from spatial clustering such as the costs of slower movement and pollution that are associated with congestion, and socially exclusionary behaviour.

<sup>24</sup> This concept refers to the premise that the rights of Canadians to basic services must include (within limits) the right to receive those services wherever they choose to move.

## 4.2 Criteria for Designing a Governance Structure

Several criteria can be used to design a governance structure:

- subsidiarity and local responsiveness,
- economies of scale,
- externalities,
- equity and social justice, and
- access and accountability.

### *Subsidiarity and Local Responsiveness*

According to the “subsidiarity” principle,<sup>25</sup> the efficient provision of goods and services requires that decision-making be carried out by the level of government that is closest to the individual citizen. The application of this principle means that responsibilities should only be assigned to a higher level of government if it can be demonstrated that it can carry out the function more efficiently than the lower level. With few exceptions (such as national defence and services that involve redistribution such as social assistance), almost all public services should be provided at the local or regional level with local policy-makers deciding what services to provide, how much to provide, and who should pay for them. Local provision of goods and services will result in an efficient allocation of resources, accountability, and responsiveness to local citizens.

Public choice theory argues that small-scale, fragmented local governments have special advantages for local democracy because they maintain a quasi-market. The proliferation of small government units in a metropolitan area results in competition among them. Tiebout (1956), for example, suggested that people “vote with their feet,” meaning that they move to the jurisdiction with the tax and expenditure package that reflects what they want.<sup>26</sup> This type of competition benefits citizens through increased

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<sup>25</sup> The subsidiarity principle was included in the Treaty of the European Union in 1992 in the context of the division of powers and responsibilities between European governmental bodies and their member countries. The principle has also been applied to the role and structure of government at all levels (Barnett 1997: 59).

<sup>26</sup> The Tiebout model assumes a large number of small, homogeneous local governments as well as several other assumptions. Criticisms of the Tiebout model suggest that there is a cost to mobility that makes this

efficiency in service delivery or in terms of finding the municipality that has the basket of goods and services that most closely meets their tastes (Boyne 1992: 338). In this framework, a large urban government will be less efficient in meeting the demands of its residents because it will tend to provide a uniform level of public services to people who have different preferences for those services. As long as there are local differences in tastes and costs, there are clear efficiency gains from delivering services at the local level.

### *Economies of Scale*

Economies of scale occur where the per-unit cost of producing a particular service falls as the quantity of the service provided increases. Although this criterion points to the need for large government units, there are problems with its application. First, each urban service will likely achieve the lowest per-unit cost at a different scale of production. For example, the optimal size of government may be different for fire services than for waste management. These differences mean that it can be extremely difficult to draw boundaries for general-purpose local governments.

Second, the jurisdiction that provides the service does not necessarily have to be the one that consumes it. The producing jurisdiction, for example, could sell output to consumers in adjacent jurisdictions. In this way, the producing jurisdiction could benefit from economies of scale in production without having to be part of a larger jurisdiction, that is, without requiring the larger population to be located within its own boundaries. Thus, a larger government jurisdiction is not necessary to achieve economies of scale because the demand and supply of local government services can be separated. Economies of scale can be achieved even in a fragmented system through inter-municipal cooperation or through the creation of special districts. Furthermore, there is some evidence of higher costs from larger government units because of problems delivering services to remote areas within large jurisdictions or because of “bureaucratic congestion” (Boyne 1992: 336).

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adjustment less than automatic, that it excludes any discussion of externalities, that it penalizes those who are poor and less mobile, and that it does not consider that people will vote in ways other than with their feet.

### *Externalities*

The provision of some services results in externalities (spillovers) whereby the benefits (or costs) of a specific service (for example, transportation) in one local government jurisdiction spill over to residents of a neighbouring jurisdiction. One way to remove the resulting inefficiency is to design government jurisdictions large enough so that all of the benefits from a particular public service are enjoyed within the boundaries of that jurisdiction. In other words, the boundary could be designed to coincide with the functional region. Such boundary readjustments would ensure that those who benefit from the service pay for it. As with economies of scale, however, the optimal sized jurisdiction will be different for different services. Furthermore, the optimal jurisdiction from the point of view of addressing externalities may conflict with the optimal size required to achieve economies of scale. Other ways to address externalities include provincial grants, coordination among municipalities, or the creation of special districts.

### *Equity and Social Justice*

Equity arguments are at least as important as efficiency arguments in designing government structures. Local government fragmentation means that there are likely to be some rich communities and some poor communities. In these circumstances, the rich communities will have a more adequate tax base with which to provide services and may not have very great demands for services (such as education or social services). The poor communities, on the other hand, may require more services but have only a small tax base on which to levy taxes. The more municipalities there are within a large urban area, the greater will be this problem. One solution is to consolidate areas into one jurisdiction, in effect taxing the rich municipalities and using some of the proceeds to subsidize the poor municipalities. An alternative approach is to shift the redistributive function to a senior level of government or for the senior level of government to provide equalization transfers.

