# OECD Territorial Reviews

# Montreal, Canada

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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MONTRÉAL, CANADA

## FOREWORD

The globalisation of trade and economic activity is increasingly testing the ability of regional economies to adapt and exploit or maintain their competitive edge. Disparities in economic performance tend to be persistent. On the other hand, rapid technological change, extended markets and greater use of knowledge are offering new opportunities for local and regional development but demand further investment from enterprises, reorganisation of labour and production, skills upgrading and improvements in the local environment.

All these trends are leading public authorities to rethink their strategies. The role of policies increasingly aimed at improving the competitiveness of regions by promoting endogenous resources and capturing trade and additional economic activities. At the same time, central governments are no longer the sole provider of development policies. The vertical distribution of power between the different tiers of government needs to be reassessed as well as the decentralisation of fiscal resources in order to better respond to the expectations of the public and improve policy efficiency.

The Territorial Development Policy Committee (TDPC) was created at the beginning of 1999 to provide governments with a forum for discussion. Within this framework, the TDPC has adopted a programme of work that mainly focuses on assessing member countries' territorial policies and on evaluating their impact. The objectives of territorial reviews are to: a) identify the nature and scale of territorial challenges using a common analytical framework; b) assist governments in the assessment and improvement of their territorial policy, using comparative policy analysis; c) assess the distribution of competencies and resources among the different levels of governments; and d) identify and disseminate information on best practices regarding territorial policy and governance.

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## ACKNOWLEDGMENTS

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## ASSESSMENT AND RECOMMENDATIONS

***Montreal is a leading contributor in the Canadian economy…***

With a population of 3.43 million inhabitants, the metropolitan region of Montreal (Metropolitan Montreal) is the second most populous area of Canada (after Toronto) and the 15th largest urban agglomeration in Canada and the U.S. combined. Despite the economic turbulence of the early 1990s, Montreal has maintained its position as one of the leading contributors of Canada's GDP (9.8% in 2002). During the period 1997-2002, Montreal's GDP has been growing at an annual rate of 3.8%. Within the context of increasing international integration - in particular, the North American Free Trade Agreement (NAFTA), Metropolitan Montreal has strengthened its position in leading sectors of the knowledge-based economy and benefited from increasing foreign trade and investment. This positive performance has resulted in a high rate of job creation: after having reached its lowest level in 1993 (55.1%), Montreal's employment rate has been steadily increasing and reached 61.7% in 2002.

***…but in terms of competitiveness, it is not very well positioned at the international level***

The economy of Montreal appears to be on a track of increased growth. Further progress is still required to lower unemployment (8.4% in 2002 against 7.4% in Toronto) and poverty, both of which are higher than the Canadian average (7.7% for unemployment). Moreover, Montreal's economic performance remains lacking when viewed internationally. Out of a selection of 65 OECD metropolitan regions of more than two million inhabitants, Metropolitan Montreal was ranked 44th with regards to real GDP per capita for 2001. On average, 62% of the difference between Montreal and the comparison regions is explained by lower average productivity, 37% by a higher activity rate and the remaining 1% by a lower employment rate. The main comparative advantage of Montreal lies in the large size of its labour force while its major weakness is a low level of productivity.

***Montreal could***

A lower stock of capital (human, physical, etc.) is the

***improve its international competitiveness by upgrading skills and increasing investment in R&D …***

main cause of Montreal's lower productivity – about 98% of the observed difference with OECD metropolitan regions. Educational attainment seems to play a significant role with only 21% of the population of Montreal having pursued higher education in comparison to Boston (33%) Minneapolis-St. Paul (27%), Stuttgart and Philadelphia (24%). Like other Canadian metropolitan regions, Montreal has been catching up with the U.S. since the 1960s. However, at the national level, Montreal still lags behind Toronto (24%) and Vancouver (23%), and the educational attainment gap has not started to decrease. Low productivity is also related to insufficient investment in equipment and R&D, especially within small and medium-sized enterprises which constitute an important share of the regional fabric.

***…compensating for the effects of an ageing population…***

High participation in the labour market represents a main competitiveness factor for Montreal, but the elderly population in Montreal is expected to increase considerably over the next few decades, leading to a decrease in activity rate. In light of the lower educational attainment and ageing population, Montreal could increase migration inflows in order to maintain a high activity rate. Presently, international immigration accounts for over half of the population growth in the area. Yet, it represents only 18% of the area’s total population compared to 42 and 35% in Toronto and Vancouver, respectively. The percentage of immigrants with a university degree (33%) is significantly lower than in the metropolitan regions of Toronto (49%) and Vancouver (47%). Targeting high skilled immigrants should be part of the strategy to upgrade the skill profile of Montreal's workforce and thus its productivity.

***…and taking better advantage of the international market***

Over the last decade, Montreal's economy has benefited from a dramatic increase in international exports. Strengthening its export potential should focus on three objectives. The first objective is to take better advantage of the US market to which Montreal has gained substantial access by targeting export niches where the demand from the U.S. and Montreal's advantages are higher (airplanes, airplane parts, train parts, other equipment and telecommunication material). The second objective consists in diversifying Montreal's export markets by increasing international trade outside the U.S. (to which 84.8% of Quebec international exports is destined). Third, Montreal should strengthen its export position in high-technology intensive products, which have higher value-added. To a certain extent, Montreal has benefited from a favourable exchange rate that has boosted its export competitiveness and hidden its productivity deficit.

***Montreal has radically reformed its metropolitan governance***

A main factor of economic competitiveness of metropolitan areas is their governance framework. Metropolitan areas in many OECD countries are fragmented into various territorial units which do not correspond to their respective functional areas (*i.e.* the extension of the labour market and the daily commuting zones beyond the old city borders as well as the intense economic relations between firms located across the region but belonging to the same cluster). While the ensuing mismatch between the functional area and political decision-making is not a new phenomenon, it has become more visible in light of globalisation and decentralisation. Territorial fragmentation and lack of regional co-ordination lay at the heart of metropolitan-wide problems such as weak economic growth, financial sustainability, fiscal disparities, urban sprawl and inadequate public services, and more generally, a complex policy environment in which area-wide consensus is difficult to reach on medium and long-term goals. It is in this context that the province of Quebec has undergone one of the most radical institutional reforms in OECD countries. This reform was supported by two main pillars: (i) a new metropolitan authority, covering the functional area of Montreal including the urban fringe — the creation of the Montreal Metropolitan Community (CMM) in 2000; and (ii) a municipal reorganisation of the metropolitan region — the amalgamation of 28 cities in Montreal and seven cities in Longueuil in 2002.

***With the creation of the Montreal Metropolitan Community (CMM), a metro-wide player has emerged***

The Montreal Metropolitan Community (CMM) was the first answer to the expanding functional area beyond administrative borders. Whereas, municipalities or provincial agencies have executive powers, the CMM is a co-ordinating, planning and financing body for metropolitan-wide strategic functions, including spatial planning, economic development, social housing, public transport and infrastructure, environment and culture. Its metropolitan-wide view enables policy coherence across municipal borders and helps to channel investments where they are considered most beneficial for the region as a whole. It receives some tax revenue, coming from municipalities' contributions and provincial grants, but has no taxing power. The CMM is an interesting example of a metro-wide organisational body, trying to overcome fragmentation and to harmonise functional with administrative areas. Contrary to a single-purpose metropolitan agency, the CMM can follow an integrated and multi-sectoral strategy for the metropolitan region.

***The functional area covered by the CMM remains an intricate institutional mosaic…***

In the short and medium term, the main priority of public authorities should be to consolidate the newly created metropolitan body by giving it the means to implement its mandate. Firstly, a crucial condition is the streamlining of the metropolitan region's institutional structure. Presently, the territory of the CMM covers, partly or completely, five administrative regions. Three of these administrative regions are under the responsibility of the Ministry of Regional and Economic Development (MDER) while the other two are under the authority of the Ministry for Municipal Affairs, Sport and Leisure (MAMSL). The main concern with maintaining the existing boundaries of the administrative regions lies with the implementation of the provincial government's policies, which does not necessarily consider the reality of the functional region of Montreal. To ensure policy coherence and avoid conflict between competent ministries and between sub-national jurisdictions, it would be appropriate to create a single administrative region covering the CMM territory and dependent on one ministry. A similar institutional complication also applies to the RCMs (Regional Counties Municipalities) — fourteen supra-municipal structures that are, entirely or partially, included within the CMM territory. When they are partially included in the CMM area, their competencies are difficult to combine with those of the CMM.

***… that should be given more responsibilities for metropolitan-wide services as well as incentives***

Secondly, a sound metropolitan institutional level also requires framing metropolitan scale functions within a unified and global structure. Presently, the management of public transport has remained under the responsibility of the provincial Transport Metropolitan Agency (AMT) while it is one of the CMM's competencies. Therefore, it would be more

***mechanisms to facilitate co-ordination of local development policies***

efficient if one metropolitan entity were to be solely responsible for public transport planning and co-ordination. Moreover, the CMM is responsible for elaborating an economic development strategy for the whole metropolitan region. It encounters difficulties to ensure coherence and co-ordination with other sub-national entities concerned with the economic development strategy for their respective areas. The challenge is to strike a balance by placing the co-ordination and planning function at the metropolitan level without precluding local authorities from participating in the design of the metropolitan strategy. The streamlining of sub-metropolitan institutional structures and clarification of competencies will certainly help to face this challenge. Appropriate incentives and sanction mechanisms could contribute to ensuring the co-ordination with local authorities. For instance, the existing Metropolitan Development Fund, which finances development projects such as the current open shores enhancement project, could be extended for this purpose through conditional and performance mechanisms.

***Strengthening and expanding the CMM's responsibilities requires further financial resources…***

Thirdly, the question of metropolitan fiscal resources should be assessed in view of the CMM's increasing responsibilities. The endorsed property tax sharing program will provide the CMM with solid financial resources in the future as the municipalities have agreed to a sharing mechanism that takes into account a specific proportion of both the property tax base growth and property wealth of each municipality. If the CMM absorbs the AMT, it would be also useful to transfer the provincial gasoline tax supplement – presently going to the province to fund metropolitan public transport – directly to it and to increase revenues from public transport fees. Strengthening its role as a financing body for metropolitan-wide infrastructure may require additional fiscal resources. Moreover, in the long run, the establishment of the CMM as a regional service provider would require reviewing its funding mechanism, including the possibility to levy a metropolitan tax.

***… and a more direct form of public representation***

Finally, a main challenge for the CMM is to strengthen its legitimacy with regards to the metropolitan population. If the CMM is to increase its financing responsibility, and potentially become a regional service provider, popular legitimacy and representation forms should be reconsidered.

Currently the CMM's Board is composed of municipal mayors and councillors. A possible option to render the CMM more accountable to the population would be the direct elections of one or more of the CMM President, Board and Steering Committee. Strengthening the new metropolitan body also requires building a metropolitan communication strategy. The CMM should introduce a strategy of public awareness-raising and mobilisation, which could then be disseminated through local outlets at municipal or borough levels. It could also alleviate the lack of metropolitan identity by developing a more aggressive communication policy by seeking original ways of informing and involving the public. Broader and closer collaboration between the CMM and non-public actors could also be facilitated through the mutual participation of their respective bodies.

***The success of amalgamation depends on the effectiveness of the new local administration***

The second pillar of the reform, the amalgamation in Montreal and Longueuil, was pursued on three grounds. First, the reorganisation of public services and use of economies of scale should reduce public per capita expenditures. A real effect on cost is likely to depend on the quality of the new public administration. Second, amalgamation should reduce the fiscal burden of the old town of Montreal and fiscal disparities among urban municipalities. As tax rates are gradually approaching the same level across the amalgamated municipalities, fiscal equity is expected to increase with a new city-wide budget. Third, it should allow for greater policy co-ordination within the entire urban areas of Montreal and Longueuil respectively. This advantage should however remain limited in the case of Montreal since several services had already been managed at the Montreal Island level since the 1970s.

***Decentralisation at the boroughs' level should be pursued***

Amalgamation has roughly turned former municipalities into simple administrative units called *arrondissements* (boroughs) with limited responsibilities. Due to their purely executive role, some citizens have raised the issue of the amalgamation's democratic cost owing to the increased distance of decision-making. The boroughs do have budget responsibility and a certain autonomy. The *law 170* that led to their creation gave them the competencies to decide on the level of services while respecting a minimum standard. In fact, the effective implementation of such provisions requires the pursuit of local administration reform.

***Disamalgamation options should include the careful consideration of appropriate equalisation mechanisms without leading to the creation of a new institutional structure***

Potential "disamalgamation", currently on the political agenda, could again change the picture. If former municipalities reacquire some of their former prerogatives – mainly in the fiscal field, there could be risk of facing harmful tax competition and larger fiscal disparities. The initial draft of *law 9* supporting the disamalgamation project already provides some equalisation measures. It is necessary that such measures be maintained and that their importance be assessed in light of existing fiscal disparities among the different sectors of the amalgamated cities. *Law 9* also introduces the obligation that some competencies continue to be administered at the level of the amalgamated towns. However, it remains unclear who would be responsible for the shared services and equalisation responsibilities. Creating new supra-local structures would contribute to the over complicated institutional mosaic that characterises the Montreal metropolitan area. Instead, the existing metropolitan level could take over such responsibilities as it would have the additional advantage of reducing fiscal disparities and fiscal spillovers not only within the amalgamated cities, but within all of the municipalities of the metropolitan region.

***The tight fiscal environment could have a negative impact on the cities' development outlook***

Although the reform could have led to a more equal distribution of financial resources across the metropolitan area, questions pertaining to long term local fiscal sustainability, the efficient delivery of public services and their impact on the metropolitan economy remain unanswered. Montreal, like most other Quebec municipalities, has to function in a tightening fiscal environment. Quebec municipalities have a lower share of total government spending (13.7%) than the Canadian average (17.3%) and this ratio tends to recede further. Also, intergovernmental grants, both provincial and federal, have been reduced in the last few years. Limited municipal resources have to be set within a framework in which the province has taken over most financially significant responsibilities such as education, health and social welfare. The municipalities are solely dependant on property taxes, making it more difficult to compensate tax losses. Agreements such as the "Fiscal Pact" and the "City Contracts" have somewhat streamlined provincial-local fiscal relations but hardly relieved the financial pressure on local governments. Structural and long term fiscal gap and unfunded mandates are lively debated topics in Quebec's municipalities. A protracted fiscal drought at the local level could have a negative impact on municipal investments, with the corresponding dismal outlook for urban development.

***A diversified tax base could make the fiscal base more robust and reward local development efforts***

The strong reliance on property tax – 76 % of total local revenue – has been advanced as the main cause of the fiscal incapacity of Quebec's municipalities to meet their growing needs. The property tax has key advantages as a sub-national tax – it is immobile and cyclically stable. However, any revenue shortfalls can lead to underinvestment in municipal infrastructure. This could be more so the case for a metropolitan region like Montreal where the transition towards the knowledge-based economy and the ageing population may impact the residential and non-residential markets. A combination of different taxes would have the advantage of securing against cyclical shocks while providing a more responsive revenue system and better rewarding local policymakers' efforts for local economic development initiatives. Any reassignment of local taxes would have to take into account the recent reallocation in municipal responsibilities and be closely linked with the ongoing decentralisation project.

***Provincial-municipal collaboration is confined to sectoral agreements and lacks an overall vision for the metropolitan area***

Relations between the local, supra-municipal and higher levels of government should evolve considering the new actors that have appeared with the recent institutional reform. Similar to other Canadian cities, there are numerous sectoral agreements between the provincial government and municipalities in the areas of environment, tourism and/or economic development. Although circumscribed in a special legal framework in Quebec, there are also a number of federal/municipal partnerships. Sectoral projects and agreements have often proved useful and flexible but rarely take into account multi-sectoral aspects and generally lack a co-ordinated, long term view of urban and metropolitan issues.

***The "City Contract" in Montreal is a first attempt towards more formalised intergovern-mental partnerships…***

More formalised relations such as intergovernmental contracts lead to increased commitment by actors and greater integration of the projects. In this respect, the "City Contract" signed by the government of Quebec and the city of Montreal at the beginning of 2003 is a promising first step. The "City Contract" is considered as a financial support for Montreal in areas such as social housing, culture and public transport. It has a single envelope of CAD 1.4 billion for a five year period. Once the overall objectives are jointly defined, the city will be autonomous in operational and financial execution. The contract could become even more valuable if clearly defined objectives and outcome indicators are set. Financial and other types of sanctions could spur both provincial and local levels to fulfil their contractual obligations.

***…that could be held at the metropolitan level as well***

Given the metropolitan-wide impact of many policy areas, a city contract extended to the metropolitan level could foster policy coherence and provide efficient public services not only for the city but for the entire functional area of Metropolitan Montreal. The tripartite agreement implemented in some western Canadian cities could serve as the basis of this metropolitan contract, which would take into account Quebec specificities. Any type of contract, either at the municipal or the metropolitan level, should be duly funded and binding (for new governments as well). Such contracts could consider involving civil society and the private sector. Finally, public-private partnerships could be better exploited on a metropolitan scale, and sectoral agreements or an integrated partnership could be established to implicate civil society representatives in metropolitan policy-making.

***A more strategic, metropolitan wide approach to economic development would bring positive results…***

Presently, there are a large number of federal, provincial, metropolitan and municipal agencies involved in the economic development of the metropolitan region of Montreal, in addition to the chambers of commerce and non-governmental organisations. Some of these actors are sector-specific, others address cross-sectoral issues. Some are strategic in nature, others are involved in programme delivery. Some operate on the metropolitan region such as the CMM and the Board of Trade of Metropolitan Montreal, others cover different geographical areas. Yet, Montreal is not fully exploiting its competitive advantages due to fragmentation in decision-making, lack of integration between key actors in the regional economy and duplication of efforts. A major challenge is how to co-ordinate the efforts of the different institutions. Two aspects of the economy should be addressed: the vertical/sectoral strengths and weaknesses, and the horizontal/factor-related strengths and weaknesses.

***…aimed at improving vertical (i.e. regional clusters) ...***

From a vertical perspective, Montreal's economy is based on strong specialisation in a number of clusters that generate important external economies for local firms. An assessment of the relative situation of the different clusters indicates three different categories: established competitive clusters (such as aerospace and biotech), emerging clusters (such as culture industries or fashion design), and more diffuse clusters (such as IT industries). Their development will depend on the quality of inter-firm relations, innovation support and the availability of high-skilled workers. Currently, there are a number of disconnected cluster-based initiatives in the Montreal region, most often endeavoured to the promotion of zone- or firm-specific incentives and subsidies. As Montreal moves forward towards defining a metropolitan strategy, identifying clusters, setting priorities and strengthening networking aspects will become crucial.

***…as well as horizontal (i.e. input factors) dimensions of the economy***

Cluster actions alone, however, are not enough. Horizontal factors that cut across multiple sectors provide a basis for sustained regional competitiveness. Montreal has strong human capital assets and dense research and education infrastructures, yet the institutional framework to support the continuous upgrading of these assets and to ensure close links between knowledge "production" and the firms that benefit from it is somehow disjointed. Weaknesses in initiatives or policy coherence could be illustrated in four selected fields: (i) the role of educational institutions in linking knowledge producers and users, (ii) entrepreneurship and firm creation in maintaining dynamism in the economy, (iii) access to finances to ensure that innovations can be commercialised, and (iv) a clear and unified marketing "message" to promote the metropolitan area as a quality location for investment.

***The links between universities and local business should be improved…***

(i) In the education field, different programmes within universities encourage either links between firms and research initiatives or between students and firms (*e.g.* the COOP training programme). At the same time, the network of CEGEPs (General and Vocational Colleges) do not appear to fully exploit their existing potential to emulate US community colleges that forge close relationships with local businesses, particularly SMEs. The emergence of community colleges as important actors in local economic development in the U.S. could serve as a model to guide the evolution of the CEGEPs in this direction.

***…as is the case for entrepreneurship initiatives targeted at principal vertical clusters***

(ii) A multitude of governmental and non-governmental actors are involved in the delivery of programmes to foster entrepreneurship, which tends to pose significant problems of co-ordination. More problematic in the case of Montreal is the lack of strong entrepreneurship policies directed specifically at the main clusters, the sectors that drive the economy in which specialised skills and thus, innovative capacity are densest. For instance, in the ICT and biotechnology activities, two sectors where entrepreneurship is an important source of new ideas and techniques, targeted, sector- or technology-specific collective services for potential entrepreneurs would help provide a more supportive environment for new firms.

***Public sector financing should focus more on building collaborative networks***

(iii) Access to appropriate capital, particularly to venture capital, was identified as being a hindrance to economic development in the region.  This gap in private sector capital is in part met by a pool of public sector investment, mainly through subsidies to private capital. In this respect, the issue of whether the role taken by the public sector in providing finance crowds out private sector risk capital becomes important. The provincial government's assistance should be extended to the commercialisation of research and the production of new products and services. In general, the government’s approach remains strongly biased towards tax subsidies with little focus on building collaborative networks and sectoral relationships that might promote more incremental innovation and learning.