### *Access and Accountability*

This criterion suggests that citizens should have access to local government so that they can influence government policy. This is done through public meetings, hearings, elections, and direct contacts with officials. Smaller government units can provide the average citizen with greater ‘access’ to local decisions: “as the levels of consolidation and concentration in the local government system rise, so the capacity of the public to monitor policy makers’ behavior falls” (Boyne 1992: 338). Moreover, Bish (2001: 7) argues that the larger the local government, the more likely it is that well-organized special interest groups will dominate public hearings and meetings and that individual citizens will participate less.

Accountability is closely related to access: the more accessible politicians are to their constituents, the more easily they can be held accountable for their actions. A more fragmented system of local governments, in theory, should increase public scrutiny and accountability and result in lower service costs, at least for certain kinds of services. Accountability requires a link between expenditure and revenue decisions: “the costs of local decisions should be fully borne by those who make them” (Bird 2001: 117). If there is no accountability in decision-making, there is no incentive to allocate resources efficiently across the competing services. Local governments must also be accountable to senior levels of government to the extent that they receive transfers from them.

### *Summary of Criteria for Designing Local Government*

Proponents of large government units that cover the entire city region differ in terms of underlying values and criteria regarding the role of local government from those who favour small, homogeneous governments. Those who support larger government units (such as metropolitan governments) highlight the need to address externalities and social equity. Those who support small, homogeneous local governments emphasize the individual’s right to choose the package of services and taxes that they want. They support competition, accessibility, and accountability. Smaller local government units do not, however, address region-wide issues unless they are involved in some form of cooperation with neighbouring jurisdictions or special districts are created for specific services of a region-wide nature. Different governance models are set out below.

### **4.3 Governance Models**

In this section we briefly describe and evaluate five models of governance structure that are used in large cities and city regions -- one-tier governments, two-tier governments, voluntary cooperation (including inter-municipal agreements), special purpose districts, and the provincial government as regional government. It should be noted at the outset that different structures have worked in different places at different times. The appropriate governing structure in any municipality depends on its specific characteristics – the nature of the services it provides, the revenue sources available to it, the size and location of the municipality, the size and growth rate of the municipality relative to the province as a whole, the nature of intergovernmental relations, the history of cooperation with neighbouring municipalities, and other factors.

As noted in Section 1, urban areas are generally defined by the organization of daily life such as commuting to work, shopping, schools, and social visits. Urban areas thus defined include the central city, the adjacent suburbs, and exurban communities that are closely integrated with the urban core. As also noted in Section 1, however, rarely do the boundaries of formal government structures correspond to the scale of these urban areas or city regions. Rather, large urban areas are often characterized by fragmentation and urban sprawl. From a governance perspective, the sheer size of some urban areas may mean that it is not possible for the political boundaries to coincide with the entire functional urban area. Under these circumstances, it may be necessary to rely on voluntary cooperation, special purpose districts or a provincial role in addressing functions that need to be carried out on a region-wide basis.

#### **4.3.1 One-Tier Government Model**

Under the one-tier model of urban governance, a single local government is responsible for providing the full range of local services. The one-tier model can apply to two quite different cases, however. It can apply to a series of small fragmented municipalities in a metropolitan area or to one large consolidated municipality for the whole area. Large

single-tier governments have generally been formed by *amalgamation* (merger of two or more lower-tier municipalities within an existing region) or by *annexation* (appropriation of a portion of a municipality by an adjacent municipality).

Ideally, a large consolidated model would have a geographic boundary that covers the entire urban area or city region. In theory, these boundaries move outward as the urbanized area expands; in practice, however, this is seldom the case. Historically, municipal boundaries have been inelastic, leading to fragmentation of the urban region into city and suburban municipalities (Bourne 2003).

Large, consolidated one-tier cities can deliver uniform services throughout the urban area, but this is not necessary. Particularly where the one-tier municipality has been created from the amalgamation of several municipalities, there is the option of maintaining the different services and service levels that existed in different parts of the city region prior to the creation of one tier. For example, rural residents will not necessarily receive all of the services available to urban residents. In the case of a one-tier government, however, there is no need to allocate expenditures among levels of local government (as in the two-tier model below).

The main advantages that have been cited for large one-tier governments that cover the entire urban region include: better service coordination, clearer accountability, more streamlined decision-making, and greater efficiency (Boyne 1992: 333). They might also facilitate long-term planning and budgeting. Furthermore, there is likely to be funding fairness in the provision of services because there is a wider tax base for sharing the costs of services that benefit taxpayers across the region. The larger taxable capacity of the one-tier government increases its ability to borrow and to recover capital and operating costs from user fees (Bahl and Linn 1992: 415).

There is little dispute over the advantages of better service coordination, streamlined decision-making, and funding fairness. From an efficiency perspective, large one-tier governments have the potential to internalize externalities. For example, rural residents outside of the original municipal boundary who did not previously pay for the urban services that they used would now pay for urban services that they use. Large one-tier governments can also take advantage of economies of scale in service provision.

There is some debate, however, over the success of large one-tier municipalities that result from the amalgamation of existing local governments.<sup>27</sup> An amalgamated large-scale one-tier government can reduce access and accountability if the jurisdiction becomes too large and bureaucratic, especially if it is large enough to contain spillovers and provide a basis for rational regional planning. In some cases, community committees have been established to address local issues or satellite offices are distributed across the municipality where people can pay tax bills, apply for building permits, etc.<sup>28</sup> These committees and satellite offices likely increase accessibility, but it is less clear how they impact on accountability. Furthermore, they reduce any potential cost savings that might result from a larger government unit.

In terms of efficiency, evidence from municipal amalgamations of existing municipalities suggests that cost savings are elusive (Slack 2000: 24). Although the reduction in the number of politicians and bureaucrats reduces costs, there is also a tendency for expenditure increases when municipalities with different service levels and different wage scales merge. Service and wage level harmonization generally mean that expenditures increase to the level of the highest-expenditure municipality. A review of the empirical evidence in the US on fragmented versus consolidated local governments concludes that lower spending is a feature of fragmented local government systems; consolidated structures are associated with higher spending (Boyne 1992: 344-46).<sup>29</sup> One of the reasons for higher spending is that amalgamation tends to reduce competition between municipalities because there is less incentive to be concerned with efficiency and less incentive to be responsive to local needs. The lack of competition can reduce efficiency in the delivery of services and result in higher costs.<sup>30</sup> Another reason for

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<sup>27</sup> The analysis of cost savings applies to amalgamations of established municipalities rather than large one-tier municipalities with elastic boundaries -- where the boundary expands with the city and there are no inherited local governments.

<sup>28</sup> In 1971, the City of Winnipeg and its twelve area municipalities were amalgamated to form a single city. Even with its residents' advisory groups (RAGs), it was felt to lack responsiveness and accountability. These groups were subsequently abolished. See Smith (1995: 168) and Sancton (2000: 62-3).

<sup>29</sup> Sancton (1996) reviewed municipal consolidations in three Canadian provinces and concluded that the evidence does not support the view that consolidations result in cost savings.

<sup>30</sup> Some forms of competition between municipalities can be wasteful of resources, however. Examples include tax incentives and other strategies to attract development.

higher costs, and an important equity consideration, is that there is likely to be an increase in the quality of services provided in the smaller and poorer municipalities.

The first type of one-tier government described above, fragmented one-tier governments, is common in the United States. Klink (2002: 11), for example, describes metropolitan institutions in that country as a large number of “spatially limited networks of general purpose government, special purpose bodies and sectoral institutional structures.” Orfield (1997) similarly stresses that US local governments are characterized by fragmentation, decentralization, and income polarization.<sup>31</sup> As discussed below, however, such small, fragmented single-tier governments in practice often engage in voluntary cooperation and participate in special purpose districts that cover the metropolitan area.

*Houston, Texas* is an example of a model of “fragmented single tiers” (Savitch and Kantor 2002: 69). Houston is a city surrounded by 790 governments and special districts. These jurisdictions frequently overlap and compete for industry. The state of Texas permits cities to annex unincorporated areas, and Houston has, over time, taken advantage of this legislation to blunt some of the competition. The city now covers over 600 square miles.

*Toronto* is an example of a large consolidated one-tier government created through the amalgamation of the former metropolitan level of government and six constituent lower-tier municipalities.<sup>32</sup> The City delivers a wide range of services, including social services such as welfare assistance, public health and housing, roads and transit, emergency services such as fire and ambulance, and parks, culture and recreation. Toronto relies heavily on property taxes to finance services (about 45 percent of revenues) followed by provincial grants, user fees, and other revenues.

Although there do not appear to have been costs savings from amalgamation, it does seem to have resulted in a fairer sharing of the tax base as well as some equalizing up of local services so that everyone can enjoy a similar level of services across the city.

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<sup>31</sup> One notable exception is Portland, Oregon which is described in section 4.3.2 below.