***A marketable metropolitan identity remains lacking***

(iv) All economic activities benefit from association with a quality location: an area that possesses attributes attractive and/or necessary to investors and skilled workers. This attractiveness is partially derived from the ability to group assets together under a recognised, marketable identity/brand, which in this case is the metropolitan region of Montreal. Nonetheless, rather than promote regional attributes, marketing and investment promotion initiatives in the Greater Montreal still remain municipal and/or sectoral. An important element of the cluster strategy should involve presenting clusters as regional assets that benefit from a supportive regional environment rather than as belonging to a particular municipality or locality.

***A metropolitan-wide co-ordination committee would provide a framework for the different actors while building synergies between the vertical and horizontal dimensions of the economy***

Implementing a clear and coherent strategy for the economic development of the whole metropolitan region requires a collaborative framework. Networking in key sectors is crucial to build and maintain the relations from which clusters draw their competitive advantage. At the same time, more general networking efforts across the wider innovation system would provide an important input to the existing clusters, but also support the several emerging and more diffuse clusters in the Montreal economy. A metropolitan-wide co-ordinating committee could thus play a critical role in facilitating interactive processes in different domains. Such a body could also provide a vehicle for a more cohesive "learning region" strategy that would bring together the policy initiatives in "horizontal" fields, in particular those relating to the region's knowledge/innovation system. This committee should also be able to create synergies between sectoral potential and improvements in input factors such as entrepreneurship, education and research, access to finance and marketing. Some examples include:

- Developing a unified marketing strategy for the emerging culture cluster to simultaneously explore the economic potential of this emerging sector and increase active engagement in the regional identity concept, thereby opening the door for more general engagement;
- Improving education and training provision for the ICT diffuse sector to understand better the potential and needs of this diffuse sector and at the same time

improve joint action among different educational institutions towards a specific goal, again opening the door for more general co-ordination;

- Increasing the availability of finance in the life sciences/biotechnology cluster to raise awareness of the issue of access to finance and address its implications in a specific area in the performance of the regional economy.

In each case, an institutional forum is necessary to take on the specific initiative but also to "mainstream" progress made in other sectors, and bring in other actors.

***To sum up: governance issues should be solved as soon as possible to allow the implementation of a strategic economic development policy***

Montreal finds itself in somewhat of a paradox. With its low costs, high quality of life, and wide-range of industrial, cultural, education, and social strengths, Montreal has a vibrant and dynamic economy that makes it the envy of less endowed regions. Yet, this same diversity and complexity also serve to undermine the region's economic dynamism when they give way to institutional isolation and fragmented decision-making. If Montreal wants to pursue its expansion to external markets and continue to register economic growth and employment, it has to increase productivity, reinforce existing regional clusters through policies that support innovation and attract high-skilled talents. In other words, it has to focus now on qualitative growth instead of quantitative growth. Implementing a co-ordinated economic plan for the whole metropolitan region will be central to achieving better competitiveness. Recent institutional reforms, whether they be the amalgamation of Montreal and Longueuil or the creation of a Metropolitan Community, have started to address problems such as urban sprawl, fiscal disparities, inadequate public services or lack of regional co-ordination. Consolidating local and metropolitan governance should be a short term priority as uncertainty surrounding the present framework will eventually undermine businesses' confidence. Streamlining institutional structures and fiscal resources will however not be enough. Implementing and not simply elaborating a comprehensive economic strategy for the whole metropolitan region will be the main challenge for Montreal in the following years.

# CHAPTER 1

# MONTREAL AND OECD METROPOLITAN REGIONS

With a population of 3.43 million inhabitants, the metropolitan region of Montreal (Metropolitan Montreal) is the second most populous area of Canada (after Toronto) and the 15$^{th}$ largest urban agglomeration in Canada and the U.S. combined. Today, the metropolitan region of Montreal is the second largest contributor of Canadian metropolitan regions to national GDP. It has registered good economic performance in recent years, recovering steadily from the economic crisis of the first half of the 1990s. The sources of growth (in GDP per capita) since 1991 show its recent good performance in improving the labour market situation, *i.e.* the significant turn around in participation and in employment rates. Moreover, within the context of the integration in the international economy, and in particular in the economic area of North America since the North American Free Trade Agreement (NAFTA) entered into force in 1994, Metropolitan Montreal has managed to strengthen its position in leading sectors of the knowledge-based economy and to benefit from increasing foreign trade and investment.

However, when assessed in an international context, how does the competitiveness of Montreal fare? While Montreal has often been compared to US metropolitan regions, this chapter intends to provide a broader perspective by comparing Montreal's competitiveness with a selection of 65 OECD metropolitan areas. The conclusion is that, despite significant improvement, at the international level, Montreal is not very well positioned in terms of competitiveness, notably due to relatively lower labour productivity, which can be mostly explained by insufficient educational attainment. Montreal is now faced with the challenges of maintaining its competitive position in external markets, pursuing the development of innovative clusters and continuing to attract capital and skills. A coherent and integrative metropolitan strategy will be crucial to meet these challenges.

## What is the metropolitan region of Montreal?

Metropolitan Montreal, *i.e.* the Montreal CMA (Census Metropolitan Area) according to Statistics Canada, has been defined around the urban core of the municipality of Montreal, and it includes 65 municipalities. This definition is based mainly on commuting flows criteria, which is the most typical concept used in OECD countries to delineate a functional area (Box 1.1). Labour movements in the metropolitan region reflect the evolution of the localisation of economic activities. These activities have developed around clusters dispersed throughout the region, although many are concentrated in the Montreal Island, Laval and Longueuil[1] (Figures 1.1 to 1.5). Transport infrastructure also reflects this pattern, *i.e*. the metropolitan transport network (highways, roads and public transport) has developed around the urban centre to serve other areas of the region[2].

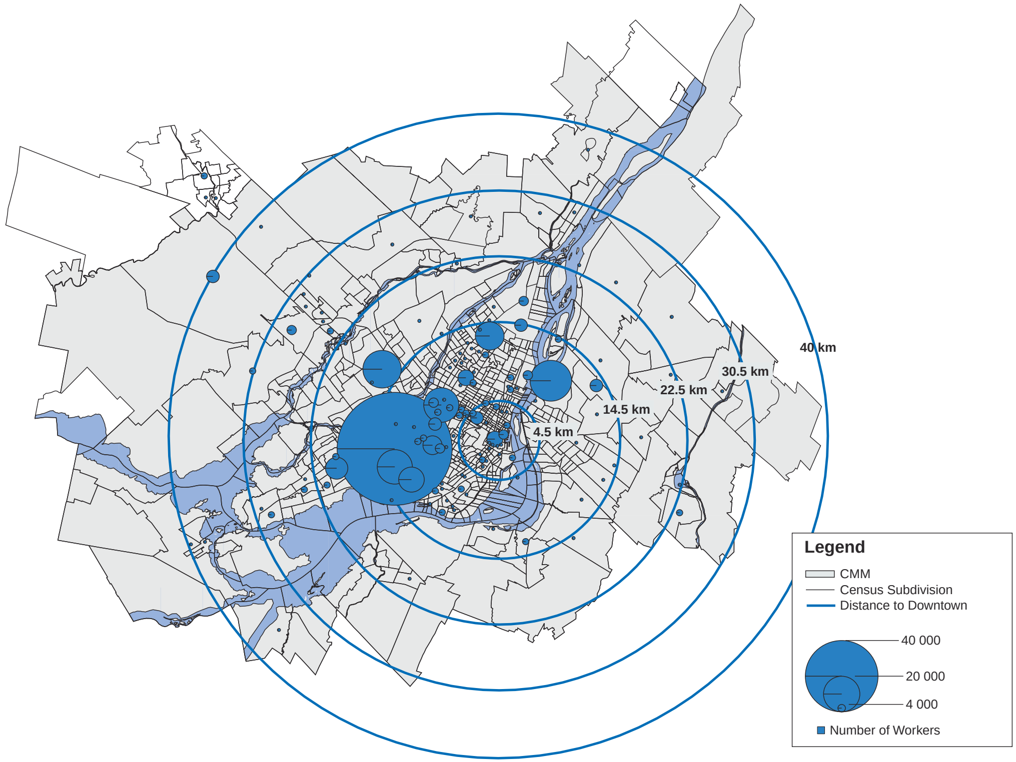
**Box 1.1. Defining a functional metropolitan region**

The choice of the territorial unit of analysis is of prime importance. This territorial unit should correspond to a functional area, *i.e.* it should reflect the spatial organisation of social and economic relations. In OECD countries, the most typical concept used in defining a functional region is that of the labour markets. Accordingly, functional regions are delineated based on common commuting conditions. Even though there are slight differences in the definitions (in that the parameters applicable to commuters can vary from one country to another and/or the travel-to-work criterion may be combined with other criteria such as daily travel distances, inter-city co-operation) the rationale underlying the delineation of such regions nonetheless remains the same, that is commuting conditions (OECD 2002*d*). While labour mobility is the most commonly used criterion, there could be also influential factors to delineate a functional area such as transport infrastructure or industrial development, *e.g.* clusters development and the inter-firm relations.

Regarding metropolitan regions in Canada, Statistics Canada uses an approach that combines functional (commuting flows to and from the urban core) as well as morphological (a densely populated urban core) criteria (Mendelson and Lefebvre, 2003) to define the unit of socio-economic analysis (*i.e.* the Census Metropolitan Area—CMA). A CMA begins with an urban core (at least 100 000 residents) to which adjacent municipalities are added according to their commuting flows. The functional criterion delineates the municipalities to be included in the CMA. The municipalities must fulfil forward or reverse commuting flow rules: the former requires a minimum of 100 commuters and at least 50% of the labour force (in the municipality) working in the urban core; and the latter includes a minimum of 100 commuters and at least 15% of the labour force (working in the census subdivision) living in the urban core (Mendelson and Lefebvre 2003).

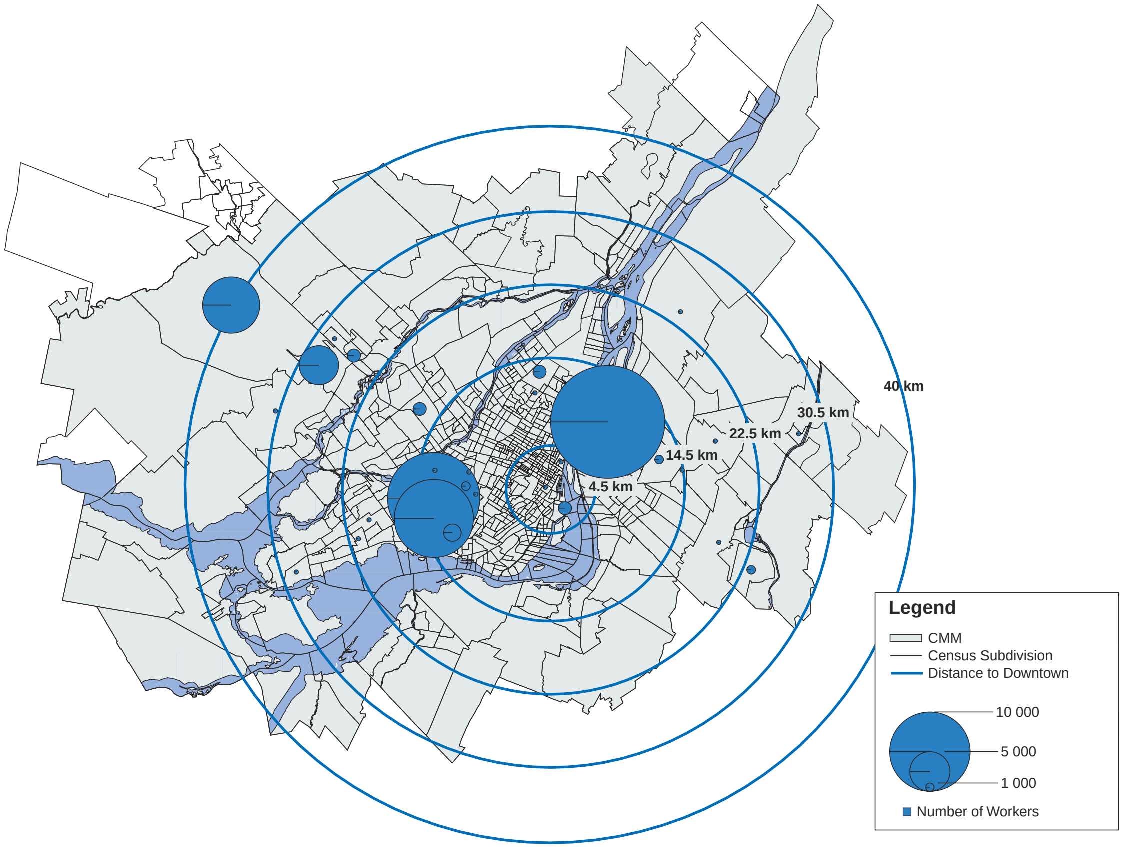
*Source*: OECD (2002*d*)

Figure 1.1. **Localisation of selected clusters : Manufacturing industries**



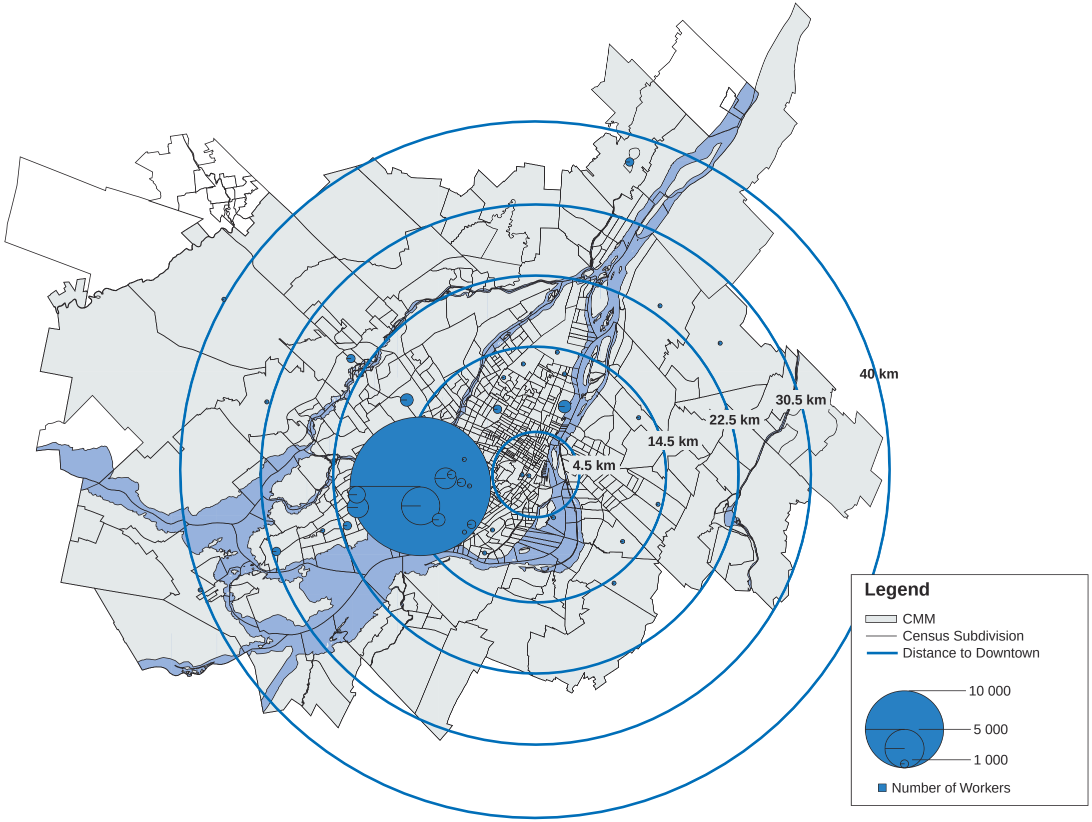

*Source*: Montreal Metropolitan Community

Figure 1.2. **Localisation of selected clusters: Transport Equipment (manufacturing industries)**



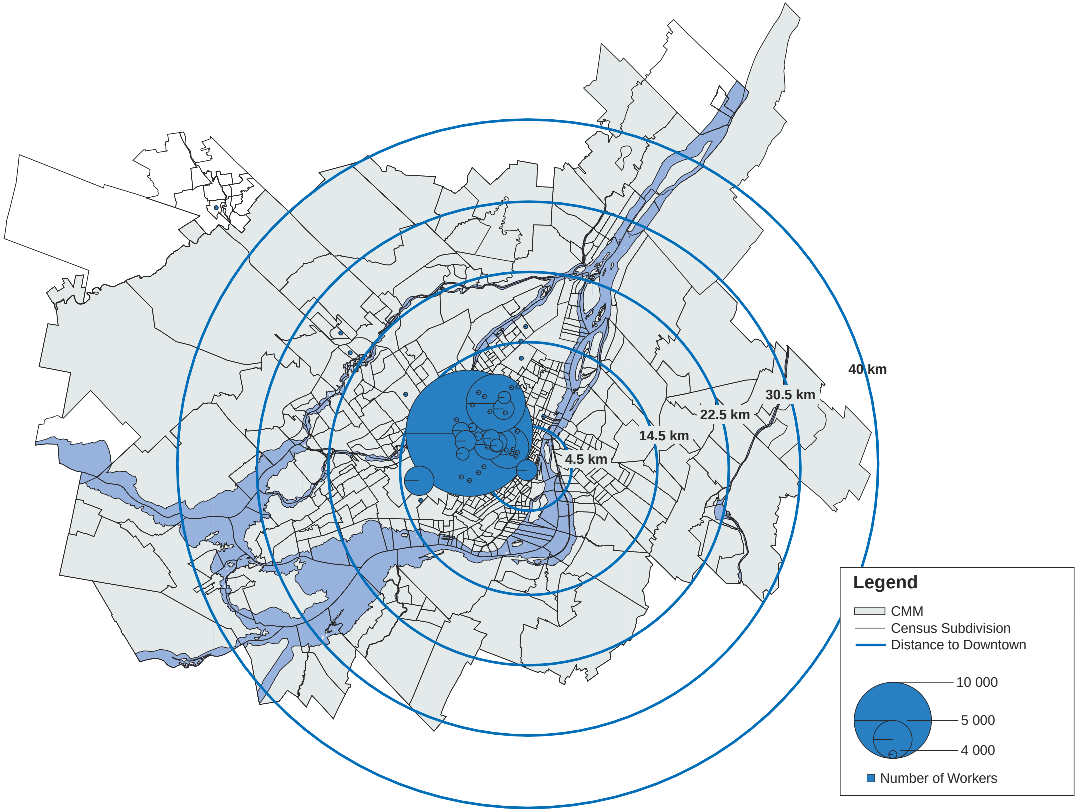

*Source*: Montreal Metropolitan Community.

Figure 1.3. **Localisation of selected clusters: electric and electronic product industries**



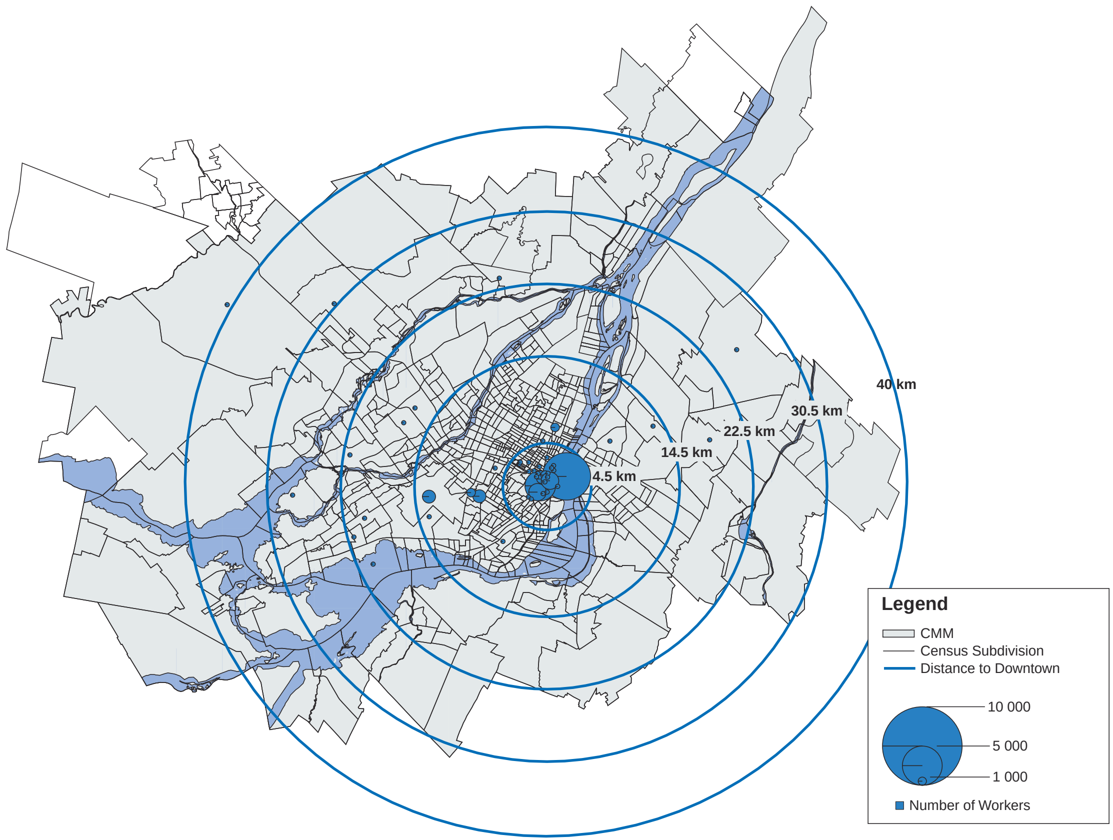

*Source*: Montreal Metropolitan Community.