<sup>32</sup> The new City of Toronto is contained within the Greater Toronto Area (GTA), which is not a government or even a service district. The GTA comprises the City of Toronto plus the regions of Durham, Halton, Peel, and York, all of which continue to have two-tier structures.

Moreover, such equalization extends across the whole city region for reasons unrelated to the amalgamation of the City of Toronto. Within the GTA, the costs of social services and social housing are pooled across the region through an equalization formula that measures the capacity of each municipality to contribute to these costs.<sup>33</sup> Some have argued that the larger city is a more effective entity for economic development and marketing (see Stevenson and Gilbert 1999: 5).<sup>34</sup>

One could also argue, however, that the megacity in Toronto is simultaneously both too small and too big. It is too small to address region-wide spillovers related to transportation and planning and it is too big to be locally responsive and accessible (Slack 2000). Indeed, none of the studies of governance in the region known as the Greater Toronto Area (GTA) commissioned by the provincial government in the years prior to the amalgamation emphasized the need to create a “megacity.” On the contrary, these studies identified serious problems in coordination of transportation, planning, water provision, and waste management among the regions within the GTA and focussed on the need for a GTA governing body to address these service coordination issues.<sup>35</sup>

#### **4.3.2 Two-Tier Government Model**

The two-tier model of local/regional government consists of an upper-tier governing body (usually a region, district, or metropolitan government) encompassing a relatively large geographic area and containing lower-tier or area municipalities (including cities, towns, villages, townships, etc.). The upper tier provides region-wide services characterized by economies of scale and externalities and the lower tiers are responsible

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<sup>33</sup> “Pooling” means that the entire city region shares the costs of these services. No municipality in the absence of any regional government or service authority, however, has any say over how the other municipalities spend their money on these services. Furthermore, because the service costs in other municipalities are beyond the control of any individual municipality, the contribution each municipality will have to make to this pool is both uncontrollable and uncertain from year to year. This provincially-mandated pooling system may be fairer in some sense, but it is unlikely to provide incentives for efficient local revenue raising, and it has also clearly substantially reduced local accountability.

<sup>34</sup> The Greater Toronto Marketing Alliance (GTMA) was also created to market the GTA.

<sup>35</sup> Following the amalgamation of the new City of Toronto, the Province of Ontario established a Greater Toronto Services Board (GTSB). The GTSB was given no legislative authority except to oversee regional transit; nor was it given any taxing authority. Even this weak body was soon disbanded by the province, however, and the important function of regional transit was taken over by the provincial government.

for services of a local nature. Although there are differences across regions, generally the regional government is responsible for arterial roads, transit, policing, water and sewers, waste disposal, social services and social housing, and regional planning and development. The lower tier is responsible for local roads, fire protection, waste collection, parks, recreation and libraries, and local planning and development.

The two-tier model helps to resolve the conflict among the various criteria for designing government structure -- economies of scale, externalities, and redistribution on the one hand and subsidiarity, access and accountability on the other.<sup>36</sup> Critics of the two-tier model argue, however, that costs are higher because of waste and duplication in the provision of services by two levels of government. Moreover, two-tier levels of government are less transparent and more confusing to taxpayers who cannot figure out who is responsible for what services. Two municipal councils (upper tier and lower tier) are said to lead to “considerable wrangling, inefficiency in decision-making and frequent stalling or postponement of the implementation of policies that would benefit taxpayers across the entire local government jurisdiction” (Kitchen 2002). One of the reasons for the wrangling is that upper tiers have generally been imposed by a state or provincial government rather than through a local process. The result is that they came into the world “by a ‘forceps delivery,’ which naturally left scars in the relationships between the local actors and the new institution” (Lefèvre 1998: 16).

There are a number of examples of two-tier governments around the world. In *London, England*, for example, the upper tier is the Greater London Authority (GLA) covering a population of 7.4 million. It has a directly-elected Mayor and a 25-member Assembly that is elected in part on a constituency basis (14 members) and in part on a London-wide basis (11 members). The lower tier comprises 32 boroughs and the Corporation of London. The division of responsibilities highlights the relative importance of the lower tiers compared to the GLA: the main functions of the GLA are

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<sup>36</sup> Redistribution throughout a city region is achieved at the upper-tier level through a combination of tax and spending policies. A uniform property tax at the upper-tier level, combined with region-wide expenditures, serves to redistribute resources from the relatively large tax base municipalities to the relatively small tax base municipalities. There will, however, still be differentiation in service levels and tax rates for services provided by lower-tier municipalities.

transportation, economic development, policing, and fire and emergency planning.<sup>37</sup> The boroughs are responsible for education, housing, social services, street cleaning, waste disposal, roads, local planning and many arts and leisure services.