Figure 1.4. **Localisation of selected clusters: Textile and Clothing industries**




*Source*: Montreal Metropolitan Community.

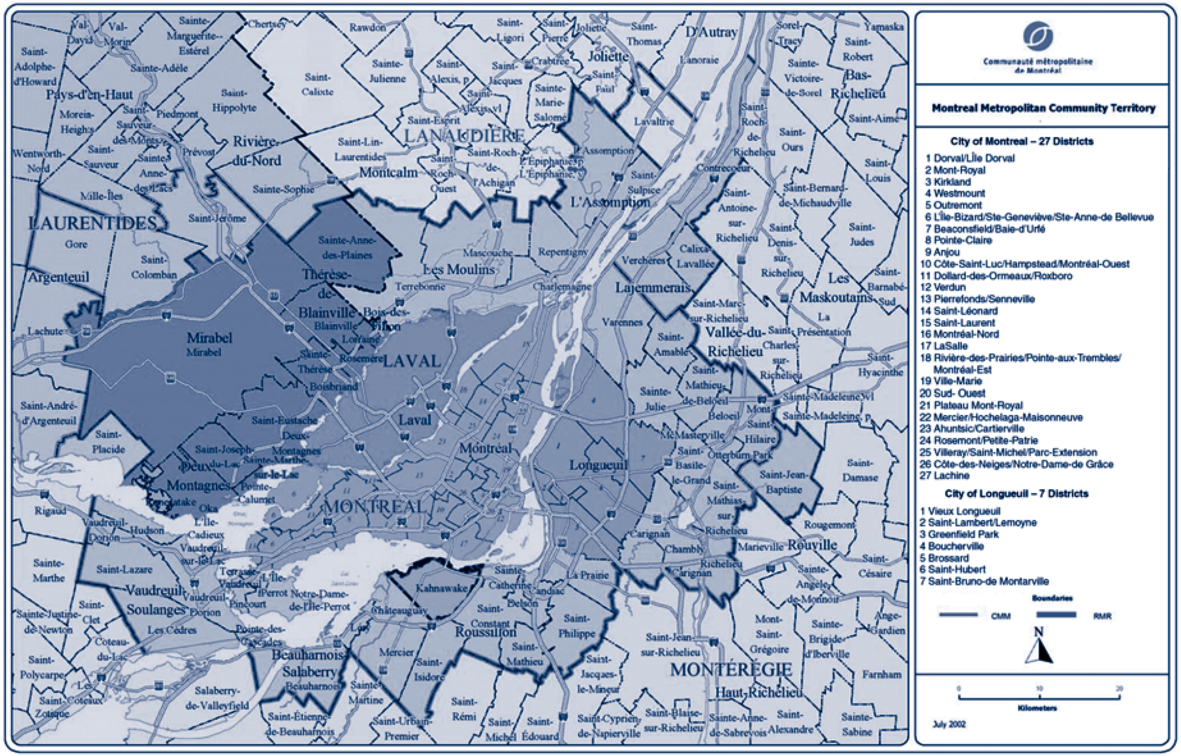
Figure 1.5. **Localisation of selected clusters: Art, entertainment and recreation services**




*Source*: Montreal Metropolitan Community.

Although it is common to find administrative units that are incompatible with functional regions, this is not entirely the case in Metropolitan Montreal. In fact, since January 2001, a new metropolitan institutional body has been set up by the government of Quebec: the Montreal Metropolitan Community (CMM). The CMM was defined to include 63 municipalities that can be grouped into five major sub-regions: Montreal, Laval, Longueuil, North Shore and South Shore. Except for the City of St-Jérôme and certain low density small municipalities on the North and South Shores[3], the territory of the CMM matches almost exactly the territory of the Montreal Census Metropolitan Area (CMA), the functional territorial unit defined by Statistics Canada[4] (Figure 1.6). Thus, when assessing Montreal's competitiveness in the following sections, the Montreal CMA will serve as the unit of analysis, and the results of the analysis will also be applicable to the territory covered by the CMM.

Figure 1.6. **Map of the Montreal Metropolitan Region, 2002**

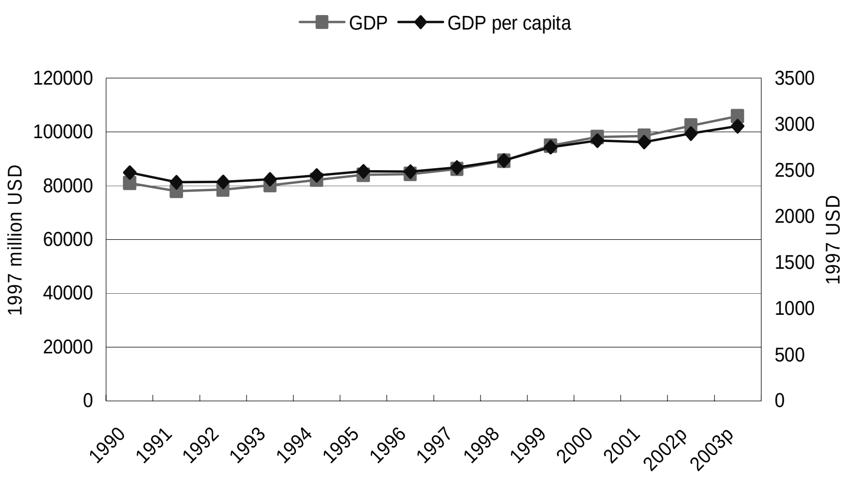



*Source*: Montreal Metropolitan Community.

## Assessing Montreal's competitiveness

Despite its limited growth in employment since the 1980s and the economic turbulence of the early 1990s, Montreal remains among the leading contributors of Canada's GDP[5] (9.8% in 2001). Its position within Quebec[6] is even more striking, producing around half of provincial GDP. In 1999, Montreal accounted for 52% of manufacturing shipments, 70% of high technology manufacturing firms, 70% of exports, and 90% of research and development expenditures in Quebec (MAMM 2001). Its GDP grew from CAD 86.2 billion in 1997 to CAD 104 billion[7] in 2002, *i.e.* an annual growth rate of 3.6%, behind Toronto (5.4%), but ahead of Vancouver (3%) (Figure 1.7). According to the Conference Board of Canada, short-term prospects forecast a real GDP growth rate of 3.2% in 2003 and 3.0% for the period 2004-2007 (Conference Board, 2003).Yet, in terms of GDP per capita, Montreal ranks behind both Vancouver and Toronto.

Figure 1.7. **Evolution of GDP and GDP per capita of Montreal CMA**




*Source*: Conference Board of Canada

At an international level[8], Metropolitan Montreal is somewhat lagging in terms of competitiveness. Indeed, compared with a selection of OECD metropolitan regions with more than 2 million inhabitants (27 of which are located in Europe, 12 in Asia, 23 in the U.S. and 3 in Canada), the Montreal CMA is found at the bottom third of the ranking with regards to real GDP per capita[9] for 2001, positioning 44 out of 65 (Table 1.1)[10]. At USD 26 629, its GDP per capita is below all North American metropolitan regions, as well as other European and Japanese metropolitan regions, *i.e.* Tokyo (10), Ile-de-France Paris (16), London (22), Stuttgart (31), Rome (37) and Comunidad de Madrid (43). Nonetheless, Montreal's GDP per capita is higher than that of Barcelona (48), the Berlin Region (51), Budapest (56), Attiki-Athens (58) and Seoul (62).

Table 1.1. **Competitiveness ranking among selected OECD metropolitan regions, 2000**

| Country | Metropolitan Region | Real GDP Per capita | Index Montreal = 100 | Rank |
|---|---|---|---|---|
| US | Boston | 73 470 | 276 | 1 |
| US | San Francisco | 64 836 | 243 | 2 |
| US | Seattle | 50 241 | 189 | 3 |
| US | New York | 48 562 | 182 | 4 |
| US | Dallas | 46 584 | 175 | 5 |
| US | Washington | 44 750 | 168 | 6 |
| US | Denver | 44 113 | 166 | 7 |
| Germany | Regnion München-Ingolstadt | 43 197 | 162 | 8 |
| US | Houston | 42 838 | 161 | 9 |
| Japan | Tokyo | 42 694 | 160 | 10 |
| US | Atlanta | 41 478 | 156 | 11 |
| US | Chicago | 41 285 | 155 | 12 |
| Italy | Milan | 40 081 | 151 | 13 |
| US | Los Angeles | 40 031 | 150 | 14 |
| US | San Diego | 39 318 | 148 | 15 |
| France | Ile de France | 38 951 | 146 | 16 |
| US | Minneapolis Saint Paul | 38 587 | 145 | 17 |
| US | Portland-Vancouver | 38 279 | 144 | 18 |
| US | Baltimore | 38 242 | 144 | 19 |
| US | Cleveland | 37 479 | 141 | 20 |
| US | Philadelphia | 36 837 | 138 | 21 |
| R.U | London | 36 719 | 138 | 22 |
| Germany | Darmstadt | 36 629 | 138 | 23 |
| US | Detroit | 36 376 | 137 | 24 |
| US | Phoenix | 35 400 | 133 | 25 |
| US | Pittsburgh | 35 378 | 133 | 26 |
| US | St. Louis | 35 318 | 133 | 27 |
| US | Tampa-Saint-Petersburg | 35 198 | 132 | 28 |
| Germany | Region Hamburg | 34 449 | 129 | 29 |
| Canada | Toronto | 33 581 | 126 | 30 |
| Germany | Stuttgart | 30 044 | 124 | 31 |
| US | Miami | 32 695 | 123 | 32 |
| Netherlands | Noord-Holland | 31 830 | 120 | 33 |

| Table 1.1. (continued) | | | | |
|---|---|---|---|---|
| Germany | Rheinland | 31 227 | 117 | 34 |
| Italy | Turin | 31 125 | 117 | 35 |
| Germany | Karlsruhe | 30 921 | 116 | 36 |
| Italy | Rome | 30 477 | 114 | 37 |
| Canada | Vancouver | 28 545 | 107 | 38 |
| Netherlands | Zuid-Holland | 28 284 | 106 | 39 |
| Japan | Aichi | 28 007 | 105 | 40 |
| Japan | Osaka | 27 134 | 102 | 41 |
| Netherlands | Noord-Brabant | 26 895 | 101 | 42 |
| Spain | Comunidad de Madrid | 26 858 | 101 | 43 |
| Canada | Montreal | 26 629 | 100 | 44 |
| Germany | Detmold | 25 997 | 98 | 45 |
| Germany | Rheinhessen-Pfalz | 25 903 | 97 | 46 |
| Germany | Freiburg | 25 890 | 97 | 47 |
| Spain | Barcelona | 24 146 | 91 | 48 |
| Germany | Ruhrgebiet | 23 591 | 89 | 49 |
| UK | Greater Manchester | 22 140 | 83 | 50 |
| Germany | Region Berlin | 21 432 | 80 | 51 |
| Japan | Kanagawa | 21 227 | 80 | 52 |
| France | Region Nord | 21 077 | 79 | 53 |
| Japan | Fukuoka | 20 308 | 76 | 54 |
| Spain | Valencia | 20 188 | 76 | 55 |
| Hungary | Budapest + Pest | 19 288 | 72 | 56 |
| Japan | Chiaba | 18 614 | 70 | 57 |
| Greece | Attiki | 17 444 | 66 | 58 |
| Japan | Saitama | 17 272 | 65 | 59 |
| Korea | Gyeonggi | 16 365 | 61 | 60 |
| Italy | Naples | 15 860 | 60 | 61 |
| Korea | Seoul | 14 460 | 54 | 62 |
| Korea | Incheon | 12 146 | 46 | 63 |
| Korea | Busan | 10 854 | 41 | 64 |
| Korea | Daegu | 9 343 | 35 | 65 |

*Source*: OECD Territorial Database

The main comparative advantage of Montreal lies in the large size of its labour force while its major weakness is a low level of productivity. Three factors contribute to the observed difference in GDP per capita between Montreal and other metropolitan regions: productivity, efficiency of the local labour market, and relative size of the labour force. Greater productivity is reflected in a higher level of GDP per worker, a more efficient labour market results in an increase in employment and production while a larger labour force relative to population implies a higher GDP per capita. Among OECD metropolitan regions, Montreal's productivity ranking is the lowest (49), whereas it performs better when ranking is based on activity rate (20) and its ranking based on employment rate (46) is almost reflective of its positioning in terms of GDP growth (Tables 1.2 to 1.4). On average, 62% of the difference between Montreal and the other metropolitan regions is explained by lower average productivity, 37% by a higher activity rate and the remaining 1% by a lower employment rate (Table 1.5).

Table 1.2. **Ranking of OECD metropolitan regions based on average labour productivity,**

| ISO Code | Metropolitan region | Average Labour P.tivity | Index Montreal = 100 | Rank | ISO Code | Metropolitan region | Average Labour P.tivity | Index Montreal = 100 | Rank | ISO Code | Metropolitan region | Average Labour P.tivity | Index Montreal = 100 | Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| US | Boston | 138 462 | 255 | 1 | UK | London | 79 162 | 146 | 24 | FRA | Nord | 56 724 | 104 | 48 |
| US | San Francisco | 117 641 | 216 | 2 | US | Cleveland | 76 852 | 141 | 25 | CAN | Montreal | 54 351 | 100 | 49 |
| US | New York | 114 172 | 210 | 3 | US | San Diego | 76 746 | 141 | 26 | CAN | Vancouver | 54 005 | 99 | 50 |
| ALL. | Müchen-Ingolstadt | 104 772 | 193 | 4 | ALL | Detmold | 76 514 | 141 | 27 | NLD | Noord-Brabant | 53 840 | 99 | 51 |
| ALL. | Region Hamburg | 96 275 | 177 | 5 | US | Atlanta | 76 466 | 141 | 28 | JPN | Aichi | 53 499 | 98 | 52 |
| ALL. | Darmstadt | 95 684 | 176 | 6 | ITA | Turin | 75 873 | 140 | 29 | ESP | Valencia | 51 971 | 96 | 53 |
| ITA | Milan | 94 966 | 175 | 7 | US | Baltimore | 74 771 | 138 | 30 | UK | Greater Manchester | 48 339 | 89 | 54 |
| US | Seattle | 93 087 | 171 | 8 | US | Philadelphia | 74 709 | 137 | 31 | HUN | Budapest | 46 244 | 85 | 55 |
| ALL. | Rheinland | 90 097 | 166 | 9 | US | Detroit | 72 785 | 134 | 32 | JPN | Fukuoka | 43 845 | 81 | 56 |
| ALL. | Stuttgart | 87 643 | 161 | 10 | US | Pittsburgh | 72 548 | 133 | 33 | JPN | Kanagawa | 42 451 | 78 | 57 |
| ALL. | Karlsruhe | 86 649 | 159 | 11 | US | Phoenix | 72 196 | 133 | 34 | GRC | Attiki | 42 193 | 78 | 58 |
| ALL. | Rheinhessen-Pfalz | 85 989 | 158 | 12 | US | Minneapolis-St Paul | 71 724 | 132 | 35 | JPN | Chiba | 37 071 | 68 | 60 |
| FRA | Ile de France | 85 812 | 158 | 13 | US | Miami | 71 620 | 132 | 36 | KOR | Seoul | 34 269 | 63 | 61 |
| US | Dallas | 84 746 | 156 | 14 | US | Portland-Vancouver | 71 544 | 132 | 37 | JPN | Saitama | 33 962 | 62 | 62 |
| US | Chicago | 84 221 | 155 | 15 | US | St. Louis | 69 692 | 128 | 38 | KOR | Incheon | 29 444 | 54 | 63 |
| US | Denver | 83 797 | 154 | 16 | US | Tampa-St-Petersburg | 68 116 | 125 | 40 | KOR | Busan | 27 042 | 50 | 64 |
| JPN | Tokyo | 83 637 | 154 | 17 | ALL. | Region Berlin | 66 006 | 121 | 41 | KOR | Daegu | 22 843 | 42 | 65 |
| US | Houston | 83 381 | 153 | 18 | NLD | Noord-Holland | 63 900 | 118 | 42 | | | | | |
| ITA | Rome | 82 666 | 152 | 19 | ITA | Naples | 63 235 | 116 | 43 | | | | | |
| US | Washington | 81 994 | 151 | 20 | ESP | Barcelona | 63 012 | 116 | 44 | | | | | |
| US | Los Angeles | 80 722 | 149 | 21 | CAN | Toronto | 62 371 | 115 | 45 | | | | | |
| ALL. | Ruhrgebiet | 79 302 | 146 | 22 | JPN | Osaka | 57 791 | 106 | 46 | | | | | |
| ALL. | Freiburg | 79 220 | 146 | 23 | NLD | Zuid-Holland | 56 862 | 105 | 47 | | | | | |

*Source*: OECD Territorial Database

Table 1.3. **Ranking of OECD metropolitan regions based on average employment rate**

| ISO code | Metropolitan region | Employ-ment rate % | Index Montreal = 100 | Rank | ISO code | Metropolitan region | Employ-ment rate % | Index Montreal = 100 | Rank | ISO code | Metropolitan region | Employ-ment rate % | Index Montreal = 100 | Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NLD | Noord-Brabant | 97.8 | 106 | 1 | KOR | Seoul | 95.0 | 103 | 24 | US | Miami | 92.0 | 99 | 47 |
| NLD | Zuid-Holland | 97.3 | 105 | 2 | KOR | Incheon | 94.8 | 102 | 25 | ALL | Darmstadt | 91.8 | 99 | 48 |
| NLD | Noord-Holland | 97.1 | 105 | 3 | HUN | Budapest | 94.7 | 102 | 26 | ALL | Karlsruche | 91.6 | 99 | 49 |
| US | San Diego | 96.7 | 104 | 4 | US | Cleveland | 94.7 | 102 | 27 | ITA | Turin | 91.5 | 99 | 50 |
| US | Minneapolis-St Paul | 96.5 | 104 | 5 | US | Phoenix | 94.7 | 102 | 28 | ALL | Freiburg | 91.5 | 99 | 51 |
| US | Washington | 96.5 | 104 | 6 | ITA | Milan | 94.6 | 102 | 29 | FRA | Ile de France | 91.3 | 99 | 52 |
| US | Boston | 96.3 | 104 | 7 | US | Detroit | 94.6 | 102 | 30 | ESP | Barcelona | 90.6 | 98 | 53 |
| KOR | Gyeonggi | 96.2 | 104 | 8 | JPN | Fukuoka | 94.1 | 102 | 31 | ESP | Comunidad de Madrid | 90.2 | 97 | 54 |
| JPN | Aichi | 96.0 | 104 | 9 | US | Chicago | 94.1 | 102 | 32 | ALL | Region Hamburg | 89.4 | 97 | 55 |
| US | Philadelphia | 95.9 | 104 | 10 | US | Dallas | 94.1 | 102 | 33 | ALL | Detmold | 89.2 | 96 | 56 |
| US | Atlanta | 95.8 | 104 | 11 | US | Los Angeles | 94.1 | 102 | 34 | ALL | Rheinland | 89.0 | 96 | 57 |
| US | Pittsburgh | 95.8 | 104 | 12 | CAN | Toronto | 94.1 | 102 | 35 | ALL | Rheinhessen-Pflaz | 88.5 | 96 | 58 |
| US | Tampa-St-Petersburg | 95.6 | 103 | 13 | ALL. | München-Ingolstadt | 94.1 | 102 | 36 | ITA | Rome | 88.1 | 95 | 59 |
| US | Houston | 95.5 | 103 | 14 | UK | Greater Manchester | 94.0 | 102 | 37 | GRC | Attiki | 87.8 | 95 | 60 |
| US | San Francisco | 95.5 | 103 | 15 | US | Seattle | 93.8 | 101 | 38 | ESP | Valencia | 87.7 | 95 | 61 |
| US | Baltimore | 95.4 | 103 | 16 | US | New York | 93.5 | 101 | 39 | FRA | Nord | 86.6 | 94 | 62 |
| JPN | Chiba | 95.3 | 103 | 17 | KOR | Busan | 93.1 | 101 | 40 | ALL | Ruhrgebiet | 85.0 | 92 | 63 |
| JPN | Saitama | 95.3 | 103 | 18 | UK | London | 93.0 | 101 | 41 | ALL | Region Berlin | 80.4 | 87 | 64 |
| JPN | Kanagawa | 95.2 | 103 | 19 | JPN | Osaka | 93.0 | 100 | 42 | ITA | Naples | 72.1 | 78 | 65 |
| JPN | Tokyo | 95.2 | 103 | 20 | ALL. | Stuttgart | 93.0 | 100 | 43 | | | | | |
| KOR | Daegu | 95.2 | 103 | 21 | CAN | Vancouver | 92.8 | 100 | 44 | | | | | |
| US | St Louis | 95.1 | 103 | 22 | US | Portland-Vancouver | 92.7 | 100 | 45 | | | | | |
| US | Denver | 95.0 | 103 | 23 | CAN | Montreal | 92.5 | 100 | 46 | | | | | |

*Source*: OECD Territorial Database

Table 1.4. **Ranking of OECD metropolitan regions based on average activity rate**

| ISO code | Metropolitan region | Activity rate % | Index Montreal = 100 | Rank | ISO code | Metropolitan region | Activity rate % | Index Montreal = 100 | Rank | ISO code | Metropolitan region | Activity rate % | Index Montreal = 100 | Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| US | Dallas | 58.4 | 110 | 1 | US | Chicago | 52.1 | 98 | 25 | ESP | Comunidad de Madrid | 43.1 | 81 | 49 |
| US | San Francisco | 57.7 | 109 | 2 | US | Phoenix | 51.8 | 98 | 26 | KOR | Busan | 43.1 | 81 | 50 |
| US | Portland-Vancouver | 57.7 | 109 | 3 | US | Cleveland | 51.5 | 97 | 27 | KOR | Daegu | 43.0 | 81 | 51 |
| US | Seattle | 57.6 | 109 | 4 | US | Philadelphia | 51.4 | 97 | 28 | FRA | Nord | 42.9 | 81 | 52 |
| CAN | Toronto | 57.2 | 108 | 5 | NLD | Noord-Holland | 51.3 | 97 | 29 | ESP | Barelona | 42.3 | 80 | 53 |
| CAN | Vancouver | 56.9 | 108 | 6 | NLD | Zuid-Holland | 51.1 | 97 | 30 | ITA | Rome | 41.9 | 79 | 54 |
| US | Atlanta | 56.6 | 107 | 7 | NLD | Noord-Brabant | 51.1 | 96 | 31 | ALL | Darmstadt | 41.7 | 79 | 55 |
| US | Washington | 56.6 | 107 | 8 | US | Pittsburgh | 50.9 | 96 | 32 | ALL | Stuttgart | 40.5 | 77 | 56 |
| US | Minneapolis-St Paul | 55.7 | 105 | 9 | JPN | Osaka | 50.5 | 95 | 33 | ALL | Region Berlin | 40.4 | 76 | 57 |
| US | Denver | 55.4 | 105 | 10 | UK | London | 49.9 | 94 | 34 | ALL | Region Hamburg | 40.0 | 76 | 58 |
| US | Boston | 55.1 | 104 | 11 | FRA | Ile de France | 49.7 | 94 | 35 | ALL | Karlsruhe | 39.0 | 74 | 59 |
| JPN | Aichi | 54.5 | 103 | 12 | US | Miami | 49.7 | 94 | 36 | ALL | Rheinland | 38.9 | 74 | 60 |
| US | Tampa-St-Petersburg | 54.1 | 102 | 13 | JPN | Fukuoka | 49.2 | 93 | 37 | ALL | Detmold | 38.1 | 72 | 61 |
| US | Houston | 53.8 | 102 | 14 | UK | Greater Manchester | 48.7 | 92 | 38 | ALL | Freiburg | 35.7 | 67 | 62 |
| JPN | Tokyo | 53.6 | 101 | 15 | GRC | Attiki | 47.1 | 89 | 39 | ALL | Ruhrgebiet | 35.0 | 66 | 63 |
| US | Baltimore | 53.6 | 101 | 16 | KOR | Gyeonggi | 45.8 | 86 | 40 | ITA | Naples | 34.8 | 66 | 64 |
| JPN | Saitama | 53.4 | 101 | 17 | US | New York | 45.5 | 86 | 41 | ALL | Rheinhessen-Pfalz | 34.0 | 64 | 65 |
| US | St. Louis | 53.3 | 101 | 18 | ITA | Turin | 44.8 | 85 | 42 | | | | | |
| US | San Diego | 53.0 | 100 | 19 | ITA | Milan | 44.6 | 84 | 43 | | | | | |
| CAN | Montreal | 52.9 | 100 | 20 | KOR | Seoul | 44.4 | 84 | 44 | | | | | |
| US | Detroit | 52.8 | 100 | 21 | ESP | Valencia | 44.3 | 84 | 45 | | | | | |
| US | Los Angeles | 52.7 | 100 | 22 | HUN | Budapest | 44.0 | 83 | 46 | | | | | |
| JPN | Chiba | 52.7 | 100 | 23 | ALL. | München-Ingolstadt | 43.844.0 | 83 | 47 | | | | | |
| JPN | Kanagawa | 52.5 | 99 | 24 | KOR | Incheon | 43.5 | 82 | 48 | | | | | |

*Source*: OECD Territorial Database

Table 1.5. **Explanatory factors of regional differences in GDP per capita, 2000**

| | | Percentage difference in : : | | | Proportion of the difference in GDP per capita due to : | | |
|---|---|---|---|---|---|---|---|
| Country | Metropolitan Region | Average productivity | Employment rate | Activity rate | Average productivity | Employment rate | Activity rate |
| Germany | Region Berlin | -26.9 | 13.1 | 23.7 | 32% | 23% | 45% |
| Germany | Region Hamburg | -85.1 | 3.3 | 24.4 | 65% | 4% | 32% |
| Germany | Ruhrgebiet | -52.5 | 8.1 | 33.9 | 43% | 10% | 47% |
| Germany | Rheinland | -73.2 | 3.8 | 26.4 | 59% | 5% | 36% |
| Germany | Detmold | -47.1 | 3.6 | 28.1 | 48% | 5% | 47% |
| Germany | Darmstadt | -84.0 | 0.8 | 21.2 | 70% | 1% | 29% |
| Germany | Rheinhessen-Pfalz | -65.3 | 4.4 | 35.7 | 49% | 5% | 47% |
| Germany | Stuttgart | -68.5 | -0.5 | 23.4 | 64% | 1% | 36% |
| Germany | Karlsruhe | -66.6 | 1.1 | 26.4 | 60% | 1% | 39% |
| Germany | Freiburg | -52.3 | 1.1 | 32.5 | 48% | 1% | 50% |
| Germany | Region Müchen-Ingolstadt | -101.4 | -1.7 | 17.2 | 76% | 2% | 22% |
| Spain | Comunidad de Madrid | 11.4 | 2.5 | 18.5 | 51% | 5% | 44% |
| Spain | Barcelona | 19.1 | 2.1 | 20.1 | 38% | 5% | 57% |
| Spain | Valencia | 33.3 | 5.3 | 16.3 | 16% | 20% | 64% |
| France | Ile de France | -36.21 | 1.3 | 6.1 | 86% | 2% | 12% |
| France | Nord | 10.0 | 6.4 | 19.0 | 13% | 21% | 66% |
| Greece | Attiki | 50.1 | 5.2 | 11.0 | 60% | 13% | 28% |
| Hungary | Budapest | 68.2 | -2.4 | 16.8 | 44% | 6% | 50% |
| Italy | Turin | -2.5 | 1.1 | 15.4 | 65% | 2% | 33% |
| Italy | Milan | -28.3 | -2.3 | 15.8 | 74% | 3% | 23% |
| Italy | Rome | -11.7 | 4.8 | 20.9 | 60% | 7% | 33% |
| Italy | Naples | 14.6 | 22.1 | 34.3 | 18% | 30% | 51% |
| Japan | Saitama | 19.9 | -3.0 | -0.8 | 93% | 6% | 2% |
| Japan | Chiba | 12.6 | -3.0 | 0.5 | 92% | 7% | 1% |
| Japan | Tokyo | -97.2 | -2.9 | -1.3 | 91% | 6% | 3% |
| Japan | Kanagawa | -0.1 | -2.9 | 0.8 | 87% | 10% | 3% |
| Japan | Aichi | -26.1 | -3.7 | -3.0 | 19% | 45% | 36% |
| Japan | Osaka | -36.2 | -0.5 | 4.6 | 54% | 4% | 42% |
| Japan | Fukuoka | -3.4 | -1.7 | 7.1 | 70% | 6% | 24% |
| Korea | Seoul | 59.2 | -2.7 | 16.1 | 70% | 4% | 26% |
| Korea | Busan | 67.8 | -0.6 | 18.6 | 77% | 1% | 23% |
| Korea | Daegu | 72.8 | -2.8 | 18.8 | 79% | 3% | 19% |
| Korea | Incheon | 65.0 | -2.4 | 17.8 | 74% | 3% | 24% |
| Korea | Gyeonggi | 55.8 | -4.0 | 13.6 | 67% | 7% | 26% |
| Netherlands | Noord-Holland | -0.4 | -5.0 | 3.1 | 67% | 20% | 13% |
| Netherlands | Zuid Holland | 10.7 | -5.1 | 3.4 | 35% | 38% | 27% |
| Netherlands | Noord-Brabant | 15.4 | -5.7 | 3.6 | 9% | 55% | 36% |
| UK | London | -43.5 | -0.5 | 5.8 | 85% | 1% | 14% |
| UK | Greater Manchester | 12.4 | -1.6 | 8.0 | 54% | 7% | 38% |
| USA | Atlanta | -40.8 | -3.5 | -6.9 | 77% | 8% | 15% |

**Table 1.5. (continued)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| USA | Baltimore | -37.6 | -3.1 | -1.3 | 88% | 8% | 3% |
| USA | Boston | -157.9 | -4.1 | -4.1 | 92% | 4% | 4% |
| USA | Chicago | -55.0 | -1.7 | 1.6 | 93% | 4% | 3% |
| USA | Cleveland | -41.5 | -2.3 | 2.8 | 87% | 6% | 7% |
| USA | Dallas | -56.0 | -1.7 | -10.4 | 79% | 3% | 18% |
| USA | Denver | -54.2 | -2.7 | -4.7 | 86% | 5% | 9% |
| USA | Detroit | -34.0 | -2.2 | 0.2 | 92% | 7% | 1% |
| USA | Houston | -53.5 | -3.2 | -1.7 | 90% | 7% | 3% |
| USA | Los Angeles | -48.6 | -1.7 | 0.4 | 95% | 4% | 1% |
| USA | Miami | -31.8 | 0.6 | 6.2 | 80% | 2% | 19% |
| USA | Minneapolis Saint Paul | -32.0 | -4.3 | -5.3 | 75% | 11% | 14% |
| USA | New York | -110.2 | -1.0 | 14.1 | 82% | 1% | 17% |
| USA | Philadelphia | -37.5 | -3.6 | 2.9 | 83% | 9% | 8% |
| USA | Phoenix | -32.9 | -2.3 | 2.2 | 86% | 7% | 7% |
| USA | Pittsburgh | -33.5 | -3.5 | 3.9 | 80% | 10% | 11% |
| USA | Portland-Vancouver | -31.7 | -0.2 | -8.9 | 76% | 0% | 24% |
| USA | San Diego | -41.3 | -4.5 | -0.1 | 89% | 11% | 0% |
| USA | San Francisco | -116.5 | -3.2 | -9.0 | 87% | 4% | 10% |
| USA | Seattle | -71.3 | -1.4 | -8.7 | 85% | 2% | 13% |
| USA | St. Louis | -28.3 | -2.8 | -0.7 | 88% | 10% | 2% |
| USA | Tampa-Saint-Petersburg | -25.4 | -3.3 | -2.2 | 81% | 12% | 8% |
| Canada | Toronto | -14.8 | -1.7 | -8.1 | 59% | 7% | 34% |
| Canada | Vancouver | 0.6 | -0.3 | -7.5 | 8% | 3% | 89% |
| USA | Washington | -50.9 | -4.3 | -6.8 | 79% | 8% | 13% |
| | Average (Montreal) | -23.5 | -0.8 | 8.0 | 66% | 1% | 33% |

*Source* : OECD Territorial Database

### *Why low productivity?*

Low labour productivity may have two different causes[11]. It could be the result of a specialisation in low-productivity industries or/and to a low level of complementary factors of production (skills, physical capital, etc). On average, 98% of the productivity gap of Montreal appears to be the result of a lower stock of complementary production factors while the effect of industry specialisation appears to be positive and accounts for 2% of the difference in average productivity (Table 1.6). The positive effect of specialisation appears confirmed by the evolution of Montreal's industrial mix. Three main trends have occurred. First, as most large OECD metropolitan regions, Montreal's economy has undergone a major transformation towards the tertiary sector (Table 1.7). In 2001, the tertiary sector produced the bulk of regional GDP (69.7%) and represented 76.8% of the total employed (an increase of 6.6% since 1991). Second, despite a significant shift toward tertiary activities, Montreal has maintained an important manufacturing sector which still represented 18.6% of total jobs in 2001 (an increase of 12%) and 22% of regional GDP. Third, high-technology industries have increased substantially. As of 1995, about 34% of employment in Montreal was concentrated in intensive-knowledge industries, ranking 5th among 13 North American metropolitan regions (CMM 2002). The region has developed high technology industries including aerospace, new technologies in information and communications (NTIC) as well as biotechnology and bio-pharmaceuticals. In terms of employment population ratio amongst the fifteen largest North American metropolitan regions, Montreal is ranked 4th in aerospace, 8th in biotechnology and pharmaceuticals, and 9th in information technologies (Montreal International 2002*c*).

Table 1.6. **Explanatory factors of regional differences in average productivity, 2000**

| | | Difference in productivity due to : | | Proportion of the difference in productivity due to : | |
|---|---|---|---|---|---|
| Country | Metropolitan Region | Specialisation | Capital stock | Specialisation | Capital stock |
| Germany | Berlin | 4064 | -15743 | 21% | 79% |
| Germany | Region Hamburg | -1781 | -40167 | 4% | 96% |
| Germany | Ruhrgebiet | -4705 | -20270 | 19% | 81% |
| Germany | Rheinland | -5576 | -30195 | 16% | 84% |
| Germany | Detmold | -3431 | -18756 | 15% | 85% |
| Germany | Darmstadt | -6676 | -34681 | 16% | 84% |
| Germany | Rheinhessen-Pfalz | -246 | -31416 | 1% | 99% |
| Germany | Stuttgart | -5096 | -28220 | 15% | 85% |
| Germany | Karlsruhe | -6810 | -25512 | 21% | 79% |
| Germany | Freiburg | -4558 | -20334 | 18% | 82% |
| Germany | Regnion München-Ingolstadt | -5791 | -44655 | 11% | 89% |
| Spain | Comunidad de Madrid | -4520 | -10160 | 31% | 69% |
| Spain | Barcelona | -2354 | -6332 | 27% | 73% |
| Spain | Valencia | 31514 | -29157 | 52% | 48% |
| France | Ile de France | -8570 | -22915 | 27% | 73% |
| France | Nord | 7908 | -10306 | 43% | 57% |
| Greece | Attiki | 1512 | 10622 | 12% | 88% |
| Hungary | Budapest | -1370 | 9454 | 13% | 87% |
| Italy | Turin | 2681 | -24227 | 10% | 90% |
| Italy | Milan | -10348 | -30290 | 25% | 75% |
| Italy | Rome | -1236 | -27103 | 4% | 96% |
| Italy | Naples | 16102 | -25011 | 39% | 61% |
| Japan | Saitama | 17400 | 2965 | 85% | 15% |
| Japan | Chiba | 41067 | -23811 | 63% | 37% |
| Japan | Tokyo | -6387 | -22923 | 22% | 78% |
| Japan | Kanagawa | -1619 | 13496 | 11% | 89% |
| Japan | Aichi | 23561 | -22733 | 51% | 49% |
| Japan | Osaka | -4373 | 909 | 83% | 17% |
| Japan | Fukuoka | 31405 | -20922 | 60% | 40% |
| Korea | Seoul | -8620 | 28678 | 23% | 77% |
| Korea | Busan | 12631 | 14654 | 46% | 54% |

**Table 1.6. (continued)**

| | | | | | |
|---|---|---|---|---|---|
| Korea | Daegu | 20745 | 10739 | 66% | 34% |
| Korea | Incheon | -105 | 24988 | 0% | 100% |
| Korea | Gyeonggi | 54162 | -37009 | 59% | 41% |
| Netherlands | Noord-Holland | 66 | -9639 | 1% | 99% |
| Netherlands | Zuid Holland | 9246 | -11781 | 44% | 56% |
| Netherlands | Noord-Brabant | 1922 | -1434 | 57% | 43% |
| UK | London | -11150 | -13685 | 45% | 55% |
| UK | Greater Manchester | -9128 | 15116 | 38% | 62% |
| US | Atlanta | -7463 | -14676 | 34% | 66% |
| US | Baltimore | -7354 | -13089 | 36% | 64% |
| US | Boston | -7836 | -76298 | 9% | 91% |
| US | Chicago | -9794 | -20101 | 33% | 67% |
| US | Cleveland | -8045 | -14479 | 36% | 64% |
| US | Dallas | -5715 | -24704 | 19% | 81% |
| US | Denver | -7992 | -21479 | 27% | 73% |
| US | Detroit | -8227 | -10231 | 45% | 55% |
| US | Houston | -8461 | -20593 | 29% | 71% |
| US | Los Angeles | -5738 | -20657 | 22% | 78% |
| US | Miami | -5810 | -11483 | 34% | 66% |
| US | Minneapolis Saint Paul | -3248 | -14149 | 19% | 81% |
| US | New York | -10237 | -49608 | 17% | 83% |
| US | Philadelphia | -7237 | -13145 | 36% | 64% |
| US | Phoenix | -4694 | -13176 | 26% | 74% |
| US | Pittsburgh | -6567 | -11654 | 36% | 64% |
| US | Portland-Vancouver | 3693 | -20910 | 15% | 85% |
| US | San Diego | -3621 | -18798 | 16% | 84% |
| US | San Francisco | -5125 | -58189 | 8% | 92% |
| US | Seattle | 1017 | -39777 | 2% | 98% |
| US | St. Louis | -3476 | -11889 | 23% | 77% |
| US | Tampa-Saint-Petersburg | -4946 | -8844 | 36% | 64% |
| Canada | Toronto | -1271 | -6773 | 16% | 84% |
| Canada | Vancouver | -1202 | 1525 | 44% | 56% |
| US | Washington | -5622 | -22045 | 20% | 80% |
| | Average (Montreal) | 415 | -16609 | 2% | 98% |

*Source* : OECD Territorial Database

Table 1.7. **Distribution of GDP and jobs by industry type in the Montreal CMA, 2001**

In percentage

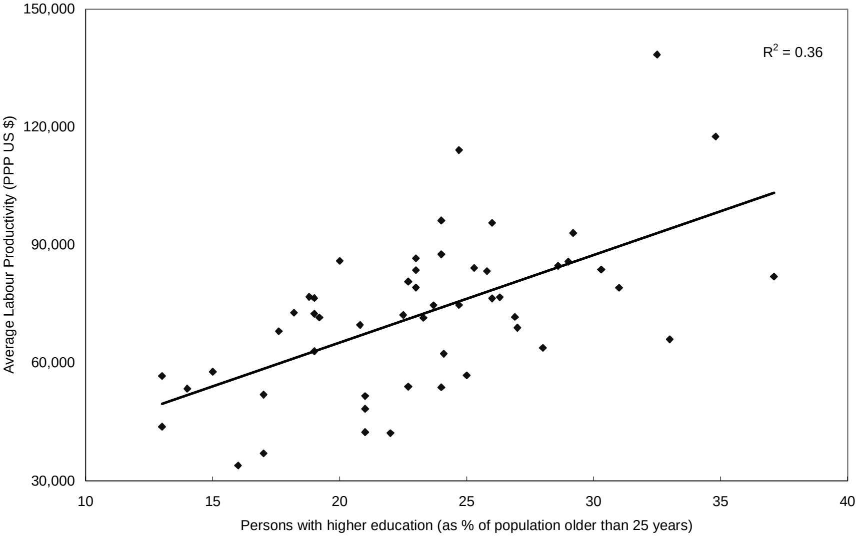
| | GDP | Jobs |
|---|---|---|
| **Primary** | 0.3 | 0.4 |
| **Secondary** | 30.1 | 22.8 |
| Public services | 4.0 | 3.3 |
| Construction | 4.2 | 3.3 |
| Manufacturing | 22.0 | 18.6 |
| **Teritary** | **69.7** | **76.8** |
| Retail | 12.0 | 16.7 |
| Transportation and Warehousing | 4.8 | 5.5 |

| Table 1.7. Continued | | |
|---|---|---|
| Finance, insurance, real estate and rentals | 18.7 | 6.0 |
| Prof. scientific and technical services | 4.7 | 7.9 |
| Management and management support | 2.3 | 3.6 |
| Teaching | 4.6 | 6.0 |
| Health and social assistance | 5.8 | 10.6 |
| Information, culture and recreation | 7.8 | 5.7 |
| Hotels and restaurants | 2.0 | 4.3 |
| Other services | 2.0 | 4.3 |
| Public administration | 4.9 | 4.9 |
| TOTAL | 100.0 | 100.0 |