Although the GLA covers much of the built up area, it does not cover the entire economic region which has been described as the Greater South East with a population of 20 million (Travers 2005: 4). Furthermore, the GLA receives more than 60 percent of its revenues from central government grants and thus does not have sufficient fiscal autonomy to undertake initiatives needed to be economically competitive (Travers 2005: 11). Nevertheless, London has seen growth in employment over the last 25 years; it has been suggested this growth has happened “more by accident than by design” (Travers 2005: 11).

*Berlin*, with a population of 3.5 million people, is another example of a two-tier system of government. Berlin is also a city-state: it has both the powers of regional government and a local government. There are two directly elected tiers of government: the city parliament which is headed by a “governing mayor” and a second tier of 12 borough councils. The Berlin city government is responsible for a wide range of services that include health, social services, housing and education as well as transportation, environment, and planning. Although the boroughs have significant responsibilities (including street cleaning, lighting, garbage collection, environmental services, planning and licensing), they receive all of their funds from the city. The result is that they have no autonomy (Travers 2005: 8). The city’s funding comes from local taxes plus constitutionally-guaranteed shares of major taxes such as the income tax. Berlin also benefits from inter-state equalization payments, unlike many large cities around the world. Although Berlin’s economic position is weak, its decentralized urban government system is believed to be able to cope relatively successfully with competitiveness issues (Travers 2005: 9).

There are few metropolitan governments in the US – one notable exception is *Portland, Oregon*. Metro, the directly elected regional government in Portland, serves more than 1.3 million people in three counties and 25 cities. Metro’s primary responsibilities are regional land use, growth management, and transportation planning. It

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<sup>37</sup> These functions are accountable to the Assembly through the Mayor but are run by separate authorities.

is also responsible for solid waste disposal, regional convention, visitor and performance spaces, a regional green spaces system, and maintenance of RLIS (Regional Land Information System), a regional data and GIS tool. Not only is the two-tier system accepted by citizens -- voters in Portland have repeatedly chosen to retain Metro or to expand its authority and functions (Abbott 2002: 229) – Metro has been credited with some important growth management strategies.

### **4.3.3 Voluntary Cooperation**

The voluntary model has been described as an “area-wide body based on voluntary cooperation between existing units of local government in the agglomeration with no permanent, independent institutional status” (Sharpe 1995: 12). This model is common in the US where the new regionalists have been promoting informal systems of cooperation between local governments instead of forming powerful general-purpose governments (Swanstrom 2001: 492). Although the voluntary model does not include an elected, area-wide government, it is an alternative method of recognizing the inter-relationship of localities within a region through some form of area-wide arrangement. Voluntary cooperation is popular in part because these area-wide bodies are easy to create politically and can also be disbanded easily.

Voluntary cooperation is an alternative way of providing services across a region without resorting to amalgamation or two-tier governments. Municipalities can retain their autonomy with respect to expenditure and tax decisions but, at the same time, achieve economies of scale in service delivery and address externalities associated with service provision (Sharpe 1995: 13). There can be problems of accountability, however, when services are provided by another jurisdiction. Redistribution throughout the urban area is not automatic in a system of voluntary cooperation.

The voluntary model can work well when policy objectives are shared by all policy-makers in the various local governments. Thus, there would be no need for any additional institutional arrangements. It may not work so well, however, when there are divergent objectives, when there are wide differences in local resources, and when social services are involved. Cooperation usually involves bargaining and some municipalities

may not have anything to bargain with. The problems faced by large urban areas noted earlier are significant – global competition, social inequalities, pollution, fiscal disparities, sprawl – and the solutions may require them to rely on a structure that has a permanent institutional status rather than a voluntary arrangement. Nevertheless, under some circumstances, voluntary cooperation may be the only way that local governments in metropolitan regions can work together to resolve their common problems.

*Bologna, Italy*, is an example of an inter-municipal model of metropolitan governance on a voluntary basis (Klink 2002). In 1994, forty-eight municipalities and the province of Bologna signed the *Accordo per la Città Metropolitana (ACM)*. The Metropolitan Conference comprises all of the mayors and is presided over by the president of the province. Each municipality is free to opt out at any time and may participate as it chooses in some or all of the activities of the Metropolitan Conference.

In other countries voluntary cooperation takes the form of consortia, communities of communes, urban communities (France), joint inter-municipal authorities (Spain and Belgium), public bodies, joint agencies and core cities (the Netherlands) (Hermann et al. 1999). These forms of cooperation generally imply some degree of administrative integration as well as political linkage in that the member local governments have some form of representation on the boards. Moreover, as a rule, these organizations can levy taxes or collect contributions from the municipalities or they can levy user fees to pay for services.