*Source*: Montreal Metropolitan Community

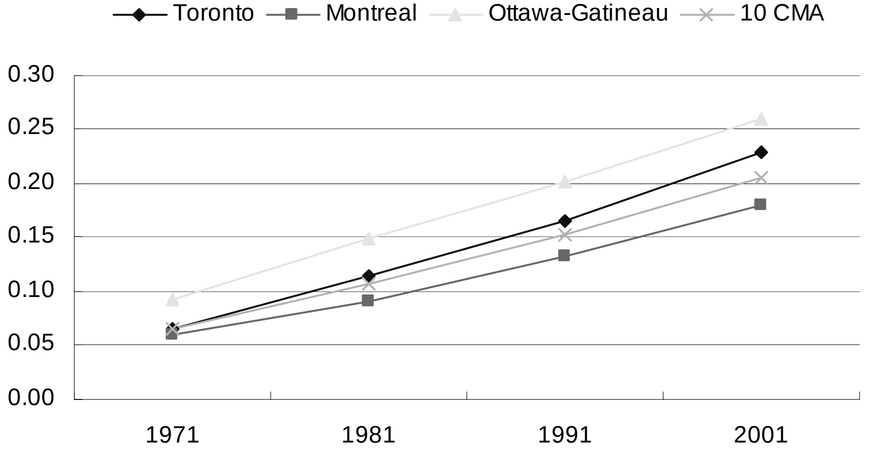
In regards to the effect of complementary factors of production, educational attainments seem to play a significant role in explaining low productivity in Montreal. In Figure 1.8, the level of productivity in selected OECD metropolitan regions has been plotted against the percentage of individuals aged 25 years and more and with higher educational attainment (a university degree and above): differences in skills explain about 36% of the observed differences in productivity. At a national level, Montreal falls behind other Canadian metropolitan regions with regard to college and university attainment for the age group 25-64. In 2001, Montreal had the lowest performance (43.4%) in relation to Toronto (49.6%), Vancouver (48.4%), Calgary (48.4%) and Ottawa-Hull (54.1%). Montreal has registered significant improvement in educational levels since 1981. However, since progress has been made at the same pace as other large Canadian CMAs, the gap in educational attainment (of the population 15 years and more) with the Canadian average has not reduced (Polèse and Shearmur 2003) (Figure 1.9). At an international level, compared with 52 OECD metropolitan regions[12], Montreal is located at the bottom of the second tier when analysing the percentage of total population with higher education attainment. Only 21% of the region's population have pursued higher education (Figure 1.10). This figure is similar for St. Louis and Greater Manchester but less than Boston (33%) Minneapolis-St. Paul (27%) as well as Stuttgart and Philadelphia (24%) and greater than Detroit (18%), Cleveland, Pittsburgh, Miami and Barcelona (19%). The shortage of qualified workers as one of the main obstacles for firm competitiveness in Quebec is further confirmed by the results of the *Survey of Innovation 1999* (Statistics Canada 1999).

Figure 1.8**. Productivity and education attainment, 2001**



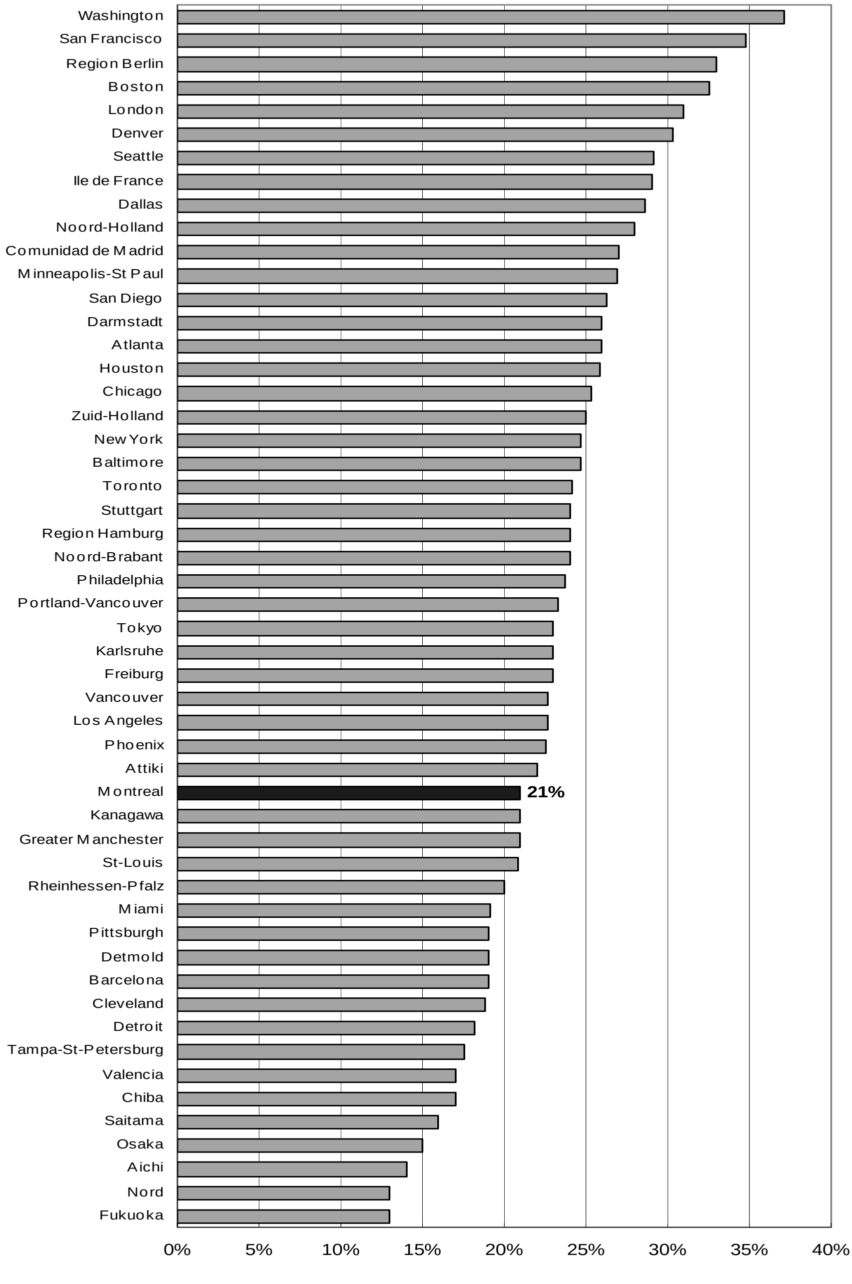

*Source*: OECD Territorial Database

Figure 1.9. **Percentage of population, 15 years + with university degrees, 1971-2001**




*Source*: Special compliation of INRS-Urbanisation, Culture and Society from employment data by working place from the Censuses of 1971, 1981, 1991 and 2001 of Statistics Canada.

Figure 1.10. **Percentage of population with higher education attainment, 2001**




*Source*: OECD Territorial Database.

Lower educational attainment of the population cannot be attributed to the educational infrastructure. Since the 1960s, the Quebec government has developed an infrastructure system that makes education widely accessible at a very low cost to students when compared to other provinces and the U.S. The Montreal metropolitan region has four universities[13], 30 community colleges and 40 professional and technical establishments (including 15 community colleges that provide professional training). In 1996, Montreal ranked 5th among the ten largest North American metropolitan regions in terms of the number of university students and 1st in terms of students per capita. Since the mid-1970s, Quebec's educational expenditures have been above the national average.[14] In 2000-2001, it allocated 7.4% of the provincial GDP (CAD 16.2 billion) to education, which was higher than the national educational allotment (Department of Education of Quebec 2002). However, this difference in educational expenditure can be attributed to the province’s initial need to compensate for its previously low levels of educational attainment before the 1960s, particularly in the French-speaking community. In terms of total education spending per capita, Quebec spends as much as the Canadian average (CAD 2 198) (Department of Education of Quebec 2002).

One possible explanation for the relatively insufficient level of skilled human capital in Montreal could be a potential brain drain, *i.e.* a net loss of high skilled workers. However, the actual brain drain to the U.S. is a controversial and debated issue and yet unproven. Access to the American labour market has improved with the introduction of NAFTA labour mobility provisions. Most estimates on brain drain figures are mainly available at the national level. On the one hand, during the 1990s, Canada suffered a net loss of skilled workers to the U.S. in several occupations such as physicians, natural scientists, nurses and engineers. Relative to new graduates, the annual outflow of physicians equalled approximately a quarter of university graduates in medicine, which was also the case for nurses (Zhao 2000). For engineers and natural scientists, the annual average loss accounted for 4 and 1% of new graduates in their respective fields.[15] On the other hand, the influx of highly skilled workers into Canada from the rest of the world also accelerated, creating a sort of brain drain and brain gain dynamic. According to some estimates, the number of master’s and doctoral graduates entering Canada from the rest of the world is equivalent to the number of university graduates of all levels leaving Canada for the U.S. (Zhao 2000). A study by the *Observatoire des sciences et des technologies* (OST) measures researchers’ migration to and from Quebec and reveals that companies hired as many researchers from outside of Quebec as researchers lost to emigration, further substantiating the brain drain and brain gain debate (OST 2000). However, it is difficult to measure the skill level in certain professions and to factor in the high unemployment rates of newly arrived immigrants. A specific study should be conducted at the metropolitan level to address the question of brain drain as it relates to human capital.

### *Is the high activity rate in danger?*

High participation in the labour market represents a main competitiveness factor for Montreal, but the demographic trend could result in a decrease of activity rates. In terms of population, the Montreal metropolitan region is the 11th largest urban agglomeration in Canada and the U.S. combined. It is comparable to that of Boston (12), smaller than Philadelphia (4) and larger than Minneapolis-St. Paul (14)[16]. Metropolitan Montreal constitutes nearly half of the total population of Quebec (7.5 million in 2002) and represents the second most populous area of Canada (the first being Toronto CMA). This comparative advantage is however endangered by a decreasing trend in its population growth rate. While Montreal registered its greatest growth during the period, 1981-1991, from 1990 to 2000, the region had a population growth rate of 6.8%, which is greater when compared to Boston (4.0%). Yet, this rate remains modest when looking at other metropolitan regions of similar size such as Atlanta and Miami that had population growth rates of 36.4% and 13.9% respectively. In fact, Montreal ranks 27th among the 65 OECD metropolitan regions in terms of population growth for the period 1990-2000 (Table 1.8).

Table 1.8. **Population in 2000 and population growth from 1990 in OECD metropolitans regions**

| Country | Metropolitan region | Population 2000 | Rank population 2000 | Growth rate 1990-2000 | Ranking growth |
|---|---|---|---|---|---|
| Japan | Tokyo | 12 064 101 | 1 | 1.8 | 51 |
| France | Ile de France | 11 001 900 | 2 | 3.2 | 46 |
| Korea | Seoul | 10 264 000 | 3 | -3.4 | 63 |
| US | Los Angeles | 9 344 086 | 4 | 5.4 | 37 |
| US | New York | 9 098 339 | 5 | 6.5 | 31 |
| Korea | Gyeonggi | 8 934 000 | 6 | 45.2 | 1 |
| Japan | Osaka | 8 805 081 | 7 | 0.8 | 55 |
| Japan | Kanagawa | 8 489 974 | 8 | 6.4 | 32 |
| US | Chicago | 8 177 052 | 9 | 9.5 | 18 |
| UK | Greater London | 7 172 036 | 10 | -7.0 | 65 |
| Japan | Aichi | 7 043 300 | 11 | 5.3 | 40 |
| Japan | Saitama | 6 938 006 | 12 | 8.3 | 21 |
| Germany | Ruhrgebiet | 6 766 749 | 13 | -0.2 | 60 |
| Germany | Rheinland | 6 606 248 | 14 | 4.9 | 41 |
| Japan | Chiba | 5 926 285 | 15 | 6.7 | 29 |
| Spain | Comunidad de Madrid | 5 150 500 | 16 | 5.8 | 36 |
| Germany | Region Berlin | 5 085 171 | 17 | 1.1 | 53 |
| Japan | Fukuoka | 5 015 699 | 18 | 4.3 | 43 |
| US | Philadelphia | 4 946 433 | 19 | 0.5 | 58 |
| US | Washington | 4 826 619 | 20 | 14.3 | 13 |

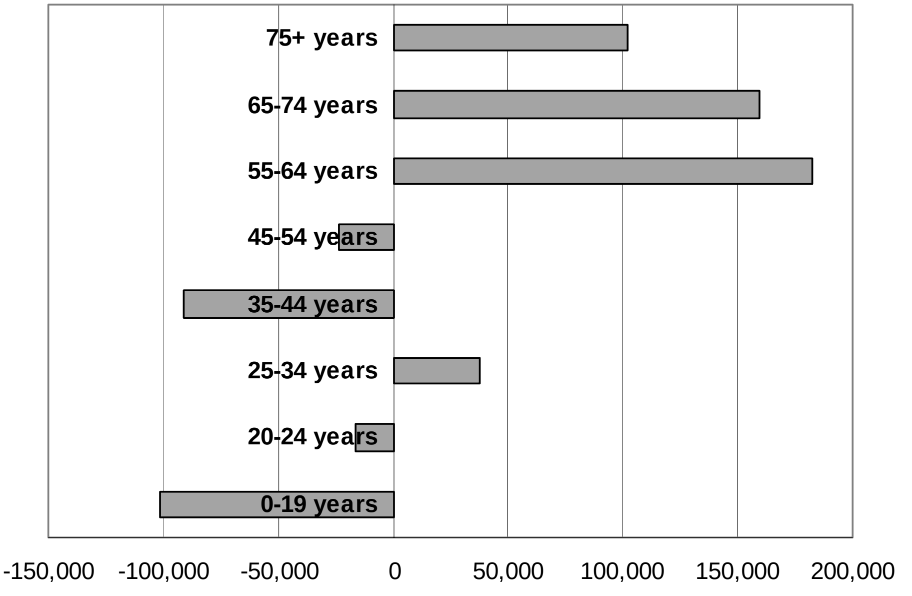
| Table 1.8. (continued) | | | | | |
|---|---|---|---|---|---|
| Canada | Toronto | 4 682 897 | 21 | 20.1 | 11 |
| Spain | Barcelona | 4 667 200 | 22 | 0.9 | 54 |
| US | Detroit | 4 381 236 | 23 | 2.7 | 49 |
| US | Houston | 4 119 040 | 24 | 24.0 | 8 |
| US | Atlanta | 4 036 630 | 25 | 36.4 | 4 |
| Germany | Stuttgart | 3 935 354 | 26 | 6.8 | 26 |
| Italy | Rome | 3 849 500 | 27 | 2.8 | 48 |
| Korea | Busan | 3 817 000 | 28 | 0.5 | 57 |
| Italy | Milan | 3 773 900 | 29 | 0.6 | 56 |
| Greece | Attiki | 3 760 900 | 30 | 7.6 | 24 |
| Germany | Darmstadt | 3 737 589 | 31 | 5.4 | 39 |
| US | Dallas | 3 466 201 | 32 | 29.5 | 5 |
| Canada | Montreal | 3 426 350 | 33 | 6.8 | 27 |
| Netherlands | Zuid Holland | 3 409 200 | 34 | 5.9 | 35 |
| US | Boston | 3 319 444 | 35 | 4.0 | 44 |
| US | Phoenix | 3 207 093 | 36 | 43.3 | 2 |
| US | Minneapolis-Saint Paul | 3 188 632 | 37 | 25.6 | 7 |
| Italy | Naples | 3 099 900 | 38 | 2.8 | 47 |
| Germany | Region-Hamburg | 3 079 032 | 39 | 7.3 | 25 |
| Germany | Region München-Ingolstadt | 2 882 181 | 40 | 6.6 | 30 |
| Hungary | Budapest + Pest | 2 838 000 | 41 | -2.1 | 62 |
| USA | San Diego | 2 716 820 | 42 | 8.8 | 19 |
| Germany | Karlsruhe | 2 684 421 | 43 | 6.0 | 34 |
| France | Nord | 2 563 400 | 44 | 1.2 | 52 |
| USA | St. Louis | 2 547 700 | 45 | 2.2 | 50 |
| Netherlands | Noord-Holland | 2 526 500 | 46 | 6.3 | 33 |
| Korea | Incheon | 2 509 000 | 47 | 38.0 | 3 |
| Korea | Daegu | 2 506 000 | 48 | 12.4 | 16 |
| USA | Baltimore | 2 493 611 | 49 | 4.7 | 42 |
| UK | Greater Manchester | 2 482 352 | 50 | 10.0 | 17 |
| USA | Seattle | 2 366 406 | 51 | 16.4 | 12 |
| Netherlands | Noord-Brabant | 2 365 600 | 52 | 8.0 | 23 |
| USA | Tampa-St. Petersburg | 2 348 178 | 53 | 13.6 | 15 |
| USA | Pittsburgh | 2 290 409 | 54 | -4.4 | 64 |
| Italy | Turin | 2 214 900 | 55 | -2.0 | 61 |
| USA | Miami | 2 207 391 | 56 | 13.9 | 14 |
| USA | Cleveland | 2 204 979 | 57 | 0.1 | 59 |
| Spain | Valencia | 2 158 100 | 58 | 3.2 | 45 |
| Germany | Freiburg | 2 137 621 | 59 | 8.1 | 22 |
| USA | Denver | 2 080 106 | 60 | 28.2 | 6 |
| Germany | Detmold | 2 055 795 | 61 | 8.5 | 20 |
| Germany | Rheinhessen-Pfalz | 2 003 242 | 62 | 6.7 | 28 |
| Canada | Vancouver | 1 986 965 | 63 | 24.0 | 9 |
| USA | Portland-Vancouver | 1 847 738 | 64 | 21.9 | 10 |
| USA | San Francisco | 1 689 490 | 65 | 5.4 | 38 |

*Source* : OECD Territorial Database, US Census Bureau, Statistics Canada

The ageing population is likely to have an impact on labour force and activity rate. As in many other OECD regions, the elderly population in

Montreal is expected to increase considerably over the next few decades. In 2002, seniors in Montreal CMA composed 13.1% of the total population while they were 11.1% in 1991 (Institut de la statistique Québec). As shown in Figure 1.11, between 2001 and 2021 the share of population less than 45 years old is forecasted to decrease from about 45 to 37.5 %, while the share of population aged 45 years and above will increase from about 55 to 62.5 %. But to what extent will ageing result in a decrease of activity rates[17]? A simulation of the overall impact of ageing on the activity rate over the next two decades shows that the activity rate will first increase (from 52.9 to 53.3% between 2001 and 2011) and then decrease (to 52.2% between 2011 and 2021). Other things being equal, the overall decrease of 0.7% in the activity rate would imply a decrease of 1.4% in GDP per capita over the period 2001-2021. Thus, given the historical trend in productivity growth, the magnitude of this reduction should be compensated by productivity gains in the long-term.

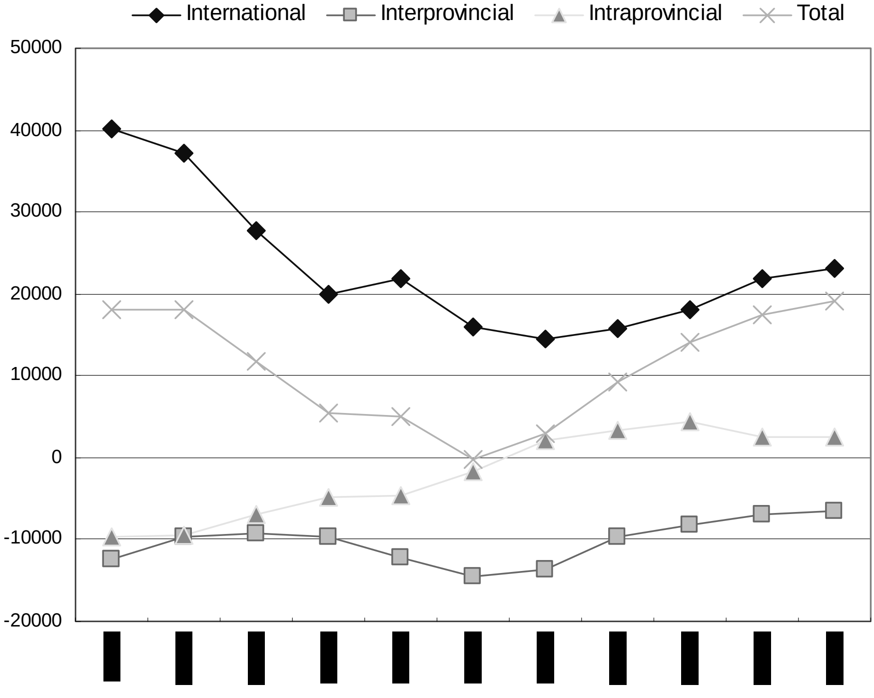
Figure 1.11. **Population forecast of Montreal (CMA) according to age group, 2001-2021**




*Source*: Matthews (2002).