The *Greater Vancouver Regional District (GVRD)* is the most often cited Canadian example of voluntary cooperation in a two-tier structure.<sup>38</sup> The GVRD was created in 1967 as part of a system of regional governments established by the provincial government in British Columbia at that time to increase municipal cooperation without introducing a new level of government (Oberlander and Smith 1993). The GVRD comprises 18 municipalities as full members and three unincorporated areas. Municipal representatives on the GVRD board of directors are elected to their municipal councils and then appointed by their respective governments to serve on the Board. Member municipalities can opt out of many district functions, and the District provides different

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<sup>38</sup> This description is based on Slack (2001).

functions for different areas, especially for unincorporated areas. The responsibilities of the GVRD include borrowing for municipalities, hospitals, planning, air pollution control, parks, solid waste disposal, public housing, collective labour relations, and public transit (the latter added in 1999). GVRD funds come from the member municipalities by billing them for services rendered. The cost of most services is apportioned among member municipalities who participate in each service on the basis of the property assessment base. Other regional costs are contained in municipal charges for water, sewer, and solid waste.

The advantages of the Vancouver model are that it preserves local autonomy, diversity, and the distinct identity of its member municipalities. Problems have arisen, however, because of the lack of authority to implement policies. Moreover, it is difficult to ensure that regional concerns are taken into account in local decisions. No one speaks for the region;<sup>39</sup> it can only do what is delegated to it by its member municipalities. If a distinct upper-tier government directly accountable to residents is the goal, obviously the Vancouver model does not work as well as a real regional government. If on the other hand, the aim is to have a flexible institution to assist municipalities in doing things they cannot do themselves, then such a voluntary cooperation model has some advantages.

*Minneapolis-Saint Paul* provides an example of voluntary cooperation in one specific area – tax base sharing. In the early 1990s, Saint Paul had to raise its taxes dramatically and cut services because of increasing social responsibilities. At the same time, some of the richer suburbs were reducing taxes and maintaining high levels of service. The idea behind regionalizing the property tax base was to make the growing property wealth available to all parts of the region to meet social needs.

Under this system, each city contributes 40 percent of the growth in its commercial and industrial tax base acquired after 1971 to a regional pool. On an annual basis, this amounts to about 20 percent of the regional tax base. Money is distributed from this pool on the basis of inverse net commercial capacity. This method reduces the tax base disparities on a regional level from 50 to 1 to 12 to 1 (Orfield 1997: 87).<sup>40</sup>

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<sup>39</sup> The Chair and the board members are part-time regional politicians.

<sup>40</sup> Property tax base sharing also reduces the fiscal incentives towards exclusionary zoning and urban sprawl. In the absence of sharing, communities have an incentive to increase their tax base and limit social

Although tax base sharing can decrease intra-metropolitan competition for tax base, apparently there still is a lot of competition for tax base in the region (Orfield 1997: 87). Furthermore, cities with a higher than average commercial base but with low-valued homes and increasing social need, contribute tax base. Cities with high-valued homes and little commercial development receive money from this system.

### *Inter-municipal Agreements*

Inter-municipal agreements are formal or informal agreements between municipalities to provide services. They are a form of voluntary cooperation but are less structured in that an official area-wide body is not generally set up to oversee the arrangements. These types of agreements have generally been effective for services such as fire fighting and emergency dispatch, maintenance of boundary roads, purchasing in bulk, and issuing debentures.

These agreements may be successful in achieving coordination and efficiencies for specific services that can be contracted out or to share clearly identifiable costs. This approach offers no solution, however, to the basic problems of region-wide coordination. Indeed, such agreements have been described as second-best solutions to reorganization that can lead to "an impenetrable jungle of *ad hoc* commissions and complex arrangements that even the most conscientious municipal voter will never understand" (Sancton 1993: 33-34). Inter-municipal agreements generally provide no clear public accountability except through the contract or agreement. If something goes wrong, for instance, it is sometimes difficult for citizens to know whether to complain to their local government or to the local government that has been contracted to provide the service. Experience suggests also that inter-municipal agreements may actually increase the likelihood of inter-municipal litigation and conflicts (GTA Task Force 1996:163).

An example of an inter-municipal agreement is the contract services plan in Los Angeles, under which Los Angeles County provides some services on behalf of

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expenditures by using exclusionary zoning. One way to achieve this objective is to encourage low-density development because it requires large lots and thus expensive housing. Regional sharing of taxes on expensive houses weakens local fiscal incentives to create this type of housing.

municipalities in the Los Angeles metropolitan area on a contract basis. Similar city-county links occur in other U.S. jurisdictions as well (Sharpe 1995). In the Canadian context, there are a number of inter-municipal agreements but these are mainly found in smaller municipalities. For example, municipalities may share a treasurer or engage in cooperative purchasing to lower costs. Many municipalities cooperate on fire services through mutual aid agreements.