In light of the ageing population, Montreal should retain and increase its immigrant population to maintain a high activity rate. Presently, immigration accounts for over half of the population growth in the area. Yet, it represents only 18% of the area's total population (compared to 42 and 35% in Toronto and Vancouver respectively). Since 1991, international immigration to Quebec as well as to Montreal has been declining. But in recent years, it has been on the rise (Figure 1.12). Between 1991 and 1996, the Montreal metropolitan region demonstrated a retention rate (56%) inferior to that found in Toronto (82%) and Vancouver (68%). Whereas the intraprovincial movements have been on the rise, (13.4% of overall immigration in the 2001-2002 period), interprovincial movements have been a traditional source of out-migration (although, the trend has begun to reverse in recent years). A challenge for the future for Montreal and other OECD metropolitan regions such as Helsinki, is to continue to attract (and retain) high-skilled immigrants (Box 1.2). In 2000, immigrants coming to the Montreal region had higher levels of scolarity than the populations of Montreal and Quebec. More than a third of immigrants aged 15 years and older held university degrees (Table 1.9). This favourable percentage for the Montreal metropolitan region is, however, lower than that of immigrants holding university degrees in the metropolitan regions of Toronto (49%) and Vancouver (47%).

Figure 1.12. **Evolution of immigration in Montreal CMA, 1991-2002**




*Source*: Statistics Canada.

Table 1.9. **Education attainment of immigrants (arriving in 2000)**

15 years +

| Level of Education | Montreal | % | Toronto | % | Vancouver | % |
|---|---|---|---|---|---|---|
| 0 to 9 years of studies | 3 282 | 15% | 11 490 | 14% | 3 887 | 15% |
| 10 to 12 years of studies | 4 282 | 19% | 14 476 | 17% | 4 145 | 16% |
| 13 years of studies | 2 581 | 12% | 6 570 | 8% | 2 392 | 9% |
| Professional Certification | 1 691 | 8% | 3 688 | 4% | 1 331 | 5% |
| Non-university diploma | 2 876 | 13% | 5 956 | 7% | 2 251 | 9% |
| Bachelor | 5 128 | 23% | 30 748 | 37% | 9 415 | 36% |
| Master | 1 539 | 7% | 9 242 | 11% | 2 512 | 10% |
| Doctor | 596 | 3% | 1 183 | 1% | 394 | 1% |
| Sub-total (Bachelor, Master, Doctor) | 7 263 | 33% | 41 173 | 49% | 12 321 | 47% |
| Total | 21 975 | 100% | 83 353 | 100% | 38 648 | 100% |

*Source* : Statistics Canada

**Box 1.2. Immigration in Helsinki**

Similar to Montreal, immigrants will be increasingly needed in the Greater Helsinki Region (GHR) to respond to two problems: the declining domestic labour share in an ageing society and the shortage of highly skilled labour in the region. Currently, the proportions of foreign nationals in GHR (2.8%) and in the core Helsinki Region (3.5%) are relatively low by international standards. The current worker pensioner ratio in Finland is 4.5 to 1. This ratio suggests that up to 2.1 million foreign workers will be needed by the year 2020. In this respect, upgrading the skills of immigrants is essential as well as attracting new skilled foreigners. First, projects to improve the employability of immigrants include the Immigrants' Employment and Family Support Projects, an Open Learning Centre and a Youth Activity Centre. Second, this shortage of highly skilled labour is most pronounced in the acute shortage of IT talent, which has forced companies to recruit from abroad (OECD 2003*c*). To attract foreign highly skilled workers, some teachers and researchers from certain countries may be entitled to full tax exemption in Finland if their employment meets specific criteria[18]. Otherwise, Finland has recently lowered the tax burden on "foreign key persons". The "foreign key persons" provisional act permits foreigners arriving in Finland for more than six months to pay, in some cases, 35% tax on their earned income instead of progressive tax. The 35% rate is applied to persons working as teachers or researchers in an institution of higher education in Finland or persons whose monthly salaries are at least EUR 5 800 throughout their stay in Finland and whose employment in a Finnish enterprise requires special skills. Furthermore, given that the increasing mobility of highly qualified persons is motivated by both monetary and non monetary incentives, quality of life and regional attractiveness are a top priority for promoting the development of knowledge intensive industries.

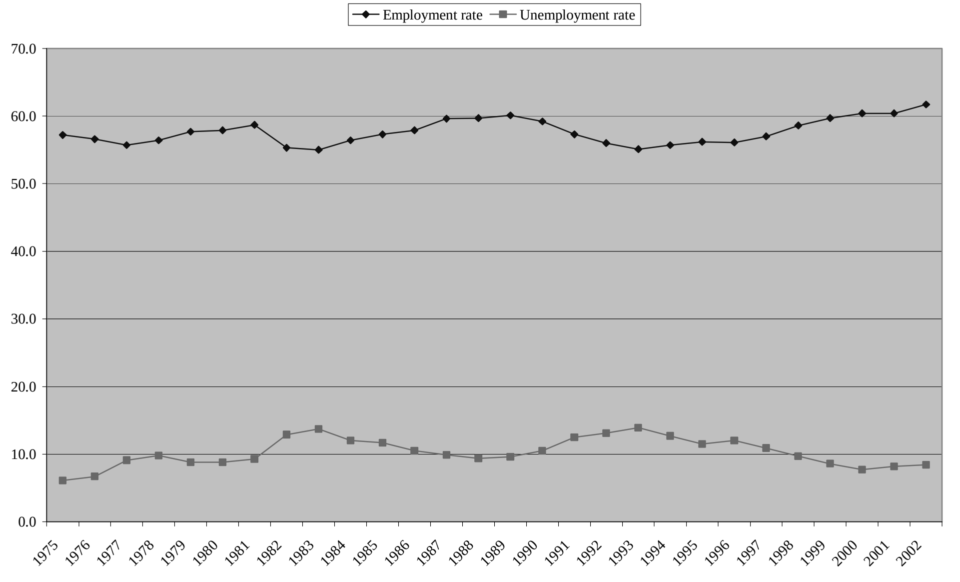
### *Labour market in restructuring*

The recent positive trend in Montreal's employment rate reveals a deep structural change due to the development of high technology activities and the orientation toward an increase in the economic weight of services. After having reached its lowest level in 1993 (55.1%), Montreal's employment rate has been steadily increasing and reached 61.7% in 2002, *i.e.* its highest level since 1976 (Figure 1.13). Historically, employment rates in Montreal have been considerably lower than in most OECD metropolitan regions. Recent performance in Montreal has led to a reduction in the differences in employment rates. Consequently, only one percent of the difference in GDP per capita between Montreal and other OECD metropolitan regions is explained by its lower employment rate. If employment were to slow down or decrease, this factor could become significant. This significant increase in employment is largely attributed to high technology[19] activities as well as other areas of services. Employment growth has been particularly pronounced in "innovative" services such as professional, science and technical services (63.4%). It has also been notable in management and management support (69.9%) and information, culture and recreation (55.6%). These types of services alone account for 42% of the increase in total employment over the period 1991-2001 (Figure 1.14). Moreover, Montreal is now well-positioned in certain high-tech industries. In 2002, the high technology sector accounted for some 142 000 jobs in the metropolitan area (a decline of slightly more than 9% relative to 2001, a net decrease of 14 500 jobs). The region represents more than 95% of aerospace jobs in Quebec. With 97 000 jobs, it ranks ninth worldwide in employment in the new technologies in information and communications industry (Montreal International 2002*c*). The third key industry, biotechnology and bio-pharmaceuticals accounted for approximately 16 000 jobs in 2001.

Labour market structure (collective bargaining and minimum wages) in Montreal does not show high tensions. Montreal's unionisation rate stood at 35.7% in 2000 which is comparable to the rate in Toronto (35.4%) and Vancouver (33.4%)[20]. Regarding minimum real wages, the level in Quebec (CAD 7.3/hour) stands a little above that found in Ontario (CAD 6.85/hour) but below British Columbia (CAD 8/hour)[21]. Moreover, not only does Montreal feature a lower mean salary than other major Canadian metropolitan regions, but the difference in mean salary also becomes significantly greater when measured against major US metropolitan regions (Table 1.10). Too large a difference in wages with other metropolitan areas could however make it difficult to retain and attract high-skilled workers.

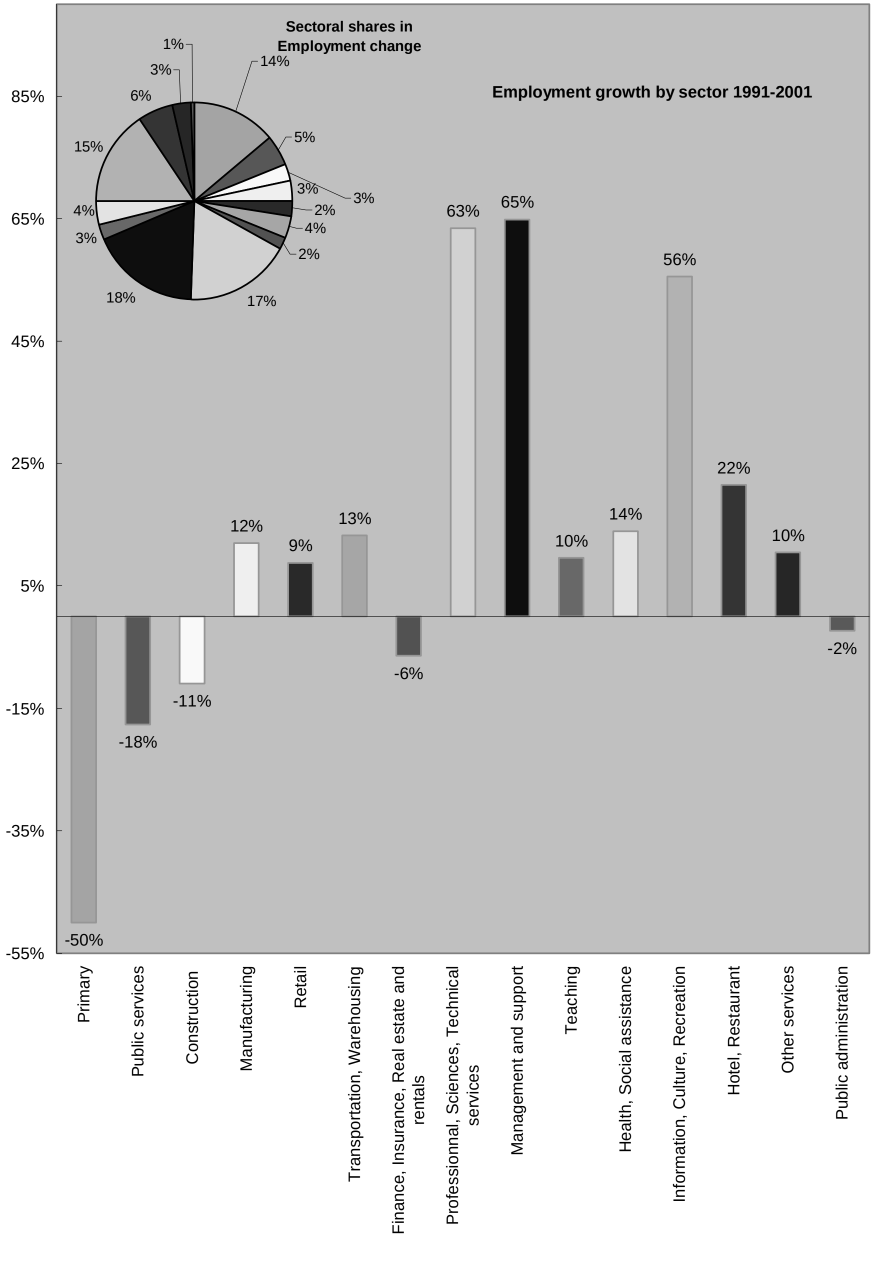
Figure 1.13. **Evolution of employment in Montreal CMA, 1975-2002**

In percentage




*Source*: Statistics Canada.

Figure 1.14. **Employment growth by sector, 1991-2001**




*Source*: OECD Territorial Database

Table 1.10. **Mean annual salary in major North American Metropolitan areas, 2003**

in USD

| | Aeronautical Engineer | Laboratory Technician | Systems Analyst | Accountant | Administrative Assistant | Computer Programmer |
|---|---|---|---|---|---|---|
| Montreal, Quebec | 52 472 | 28 917 | 48 012 | 36 200 | 31 516 | 45 809 |
| Toronto, Ontario | 54 282 | 30 969 | 49 831 | 38 042 | 33 363 | 47 634 |
| Vancouver, British Colombia | 54 224 | 30 604 | 49 720 | 37 802 | 33 097 | 47 496 |
| Atlanta, Georgia | 71 826 | 34 356 | 68 941 | 47 385 | 35 550 | 64 646 |
| Boston, Massachusetts | 78 711 | 38 756 | 75 675 | 52 978 | 40 085 | 71 157 |
| Chicago, Illinois | 77 230 | 37 440 | 74 196 | 51 517 | 38 743 | 69 680 |
| Cleveland, Ohio | 72 873 | 35 544 | 70 041 | 48 865 | 36 784 | 65 826 |
| Dallas, Texas | 73 283 | 35 141 | 70 365 | 48 557 | 36 370 | 66 021 |
| Denver, Colorado | 75 593 | 36 641 | 72 618 | 50 378 | 37 906 | 68 189 |
| Detroit, Michigan | 79 953 | 38 845 | 76 854 | 53 669 | 40 218 | 72 241 |
| Houston Texas | 73 653 | 35 750 | 70 785 | 49 333 | 36 992 | 66 516 |
| Los Angeles, California | 80 299 | 39 129 | 77 169 | 53 763 | 40 483 | 72 509 |
| Miami, Florida | 72 359 | 34 136 | 69 412 | 47 397 | 35 344 | 65 025 |
| Minneapolis, Minnesota | 75 793 | 37 148 | 72 874 | 51 037 | 38 448 | 68 528 |
| New York-Manhattan, | 83 476 | 40 737 | 80 242 | 56 051 | 42 159 | 75 427 |
| Philadelphia, Pennsylvania | 76 316 | 37 500 | 73 385 | 51 456 | 38 803 | 69 021 |
| Phoenix, Arizona | 71 637 | 34 253 | 68 746 | 47 149 | 35 435 | 64 441 |
| Pittsburgh, Pennsylvania | 71 226 | 34 618 | 68 426 | 47 501 | 35 812 | 64 258 |
| Portland, Maine | 69 739 | 33 151 | 66 880 | 45 538 | 34 290 | 62 623 |
| St. Louis, Missouri | 73 012 | 35 083 | 70 124 | 48 528 | 36 323 | 65 824 |
| San Diego, California | 75 570 | 36 597 | 72 594 | 50 348 | 37 868 | 68 164 |
| San Francisco, California | 83 764 | 41 594 | 80 591 | 56 841 | 43 022 | 75 865 |
| Seattle, Washington | 78 150 | 38 796 | 75 165 | 52 839 | 40 109 | 70 721 |
| Tampa, Florida | 69 124 | 32 084 | 66 232 | 44 644 | 33 222 | 61 926 |
| Washington, District of Columbia | 75 416 | 36 963 | 72 478 | 50 512 | 38 220 | 68 103 |

*Source*: Economic Research Institute, Inc.

## Strengthening comparative advantages to compete in the global knowledge-based economy

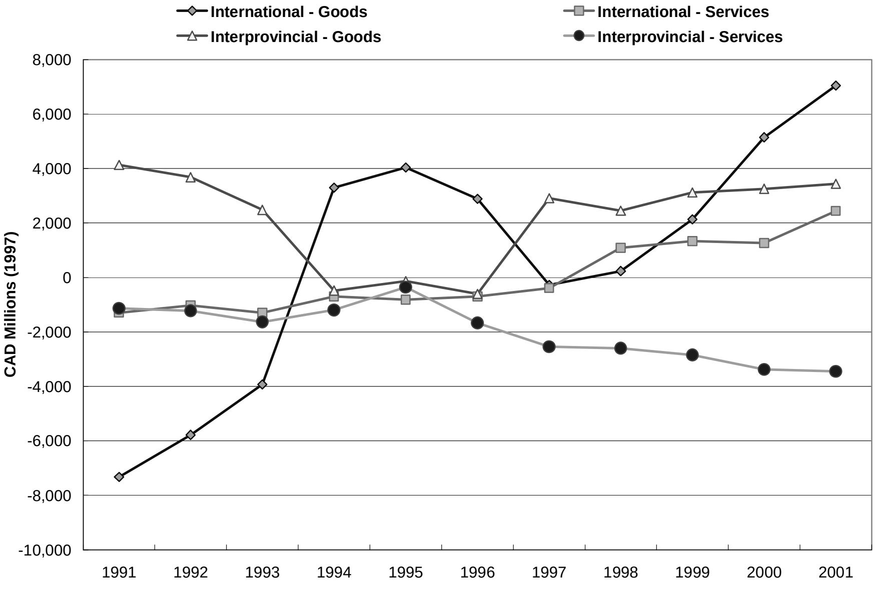
Montreal's economy has benefited from a dramatic increase in international exports (outside Canada). To consolidate and pursue its exports' growth potential, Montreal has to diversify its export markets within the U.S. and internationally. Improving Montreal's international competitiveness also requires upgrading productivity and developing high-technology intensive exports. This challenge highly depends on strengthening potential assets, *i.e.* existing and promising regional clusters. The development of regional clusters, in turn, strongly depends on innovation support, the availability of high-skilled talents most often attracted by the quality of life that a metropolitan region can offer.

### *Sustaining growth in external markets*

Montreal has registered impressive performance with regards to international exports. Although data at the CMA level is lacking[22], it is possible to identify the trends in international trade at the provincial level. In surplus since 1998, Quebec's international trade balance reached CAD 8.9 billion in 2001 (68% of total exports *i.e*. including exports to other Canadian provinces) (Figure 1.15)[23]. The balance of interprovincial goods and services became negative in 1991, experienced an increase until 1995, after which it decreased significantly (only 15% of Quebec's exports are services). These trends show that regional integration has been concentrated in the North-South corridor of North America, at the expense of Montreal's economic ties with the rest of Canada.

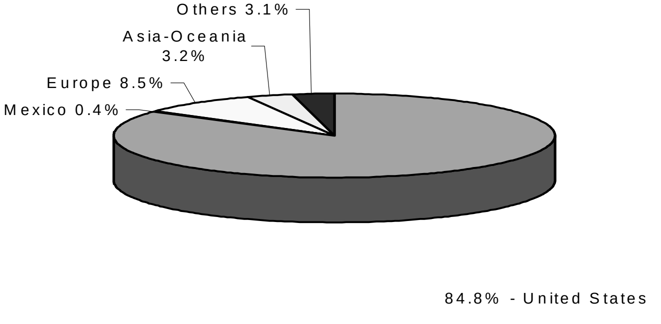
Improving the international competitiveness of Montreal should focus on three objectives. The first objective consists of ***diversifying its exports markets*** by increasing international trade outside the U.S. In 2001, 84.8% of Quebec international exports were destined to the U.S., compared to 8.5% to Europe and 3.2% to Asia-Oceania (Figure 1.16). Montreal's location within the North American continent, often advanced as an important advantage, should however be balanced. On the one hand, the region is situated in a very active zone of North America, and can benefit from its geographical proximity to the large US market of 80 million consumers living less than 1 000 km from the agglomeration centre. Within a 600-kilometre range are the cities of Quebec, Boston, New York, Buffalo and Toronto. On the other hand, with regards to the market area[24], Montreal ranks only 22nd among the largest 26 North American metropolitan areas (CMM 2002). In fact, its geographical position remains off-centre compared to other North American metropolitan regions with which Montreal is in competition. Last but not least, over dependence on US markets can be unfavourable to Montreal's economy. This could be true in the case of a rise in the value of the Canadian dollar or in a period of a slowdown of the American economy. For instance, after one decade of substantial increase, exports registered a decline in 2001 for the first time due to economic crisis in the U.S.[25]

Figure 1.15. **International and interprovincial trade in goods and services in Quebec, 1991**




*Source*: Institute of Statistics of Quebec.