#### **4.3.4 Special Purpose Districts**

Special purpose districts may be established in metropolitan regions to deliver services that spill over municipal boundaries. Single-purpose special district may provide similar municipal services for several municipalities or manage regional services with significant externalities. This form of cooperation among municipalities for region-wide services is used most widely in countries in which there is a history of strong and autonomous local governments. In the US, for example, one-third of all local governments are special districts or school districts. The boards of such special districts are usually indirectly controlled by the constituent municipal councils and are responsible for the management of such services as transportation, water and waste management, and economic development, as well as taxing, price setting, and other policy-making. School boards responsible for education are often directly elected, however.

One of the advantages of special purpose districts is that each service spillover can be addressed on an individual basis. Since it is unlikely that the spillover boundaries are the same for each service, separate districts could be established such as a region-wide transit district or hospital district. Other advantages include the following: the delivery of services by professionals with decision-making somewhat removed from political influence; services can be provided using more professional expertise than may be available to the municipal government; and dedicated revenues from user fees could be used to finance capital expenditures (Bahl and Linn 1992: 407).

Several problems with special purpose bodies have been identified: First, each body has responsibility for a single service and is not required to make the tradeoffs between, for example, expenditures on transit and expenditures on water and sewers.

Second, the proliferation of decision-making bodies has “created a diffuseness of government organizations that is difficult for citizens to understand” (Kitchen 1993). There is no citizen control and confused accountability. Third, there is no direct link between the expenditure decisions made by the special purpose agencies and the local council that collects property taxes to fund them. The absence of a link between expenditures and revenues seriously reduces accountability. Fourth, where accountability is lacking, there is no incentive to be efficient. Fifth, where there is a large number of independent special purpose bodies, it is difficult to coordinate interrelated activities.

Three ways have been suggested to address the problems of coordination (Bahl and Linn 1992: 419). The first is to have overlapping membership so that some of the same people are on a number of district boards. The second is to encourage the formation of districts with multiple functions instead of single-purpose districts. The third is to control the operations of the districts so that they remain separate authorities but are still subject to political considerations in the decision-making process.

The experience in the UK with special purpose districts, and other non-elected bodies charged with the responsibility of implementing government policy and providing urban services, is sobering. As part of the process of decentralization, and in order to make the public sector more efficient, the UK central government has for some time turned over the delivery of certain public functions to non-governmental organizations. These have become widely known as quasi- autonomous non-government organizations, or QUANGOs, or more recently they have simply been called extra-government organizations or EGOs. There are an estimated 5,500 of these organizations in the UK, of which over 4,700 operate at the local level, and they are said to manage nearly one-third of all government expenditures (Amos 1996).

While there is clearly a role for such organizations in any modern system of local government, the danger, as the British example illustrates, is that these are generally run by appointed rather than elected individuals and they are not subject to the same regulations as government agencies with respect to accountability, public access and information provision. The result has become a form of ‘shadow government’ that, in addition to being unelected, is largely unaccountable and secretive. As a consequence,

they also reduce the level of democratic accountability and representation in the delivery of services and more broadly in the governance of civil society.

#### **4.3.5 The Provincial Government as Regional Government**

Another model of governance structure for large city regions involves a provincial government role for those functions that need to be addressed on region-wide basis, such as transportation and land use planning. Under this model, a provincial government, in essence, takes on the role of regional government for some functions in a city region that is comprised of many municipalities. In some cases, that role is driven by the provincial government. It is also possible, however, for the provincial role to develop as a result of the filtering up of policy responsibilities from local governments to the provincial government either because local governments are unable to fund responsibilities adequately themselves or because there are spillover effects in service provision.

As with the other models of local governance, there are advantages and disadvantages of a strong provincial role in regional issues. The advantage of a provincial government stepping in to address transportation and land use issues, for example, is that a region-wide planning capability would eliminate fragmentation and duplication of functions between regional municipalities and allow for coordination at the city region level. Where the functional area for planning purposes is simply too large for the political boundaries to be coterminous with the city region, a provincial government can act as the regional government. Although this model of governance can address the externalities associated with land use planning and transportation, it does not meet the principle of subsidiarity when the approach is “top down” and provincially-driven. The vision and desires of the local governments within the region are more likely to be met if the approach is locally-driven.