Figure 1.16. **Destination of Quebec exports, 2001**



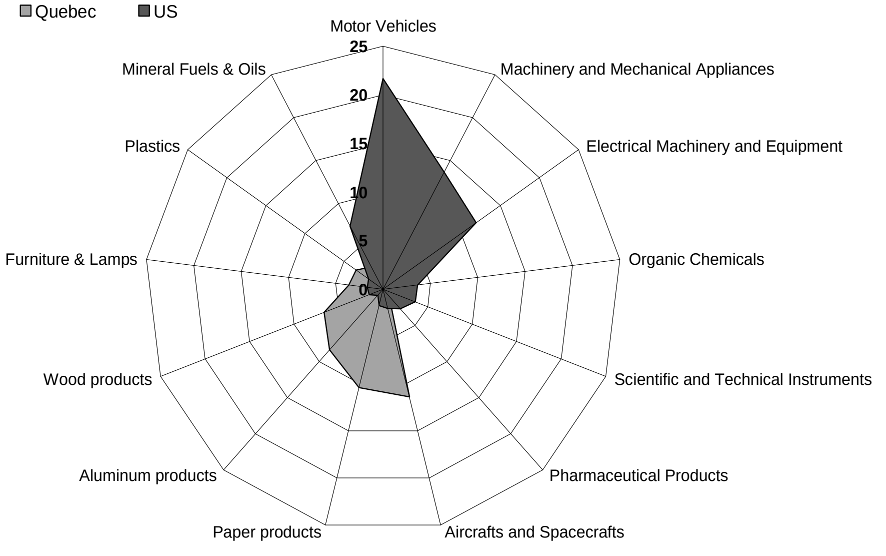

*Source*: Institute of Statistics of Quebec.

The second objective is to ***take better advantage of the US market*** to which Montreal has gained substantial access. In particular, there exist certain export niches to be further exploited. Quebec's exports are products for which the import by the U.S. is relatively low (aircraft and spacecraft, paper, wood, furniture and lamps, plastics) as opposed to other products imported by the U.S. (motor vehicles, machinery and mechanical appliances, electrical machinery and equipment) (Figure 1.17). Achieving higher competitiveness in these high demand industries could assist in increasing the export levels for Quebec and Montreal. Moreover, there should be some room for Montreal to expand its exports to the US Southeast and West regions: in 2000, 50.9% of Quebec manufacturing exports to the U.S. went to the Northeast, 21.3% to the Midwest, but only 20% to the Southeast and a meagre 7.8% to the West. According to the Department of Foreign Affairs and International Trade (DFAIT), there might be some business opportunities for Quebec in these emerging markets in business service firms (electronic data processing, software and applications, computer hardware) and for manufacturers of pharmaceutical products and transportation equipment (CED 2003). Presently, Quebec and Montreal-based firms are not present in these emerging markets.

Finally, Montreal should strengthen its exports position in ***high-technology intensive products***, which have higher value-added. The share of high-technology products in Quebec's international manufacturing exports[26] has substantially increased since 1995 and reached 28.4% in 2001 (totalling 46% when medium-high technology products are added)[27]. This switch towards high-technology products, especially in the manufacturing sector, has been conducive to the development of small and medium-sized enterprises as suppliers of intermediate goods (either through outsourcing or subcontracting) to exporting firms. For instance, more than 100 SMEs have been reported to be subcontractors of large firms located in Montreal that work in the aerospace industry (CED 2003). To strengthen its position, Montreal should pursue a qualitative and innovative strategy. Until now, Canadian exports have been supported by the substantial depreciation of the Canadian dollar. Focussing on low costs as a result of a low currency as a comparative advantage and increasing quantity products is not a sustainable, long term strategy. The example of the electronic and communication equipment sector shows clearly the weaknesses of this type of strategy. After having experienced a major setback in 2001, it is now severely challenged by new players, notably from Asia, able to produce the same quality products for lower costs. In the future, efforts should be made to meet the right characteristics of the product demand, find new and better ways to produce new products in response to rapidly shifting market trends, and develop new processes. Thus, the role of innovation is crucial in maintaining business competitiveness in the external market.

Figure 1.17. **US imports from OECD countries and Quebec exports to the US, 2001**

Sectoral composition




*Source*: OECD Territorial Database.

Note : The Figure plots the product composition of US imports from OECD countries and Quebec's exports to the US. The figure can be interpreted as a map of: 1) the products for which US demand in the international markets is highest (darker area) and 2) the products in which Quebec has an international comparative advantage (lighter area).

## *Building on innovative clusters*

The evolution of Montreal's economy has been closely linked with the development of innovative clusters in high technology (aerospace, communication and information technologies, biotechnology and biopharmaceuticals), in traditional manufacturing industries (textiles and bio-food) as well as in the culture/entertainment sector (Box 1.2). Stemming from their ability to produce high-value products and services, these regional clusters constitute a hub of innovation. Quebec's effort in R&D spending is comparatively high. Internationally, Canada ranks only 16th among 29 OECD countries in regards to gross domestic expenditure on R&D (both public and private): 1.84% of GDP in 2000. However, Quebec's R&D efforts exceeded the Canadian average: in 1999, it represented 2.42% of provincial GDP, against 1.83% for Canada, ahead of Ontario (2.23%); and in 2001, Quebec expenditures on R&D represented 28% of Canadian expenditures in 2001, against 51% in Ontario (CED 2003). In regards to the share of private expenditure on R&D dedicated to high-tech industries, Canada is the third highest among OECD countries (OECD 2002*f*). In Quebec, R&D spending by high-tech industries (mainly located in Metropolitan Montreal) has increased by more than 75% over the past 10 years, climbing from CAD 700 million in 1990 to reach CAD 1.3 billion in 1999, breakdown as follows: CAD 631 million in the aerospace industry, CAD 382 million in the IT sector, CAD 247 million in pharmaceuticals, and CAD 337 million in biotechnology (Montreal TechnoVision, 2001). A main problem is that within these clusters, innovation mainly takes place in large companies. This is problematic given that small and medium-sized enterprises account for the greater part of the metropolitan industrial fabric (56.4% of the total number of enterprises have 1 to 4 employees and 30.9% have 5 to 19 employees). Small and medium-sized enterprises encounter significant problems in investing in new technologies, notably due a lack of financial capital. A study of the *Centre de recherche industrielle du Quebec* has identified a shortage of investment in machineries and productive equipment by Quebec enterprises as being one of the main causes of Quebec's low productivity[28]. In 2002, the Montreal metropolitan region registered a decline of 6.8% in investment levels, arising from a 13.5% reduction in private sector investments.

The R&D in Montreal universities is also well developed but decreasing. University research peaked at CAD 118 million in 1992-1993, but has since declined an average of more than 2% per year. In 1998-1999, funding was at CAD 97 million, 75% of which was devoted to biopharmaceutical research and 25% to IT. Although the aerospace industry is an important high-tech industry in Montreal, it comprises less than 1% of university research funding (Montreal TechnoVision, 2001). Commitment to support R&D and innovation is however evident by the number of research centres in the area. Montreal is well-performing in this respect, with more than 63 university and college research centres working directly or indirectly in the new technologies information and communications (NTIC) sector[29], bringing together 1 200 specialists.

**Box 1.3. Main clusters in the Montreal metropolitan region**

In Montreal, three principal forms of clusters can be observed: competitive, emerging and horizontal. Referring to Porter's (2000) cluster model, Montreal's competitive clusters are identified as such because they contribute directly to the competitiveness of their enterprises. They increase productivity by providing improved access to specialised human resources and physical infrastructure and facilitating the circulation of information. The proximity of skills and production helps clusters play a key role in innovation. Also, clusters facilitate the creation of new business by making markets more easily accessible (CMM 2002).

***Competitive clusters***

*Aerospace*

In Montreal, there are 130 companies that have 50% of their business volume in the aerospace industry (Montreal International, 2002*b*). These companies represent some 28 500 jobs (Montreal International 2002*c*). There are another 120 companies for whom aerospace represents between 30 and 50% of their business. The value of aerospace industry activity in the Montreal metropolitan region is estimated at CAD 10 billion for the year 2000, and investments in R&D are estimated at over CAD 500 million. The concentration of aerospace employment clearly places Montreal in the top tier of North American cities. The sector is heavily concentrated, with nearly 50% of these jobs in a single company (Bombardier), and nearly 80% of all jobs with the top seven prime contractors (Bombardier Aerospace, Pratt & Whitney Canada, CAE Inc., Air Canada (Technical Centre), Bell Helicopter Textron, Rolls-Royce Canada and Air Transat (Maintenance)).

*Biotechnology and biopharmaceuticals*

Dimensions of the life-sciences that are important to the regional economy include: 230 private companies employing 18 000 people; another 6 000 people employed in public and semi-public research centres; a total of 75 research centres, including 24 university hospitals and institutes and 52 public research centres; 2 universities (McGill and Montreal) that are world renowned in research in this sector; CAD 3.4 billion of manufactured goods in 2001 for the manufacture of medical and pharmaceutical products, which is close to 50% of all Canadian activity in this sector; the third largest number of IPOs (initial public offerings) in North America (12), behind San Francisco (41) and Boston (17). Furthermore, within the Metropolitan Region, there are at least five important international centres of development and one emerging centre.[30]

**Box 1.3. (continued)**

***Emerging clusters***

*Culture/entertainment*

The region has 159 cultural establishments, including 59 performance halls, 43 museums and exhibition halls, and 57 libraries and archival documentation centres. There are 189 classified historical and heritage sites. When the definition of culture industries is expanded to include entertainment more broadly, it is clear that the region has valuable strengths in film and multi-media as well. As the fifth largest production centre in North America, the region exhibits particular strength in digital imagery, computer assisted animation, and special effects. Direct and indirect benefits have more than tripled, from CAD 579 million in 1992, to more than CAD 1.8 billion in 2002. For 2000–2001, the film industry has generated no less than 22 750 direct jobs and 13 650 indirect jobs in the metropolis, for a total of 36 400.[31]

Culture industries are also critically important because of their close link with the tourism industry. Tourism is an important part of the Montreal economy, with more than 60% of the tourists coming from outside the province to visit Montreal during their trip to Quebec. The region has an estimated 25 000 hotel beds but experienced a vacancy rate of 68% in 2001, signalling the untapped potential of tourism.[32] Overall in 2002, tourism expenditure slightly exceeded CAD 2 billion, 53% of which were attributed to international tourists. Tourism directly generated 76 000 jobs (Tourisme Montreal, 2002).

***Horizontal clusters***

*Information technology*

When merged together, the overall IT industry accounts for some 97 500 employees in the Montreal metropolitan region, employed in more than 2 500 companies (Montreal international 2002 c). Of the 15th largest metropolitan regions in North America, on a per capita basis, Montreal ranks 4th in IT industry employment, similar to Seattle, Philadelphia, Chicago or Toronto, and 9th in the terms of total jobs.

*Logistics and distribution*

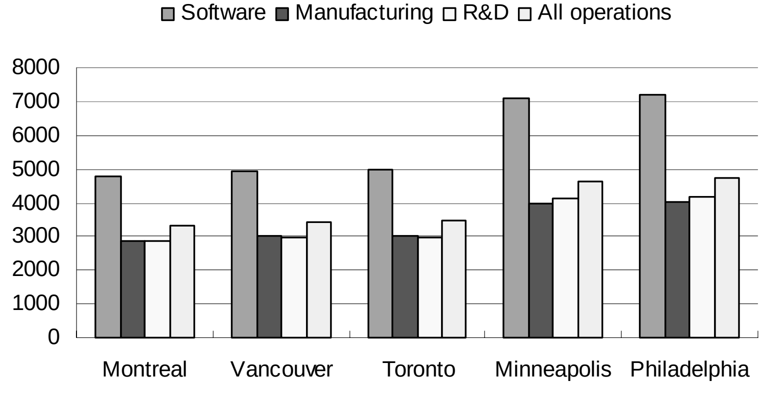
Not only is the region an important hub for goods transportation for Canada, it also services much of North America. Logistics and distribution include all related sectors of trucking, shipping, warehousing, distribution and infrastructure (*e.g.* ports, highways, airports, railways). The transportation and distribution industry employs approximately 160 000 people (transport, logistics, distribution, wholesale trade). The Port of Montreal generates around 17 000 direct and indirect jobs.

## *Attracting investment and "talent"*

Economies of scale in a given location emerging from knowledge spillovers of innovative clusters tend to generate a positive "virtuous dynamic circle" by attracting other investments as well as people in the area. A significant recent trend in Montreal has been the increase in foreign direct investment (FDI). In 2001, out of total investments of CAD 1 million and more in Quebec, 50.9% originated from foreign investors (Institut de la statistique Québec, 2002*c*). In the Montreal CMA, foreign investors were responsible for 64% of the total value of investments during 2000-2002, (CAD 60 million against an average value of domestic investment of CAD 20 million). Furthermore, in 2002, 1 352 subsidiaries of foreign enterprises employed approximately 118 500 people (7.8% of the total employment of the Montreal metropolitan region, excluding the retail sector). The majority of FDI in the Montreal CMA originated from the U.S. (52.5%), and the rest came primarily from Western Europe (40.3%) (Montreal International 2003).

Montreal's success in attracting investments is likely to continue as long as it offers locational advantages. Among the several factors that influence the location decisions of business enterprises, a first set is related to business operating costs (*i.e*. labour, taxes, transportation, industrial land and buildings) (Figure 1.18). In this respect, according to a KPMG[33] comparative analysis of 86 cities in nine countries, Montreal ranks 79th[34] (KPMG, 2002) (Table 1.11). In particular, it is among the metropolitan regions with the lowest locational and operational costs of enterprises in R&D, services, logistics and manufacturing with the most significant cost advantages arising from taxes, transport, energy and installation.[35] Although Montreal exhibits positive qualities that contribute to locational decisions and ensuing operational costs, many of these qualities are factors that are more applicable to the manufacturing sector than the new economy (CMM, 2002). Moreover, Montreal's low cost locational advantage has been magnified by the depreciation of the Canadian dollar[36].

Figure 1.18. **10-year average annual salary wage costs, 2002**
In thousand USD




*Source*: KPMG (2002)

Table 1.11. **Cost of Doing Business Index**

| City | Country | Index | Rank |
|---|---|---|---|
| Yokohama | Japan | 125.7 | 1 |
| Honolulu | US | 116.7 | 2 |
| New York, NY | US | 115.5 | 3 |
| San Jose, CA | US | 115.5 | 4 |
| Fukuoka | Japan | 113.9 | 5 |
| Hamamatsu | Japan | 113.8 | 6 |
| Newark, NJ | US | 110.5 | 7 |
| Boston, MA | US | 107.6 | 8 |
| Philadelphia, PA | US | 106.8 | 9 |
| Dusseldorf | Germany | 105.9 | 10 |
| Seattle, WA | US | 105.7 | 11 |
| Darmstadt | Germany | 104.8 | 12 |
| Houston, TX | US | 104.4 | 13 |
| Riverside-San Bernardino, CA | US | 103.7 | 14 |
| Syracuse, NY | US | 103.6 | 15 |
| Sacramento, CA | US | 103.4 | 16 |
| Dallas-Ft. Worth, TX | US | 103.3 | 17 |
| Hartford, CT | US | 102.9 | 18 |
| Las Vegas, NV | US | 102.8 | 19 |
| Minneapolis, MN | US | 102.6 | 20 |
| San Diego, CA | US | 102.2 | 21 |
| Chicago, IL | US | 101.9 | 22 |
| St. Louis, MO | US | 101.5 | 23 |
| Scranton, PA | US | 100.8 | 24 |
| Northern Virginia (Metro DC), VA | US | 100.8 | 25 |
| Portland, OR | US | 100.8 | 26 |
| Phoenix, AZ | US | 100.1 | 27 |
| Saginaw, MI | US | 99.6 | 28 |
| Oklahoma City, OK | US | 99.4 | 29 |
| Burlington, VT | US | 99.4 | 30 |
| Colorado Springs, CO | US | 99.1 | 31 |
| Wichita, KS | US | 99 | 32 |
| Raleigh, NC | US | 98.7 | 33 |
| Columbus, OH | US | 98.3 | 34 |
| Atlanta, GA | US | 98.3 | 35 |
| Lewiston, ME | US | 98.2 | 36 |
| Cedar Rapids, IA | US | 97.9 | 37 |
| Salt-Lake City, UT | US | 97.8 | 38 |
| Jacksonville, FL | US | 97.6 | 39 |
| Boise, ID | US | 97.5 | 40 |
| Nashville, TN | US | 97.3 | 41 |
| Indianapolis, IN | US | 97.2 | 42 |
| Lexington, KY | US | 96.9 | 43 |
| Cape Girardeau, MO | US | 96.3 | 44 |
| Sioux Falls, SD | US | 96.1 | 45 |
| Greenville-Spartanburg, SC | US | 95.5 | 46 |
| Chemnitz | Germany | 94.8 | 47 |
| Vienna | Austria | 94.7 | 48 |
| Dothan, AL | US | 94.3 | 49 |
| Toulouse | France | 94.2 | 50 |

| Table 1.11. (continued) | | | |
|---|---|---|---|
| Graz | Austria | 93.4 | 51 |
| Linz | Austria | 93.1 | 52 |
| Grenoble | France | 91.8 | 53 |
| West-Holland Region | Netherlands | 91.7 | 54 |
| Maastricht-Heerlen | Netherlands | 90.9 | 55 |
| Tiburg | Netherlands | 90.7 | 56 |
| Zwolle Region | Netherlands | 90.6 | 57 |
| Mulhouse | France | 90.5 | 58 |
| Edinburgh | UK | 90 | 59 |
| Groningen | Netherlands | 90 | 60 |
| Vicenza | Italy | 88.9 | 61 |
| Turin | Italy | 88.9 | 62 |
| Glasgow | UK | 88.8 | 63 |
| Birmingham | UK | 88.6 | 64 |
| Vancouver, BC | Canada | 88.2 | 65 |
| Manchester | UK | 88 | 66 |
| Toronto, ON | Canada | 87.9 | 67 |
| Livorno | Italy | 87.9 | 68 |
| San Juan, PR | US | 87.8 | 69 |
| Naples | Italy | 87.7 | 70 |
| Catania | Italy | 87.2 | 71 |
| Plymouth | UK | 86.8 | 72 |
| Cardiff | UK | 86.7 | 73 |
| Winnipeg, MB | Canada | 86.4 | 74 |
| Ottawa, ON | Canada | 86.2 | 75 |
| Stoke-on-Trent | UK | 85.8 | 76 |
| Waterloo Region, ON | Canada | 85.7 | 77 |
| Telford | UK | 85.4 | 78 |
| Montreal, QC | Canada | 85.3 | 79 |
| Calgary, AB | Canada | 85 | 80 |
| Saskatoon, SK | Canada | 84.9 | 81 |
| Kelowna, BC | Canada | 84.7 | 82 |
| Moncton, NB | Canada | 84.6 | 83 |
| Halifax, NS | Canada | 83.9 | 84 |
| Quebec City, QC | Canada | 83.5 | 85 |
| Edmonton, AB | Canada | 82.9 | 86 |

Note: The study assesses the impact of twenty seven location-specific factors on business. It features 86 cities.

*Source* : KPMG (2002)

In the new technology-oriented economy, the location decision of firms is highly dependant on the availability of a highly skilled labour force and an educational system adapted to the firms' needs. In fact, high-technology firms are less attracted by low costs advantages than by the presence of the "talent" that can operate effectively in knowledge- and information-based industries. In turn, the location decision of talented individuals is determined by the availability of jobs and career opportunities as well as the quality of life of the area. Regarding career opportunities, recent trends in Montreal show that job creation has been quite dynamic in high-tech industries. However, some argue that the high income tax in Quebec has a negative impact on high-skilled workers' decisions to remain in Montreal. Gertler (2001), however, considers that "the arguments which focus on the tax issue are misguided or worse" and emphasizes the importance of local quality of life, *i.e*. the attractiveness and condition of the natural and man-made environment, the quality of schools, public services and healthcare, and the richness of cultural amenities.