The provincial government in Ontario, for example, recently introduced Greenbelt legislation and the Places to Grow Act in the *Greater Golden Horseshoe*. The Greenbelt covers a total land area of 1.8 million acres and extends 325 kilometres from Northumberland County in the east to Niagara Region in the west. The Places to Grow Act provides a legal framework for the provincial government to designate growth in

geographic areas of the province outside of the Greenbelt and develop growth plans for the strategic management of population growth, economic expansion, and environmental and land resources (MPIR 2005). These two initiatives appear to place the provincial government firmly as the regional government for the Greater Golden Horseshoe in terms of land use planning and growth management.

#### **4.4 Conclusions on Governance Models**

The review of governance models in this report shows that several quite different models of regional governance are available in both theory and in practice. Neither theory nor practice clearly indicates, however, which model of governance is the best for large metropolitan areas.<sup>41</sup> Governance systems have evolved over time reflecting different histories, cultures, and local circumstances (Travers 2005). No one system or model provides a simple solution to the challenges set out in Sections 2 and 3 of this report which elaborated on the four pillars of sustainability – economic, social, cultural, and environmental.

It is clear, however, that most of these challenges need to be met on a region-wide basis rather than by a series of small, fragmented local governments acting on their own. As noted in Section 1, however, political boundaries rarely coincide with the geographic boundaries of the city region. Metropolitan areas are often characterized by political fragmentation and urban sprawl. A review of metropolitan governments around the world found a predominance of government institutions at the administrative city level but a relative lack of such institutions both at the regional level and at the neighbourhood level (Travers 2005). Regional governance structures appear to be less popular in practice than they are in theory.

Notwithstanding the finding that no one model stands above the rest, the following conclusions emerge from this brief review of local governance models:

- A strong regional governance structure, which encompasses the entire city region, is crucial. The challenges that metropolitan areas face (economic, social, cultural

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<sup>41</sup> Other reviews of this issue have also concluded that no model fits all cases or stands out clearly above the rest (McMillan 1997; Klink 2002; Divay and Wolfe 2002; and Travers 2005).

and environmental) are characterized by both strong inter-dependencies and by externalities among local jurisdictions (Klink 2002). Some form of regional structure is needed to overcome fragmentation and address problems of a region-wide nature such as fiscal disparities among municipalities and externalities in service provision. A regional structure is needed to resolve transportation and land use coordination issues as well as to ensure the economic competitiveness, social cohesion, environmental sustainability, and fiscal viability of city regions in the new global economic setting. Few problems and processes stop at municipal boundaries, and most feasible solutions require larger geographical units and access to a large pool of resources, both human and financial, than is likely to be at the disposal of small local governments. Some form of regional structure seems necessary if cities are to take full advantage of new and emerging trends and opportunities set out in Section 2.

- A one-tier structure is simpler to understand and more transparent than a two-tier structure and, for this reason, it may enhance political and fiscal accountability (Bird and Slack 2004). Two-tier structures are inherently more complex and may result in undesirable duplication, overlap, and general confusion among citizens as to who is responsible for what and who is paying for it. On the other hand, a two-tier structure may achieve greater efficiency than is likely to be attained in a more centralized one-tier structure. Economies of scale can be realized at the upper-tier level while at the same time the lower tier permits more responsiveness to local variations in preferences. Any desired degree of regional distribution can be achieved within either a one-tier or a two-tier structure, although more easily in a one-tier structure with uniform tax rates across the city region in which all taxes are made available for redistribution.
- If political factors make it impossible to establish any form of encompassing metropolitan regional government (one-tier or two-tier), then some variant of the voluntary cooperation or special purpose district may still be possible. In situations in which local autonomy is paramount and where objectives are shared

by policy-makers in various local governments, voluntary cooperation can work to some extent. It will not work well, however, when objectives differ among local governments, as they often do. Although not necessarily the most attractive governance option, it may be the only option open to those who wish to improve the governance of metropolitan areas and still retain some local autonomy.

- A prominent role for provincial governments to address region-wide issues is also a possibility where region-wide coordination is very difficult to achieve and perhaps where local autonomy is less important.
- Although the need for a regional structure is clear, the precise form it should take will vary with local circumstances. Different models (e.g. one-tier, two-tier, voluntary cooperation, special districts, provincial role) have worked successfully, to varying degrees, in different places. More important than the precise model of governance chosen for a city region is that some form of effective governance is in place.

Regardless of the form that governance takes, the critical factors for the success of our large cities are those that were identified in Section 2. These include the ability to adapt -- to minimize the negative impacts and take advantage of the opportunities it creates -- and the capacity to attract business investment and skilled workers. In addition to good governance, cities need to have effective leadership, sound government, adequate fiscal resources, coordinated public policies, high quality social services, and good cultural facilities and infrastructure. Success also depends on cities having a diverse economy, an attractive natural environment, and low levels of income inequality and environmental pollution. These goals will not be met without concerted actions by all three levels of government.

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