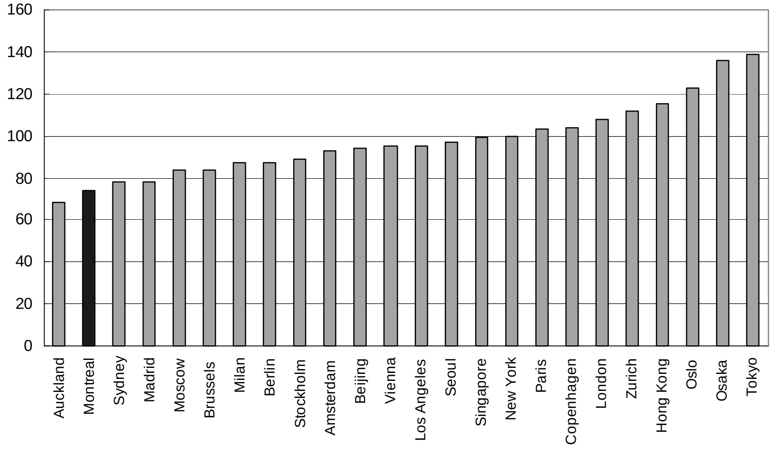
Montreal has an efficient physical infrastructure (transport, telecommunication), an important criterion for investors' locational decisions. Through time and cost savings, transport infrastructure allows for gains in productivity by improving industry production and distribution. Montreal is a hub for transport infrastructure. It has major marine transportation infrastructure (the Port of Montreal installations), railways, and airports (Dorval and Mirabel airports), as well as highways and public transport (commuter trains, the metro, intercity buses). The Port of Montreal serves as a gateway to North America via the Great Lakes and is one of the closest North American ports to European ports. Regarding railways, the metropolitan region is situated at the junction of three major rail corridors—the Trans-Canada corridor, the Quebec-Chicago corridor and the US Northeast corridor—which renders the Island of Montreal a hub for rail traffic in Eastern Canada. There are two main highway corridors: one east-west, one north-south, coming from the centre of the metropolitan region towards the east and north of Quebec, the west in Ontario and to the Northeast U.S.

Although Montreal's physical infrastructure with respect to external connections is quite efficient, Metropolitan Montreal faces an accumulating deficit for the maintenance of municipal infrastructure. A more efficient transport infrastructure could benefit the region and ultimately contribute to a higher level of productivity. Congestion has become a problem at the intra-urban level. The eight main highways that come into the centre of the metropolitan region lead to the concentration of congestion particularly during rush hours, but which is becoming a general phenomenon in space and time. Despite an increase of transit ridership in the metropolitan region of 11.9% between 1995 and 2002, public transport remains underdeveloped. This is the case with the metro network and its 65 stations where an important portion of the city of Montreal remains un-served. The same situation prevails with commuter trains that do not serve the relatively crowded eastern suburbs of Montreal. In addition to public transit investment requirements, water distribution, sewage and road infrastructures have suffered from a lack of funding over the last few years. Since existing programmes do not adequately meet the infrastructure needs, municipalities have delayed infrastructure investment expenditures[37]. For example, the Metropolitan Transport Agency (AMT) estimates that up to CAD 6 billion of additional capital investment is required for the metropolitan region, including more than CAD 3 billion for the maintenance and the development of the metro network (AMT 2003).

The quality of life in Montreal is reputed to be high. As Figure 1.19 shows, Montreal features one of the lowest costs of living among large metropolitan cities worldwide (ranks second among 24 cities according to the Economist Intelligence Unit Index)[38]. In Canada, Montreal has the lowest Consumer Price Index (115.7% in 2002) among the eight largest Canadian metropolitan cities and (national average is 119)[39]. The tax burden can also influence the cost of living. In this regard, in Montreal, the proportion of revenue devoted to the different fiscal charges varies from 15 to 51% according to the type of household (CMM 2002). Moreover, Montreal is also quoted as one of the safest cities in North America. Per 1 000 inhabitants, it registered 4.4 crimes against persons, ranking 4th out of 25 major North American metropolitan regions. Regarding crimes against property, Montreal's performance was less impressive. It ranked 18th out of 25 whereas, Philadelphia ranked 4th and Toronto, 5th (CMM 2002). The region's specialisation in cultural industries contributes to enhance and develop urban amenities, a crucial determinant for the attractiveness of a metropolitan area as a place to live and work. Furthermore, Montreal is well-known for its social diversity and tolerance, a factor which according to Florida and Gates (2001) is strongly associated with the success of knowledge intensive industry.[40] Montreal has a cultural and demographic heterogeneity as well as a unique cosmopolitan feature that serve to facilitate global interactions.[41]

Figure 1.19. **Cost of living index, 2002**

Base New York = 100, September 2002




*Source*: Economist Intelligence Unit.

## Containing social and spatial disparities

While Montreal's competitiveness has been assessed in terms of GDP per capita, there are also less quantifiable factors that may weaken its competitiveness, including social exclusion, spatial polarisation, pollution and congestion. These negative externalities, typical of large metropolitan regions, can constitute obstacles to metropolitan competitiveness depending on their magnitude. Compared to many OECD metropolitan regions, especially the U.S., the extent of such issues remains limited in Montreal. However, Montreal has relatively higher poverty rates compared to other Canadian metropolitan regions. Moreover, some signs of spatial polarisation are apparent that, if not tackled appropriately, could have an impact on Montreal's attractiveness and quality of life and thus undermine its competitiveness. For policy-makers, this means that any strategy for improving economic competitiveness should take this dimension into account. Improving productivity and competitiveness will certainly contribute to a higher standard of living and lower poverty but social and environmental policies are necessary to maintain social cohesion and preserve the environment. While federal and provincial, as well as social and environmental, policies have had a positive impact at the territorial level, local targeted actions should continue to be a priority for all levels of government.

### *Why higher poverty in Montreal?*

Poverty or the low-income cut-offs established by Statistic Canada[42] has registered an increase in Canadian metropolitan areas since the 1980s, particularly in large CMAs. This trend was particularly pronounced in the first half of the 1990s, the total population in Canadian CMAs increased by 6.9 % and poverty increased by 33.8%, against 18.2% in non CMAS regions. In 1995, among the CMAs, 69.9% of those in poverty lived in Montreal, Vancouver and Toronto. These three largest CMAs (Toronto, Montreal and Vancouver)[43] also witnessed the largest increase in their poverty rates—over five percentage points, during the period (1990-1995) (Table 1.12). In 1995, the Montreal CMA had the highest poverty rate of the three (27.3%)[44], but the Vancouver CMA experienced the greatest increase since 1990. The poverty rate of the Montreal CMA was around nine percentage points higher than in non-CMA Quebec (Lee 2000). Table 1.13 shows the low-income thresholds for the Montreal metropolitan region in 2002. The correlation between level of education and earning capacity is evident in Montreal. Workers with a secondary school graduation certificate have an average income of CAD 23 562 whereas, university graduates benefit from an income almost double that amount (CAD 41 277).[45]

Table 1.12. **Poverty rates for the largest Canadian CMAs, 1990-1995**

| CMAs (Populations : 500 000 & Over) | Poverty Rates in % (1990) | Poverty Rates in % (1995) | Changes in % point, (1990-1995) |
|---|---|---|---|
| Montreal | 22.2 | 27.3 | 5.1 |
| Vancouver | 17.9 | 23.3 | 5.4 |
| Winnipeg | 20.7 | 23.0 | 2.3 |
| Quebec | 18.7 | 22.8 | 4.1 |
| Edmonton | 19.4 | 21.3 | 1.9 |
| Toronto | 15.0 | 21.1 | 6.1 |
| Calgary | 17.7 | 19.8 | 2.1 |
| Hamilton | 15.5 | 19.0 | 3.5 |
| Ottawa-Hull | 14.6 | 18.9 | 4.3 |

*Source* : Canadian Council on Social Development (data from Statistic Canada's 1991 and 1996 Census)

Table 1.13. **Low-income thresholds (after tax) for the Montreal metropolitan region, 2002**
CAD

| Family Size | Low income threshold* |
|---|---|
| 1 | 15 907 |
| 2 | 19 410 |
| 3 | 24 550 |
| 4 | 30 576 |
| 5 | 34 174 |
| 6 | 37 773 |
| 7 or more | 41 372 |

Note: These figures apply to urban areas with a population of 500 000 and over. 1992 is the most recent base year used in calculating low-income cot-offs (LICO), which are determined by analyzing family expenditure data. To reflect differences in the costs of necessities (food, shelter and clothing) among different communities and families, LICO's are defined for five community and seven family categories.

*Source* : Statistics Canada.

The combined effect of the economic crisis and high unemployment of the first half of the 1990s serves as the major explanation of the existing high income disparities and poverty rates in Montreal. Since then, economic recovery has resulted in higher employment rates but unemployment in Montreal remains the highest (8.4% in 2002) among the largest Canadian CMAs (7.4% in Toronto and 7.8% in Vancouver). Higher poverty rates in Montreal, relative to other Canadian metropolitan regions, reflect a long term trend of lower real income per capita. However, Quebec's gap in the standard of living in relation to Ontario has reduced since the 1960s, in particular during the period 1986-1999 (Fortin 2001). A new Statistics Canada's indicator, the Market Basket Measure (MBM) which estimates household's cost of living, reveals that Montreal is in fact better positioned than other large CMAs (Table 1.14)[46].

Table 1.14. **Market Basket Measure (MBM) in the nine largest Canadian's CMA's**

CAD

| CMA | MBM |
|---|---|
| Vancouver | 27 791 |
| Toronto | 27 343 |
| Ottawa Hull | 26 503 |
| Calgary | 24 180 |
| Hamilton | 23 745 |
| Winnipeg | 22 750 |
| Montreal | 22 441 |
| Quebec City | 22 156 |

Note: The MBM estimates the cost of a specific basket of goods and services for the year 2000 assuming that all items in the basket were entirely provided for out of the spending of the household. This cost would be lower, for example, for those households who meet all or part of this standard of consumption through direct services provided by governments, other institutions or other households. The cost of the goods and services in the MBM is calculated for a reference family of one male and one female adult aged 25-49 with two children, a girl aged 9 and a boy aged 13.

*Source*: Statistics Canada.

### *Limiting spatial polarisation*

Spatial concentration of poor households, often linked with distressed urban areas, is a phenomenon present in many OECD metropolitan areas. This phenomenon could be detrimental to the entire urban economy, as it represents both an untapped development opportunity and a barrier to greater competitiveness (OECD 1998)[47]. The issue in Canada is less acute and more complex than the traditional inner-city/suburban dichotomy that prevails in many OECD metropolitan regions, particularly in the U.S. In fact, large Canadian CMAs' neighbourhoods with high concentrations of poverty, rarely combine all the characteristics associated with distressed urban areas[48] which results in a more balanced social mix. Yet, poverty rates vary significantly within large Canadian CMAs and spatial concentration of poverty is much more pronounced in Montreal than in other CMAs[49] (Seguin and Divay 2002). For instance, in 1996, of the cities in large CMAs, the new city of Montreal had the highest poverty rate at 41.2%, concentrated more particularly in the boroughs of the old city of Montreal (near downtown) as well as in several sectors of the boroughs of Verdun and Montreal-Nord. Longueuil and Laval had poverty rates at 30.3 and 21.4% respectively. In several sectors of the old city of Longueuil, at least one family in four represented a household living in poverty, while this proportion exceeded 50% of families in certain other sectors. In the city of Laval, concentrations of such households were found in some of its older areas. There were also pockets in the North Shore, but to a lesser degree. Concentration of low income households in Montreal's different sub-regions is reflected in Montreal's different sub-regions' employment rates. When considering the employment rates in the place of residence, the administrative region of Montreal had the lowest employment rate (56.6%) compared to Laval (60.6%), Lanaudière (58.5%), Laurentides (62.4%) and Montérégie (62.8%) (Institut de la statistique de Quebec, 2002*a*).

Transport infrastructure is among the factors that influence the spatial nature of social disparities, by further excluding communities or improving accessibility and mobility. In Montreal, the metro has allowed for the consolidation of socio-economic activities in the downtown core. The organisation of the public transportation network is principally designed for trips that are headed for this area, which is also the case for the express buses and rail. As a result, the service to the centre is particularly efficient, but destinations out of the core are difficult to reach because of the need to transfer, which involves long waiting times. At the intra-urban level, public transport has been less active in the zones which are best served. In 1998, there were 110 000 trips fewer to the centre of the Island of Montreal, 58 000 fewer on the rest of the Island, 23 000 fewer to Laval and Longueuil (AMT 1998). But overall, between 1987 and 1998, traffic augmented from 935 000 to 1 325 000 vehicles, a 42% increase or an annual growth of 3.2%. Car traffic flows increasingly into the arterial network, spilling over into residential areas. Congestion has spread from the centre, to become a phenomenon no longer localised and occasional, rather one that is general in space and time.

## Conclusion

Montreal continues to be a major player in the Canadian economy. The metropolitan region has registered good economic performance in recent years, recovering from the economic crisis of the first half of the 1990s. It has considerably improved its labour market situation, with a significant turnaround in participation and in employment rates. Considerable progress has also been made with regards to labour productivity over the past few years. On the external markets, Metropolitan Montreal has also managed to strengthen its position in leading sectors of the knowledge-based economy and to benefit from increasing foreign trade and investment. Yet, when compared to a selection of 63 metropolitan regions, Montreal is not doing as well in terms of GDP per capita. In particular, it features low productivity mainly due to relatively lower education levels of its labour force and an insufficient level of capital.

How can Montreal cope with the challenge of competitiveness? Clearly, it has to increase its level of productivity, a major factor in a context of fierce competition with other metropolitan regions. For this reason, efforts to enhance the educational level of the population and to fill the gap with other Canadian and OECD metropolitan regions should be pursued. Montreal has also benefited from a favourable exchange rate for its export competitiveness. It now has to focus on qualitative growth instead of quantitative growth. For this purpose, Montreal has to build on its existing assets and exploit some untapped potentials. Montreal can rely on well-established localised comparative advantages which include regional clusters specialised in high-tech industries, aerospace, biotechnology and media/entertainment. Furthermore, it combines different positive aspects for a high quality of life that makes it an attractive location for enterprises and people. If Montreal wants to pursue its expansion on external markets and continue to register economic growth and employment, it has to reinforce its existing regional clusters through policies for supporting innovation and attracting high-skilled talents. Implementing a co-ordinated economic strategy for the whole metropolitan region will be central to achieving better competitiveness.

# NOTES

1 Manufacturing jobs in transportation and warehousing are concentrated in the northwest of the Island of Montreal at Saint Laurent and Dorval, as well as Longueuil, Laval and Mirabel. The electrical and electronics products industry is concentrated in the West Island of Montreal. The largest concentrations in the clothing industry are found on the northern part of the Island of Montreal.

2 The main highway network was set up to serve the Island of Montreal, which is a point of convergence for the main highway corridors. Today, the eight main highways coming into the centre of the metropolitan region all feed one major highway (Highway 40). The public transport has three main components: (i) the Metro, opened in 1966, serves the central core of the metropolitan region and carries about half of the public transport trips taken in the metropolitan region; (ii) commuter trains, which serviced the first suburbs of Montreal, include five lines, three of which have been brought in to service in recent years. These five lines still do not form a well-established network. Certain sectors, notably the eastern metropolitan area, remain unconnected; and (iii) buses complement the heavy infrastructure (metro and commuter trains) and provide a more extensive and complete service to the metropolitan territory.

3 More precisely, they belong to the regions of Laurentides, Lanaudière and Montérégie.

4 The CMM and the CMA include the regions of Montreal and Laval and cover part of the regions of Laurentides, Lanaudière and Montérégie.

5 GDP in Canadian metropolitan regions is based on estimations provided by the Conference Board of Canada. The calculation is based on sectoral employment in metropolitan regions under the hypothesis that the sectoral labour productivity is the same as for the province. The same methodology is applied, but using productivity data at the State level, to estimate GDP in US metropolitan regions.

6 Unless otherwise specified, Quebec refers to the Province of Quebec.

7 Canadian Dollars 1997.

8 There is a vast array of literature on global urban rankings that aim to classify and position metropolitan regions in the global hierarchy. These rankings serve to highlight major strengths and weaknesses to determine the regions'

present positioning, underdeveloped aspects and future objectives (INRS, 1999). The OECD ranking of metropolitan regions does not focus on historical trends but on positioning. Although it does not highlight Montreal's recent socio-economic performances, it intends to provide a useful international positioning of the region's level of competitiveness. Moreover, despite the existence of numerous competitiveness rankings, a uniform way to measure metropolitan competitiveness does not exist, but this is not to say that such rankings are irrelevant or inconsistent. Indeed the contrary is true, but a proper interpretation of such ranking should recognise that regions are positioned comparatively according to pre-established indicators.

9 Real GDP is valued at **national** Purchasing Power Parities (PPP), which accounts for price differences between countries. The lack of **regional** PPP indexes makes it impossible to further control for price differences within the same country.

10 To assess its present state of competitiveness, the Montreal CMA has been compared to a selection of OECD metropolitan regions that have been defined according to two criteria: i) their classification as "prevalently urban" according to the OECD Territorial Typology and ii) their resident population being greater than 2 000 000 inhabitants. The OECD Territorial Typology classifies regions into three categories: predominantly rural (more than 50% of the population living in rural communities), intermediate (between 15-50%) or predominantly urban (less than 15%).

11 By definition, average productivity is a weighted average of sectoral productivity, where weights are given by the employment share of each sector. Therefore, differences in average productivity due to differences in employment shares can be regarded as the effect of specialisation and differences in average productivity due to sectoral productivity can be interpreted as the result of differences in capital and technology.

12 Selection of the 52 metropolitan regions was made out of the 65 for which data was available.

13 The four major universities are McGill University, the University of Montreal, the University of Quebec in Montreal, and Concordia University.

14 The majority of direct funding for total education spending comes from the provincial government (69.7%). The federal and local governments contribute 7.8% and 7.7%, respectively. 14.8% of direct funding is attributed to other sources (Department of Education, 2002).

15 Figures correlate to the number of graduates in 1995.

16 This ranking is based on data from 2000 and 2001 provided by the U.S. Census Bureau and Statistics Canada respectively (CMM, 2002).

17 The relationship between activity rates and age follows a bell pattern: activity rates are low for young people (due to education), increase for mature workers and decrease again for elderly people (due to retirement). Therefore, the decrease in the share of young population will induce an increase in total activity rate while the increase in elderly population will exert the opposite effect.

18 http://www.vero.fi/

19 According to Montreal International (2002c), high technology refers to computer and aeronautic equipments as well as pharmaceutical products.

20 The highest unionisation rate concerns the public sector (70.4%) against only 14% in the private sector.

21 Data are for the private sector. Except for federally regulated industries (broadcasting, telecommunications, aviation and interprovincial transport), employment standards (minimum wage, vacation pay, overtime rate, maternity and parental leave) are fixed by provincial laws.

22 Data on exportations is available at the CMA level, but they are not available on importations.

23 In 2001, Quebec exported CAD 139 billion and imported CAD 130 billion.

24 The market area corresponds to the population within 1 000 km of the agglomeration centre (CMM 2002).

25 However, they bounced back in 2002.

26 Evidence suggests that the bulk of exports of high-technology products is produced in the Montreal region.

27 The rest of Quebec's international manufacturing exports, *i.e.* low-technology and medium-low technology products constitute 54% of the total (paper, textiles, food and wood, plastics and rubber, non-ferrous metal, metalworking) (Institute of Statistics of Quebec 2002*a*).

28 Quoted in *Le Devoir*, "Productivité - Il est temps d'agir! Les entreprises manufacturières québécoises se maintiennent dans un faux sentiment de confiance", Serge Guérin, Président directeur général du Centre de recherche industrielle du Québec, Édition du lundi 17 juin 2002.

29 The NTIC sector is divided into three main categories: manufacturing, applications and services. Exports in this sector enjoyed an annual growth rate of 14.5% from 1991 to 2000.

30 The University of Montreal Complex; the McGill University Complex; the Bio-tech City in Laval; the West Montreal Centre for life sciences (including the Biotechnology Research Institute (IRB), the MacDonald Campus of McGill, the Saint-Laurent Technoparc, and the West Island Pharmaceutical Industrial Park); A Central City ensemble that includes the Montreal Institute for Clinical Research (IRCM), the University of Montreal Hospital Centre (CHUM), The Montreal Thoracic Institute, the Royal Victoria Hospital, and the Neurological Hospital of the McGill University Centre for Health (CSUM); An emerging synergistic centre of Montreal, Longueuil, Sherbrooke and Saint-Hyacinthe to the East of Montreal.

31 Information provided by the Bureau du cinéma et de la télévision de Montréal.

32 In 2000, an estimated 5.8 million visitors stayed in the city for more than 24 hours, 20% of whom came for business tourism. Estimated total visitors comprised: friends and relatives (39), pleasure (34), business (20) and other (7%). In 2001, tourists in Montreal was fairly equally composed of intra- (32.6) and interprovincial (31.3) as well as international visitors (36.0)--over half of the international tourists coming from the U.S (22.9%). Data only takes into account overnight visitors (Tourisme Montreal, 2003).

33 Regarding the methodology of the study, the KPMG Comparative Cost Model (CCM-2002) was used to analyse costs for different types of business operations across a number of geographic locations. The model applies current business cost data for each location to a set of business operating specifications that are held constant for all jurisdictions. The end result gives a comparison of the estimated cost of establishing and operating a facility in the studied locations (KPMG 2002).

34 A ranking of 1 represents the maximum costs and 86 the lowest.

35 This is especially true in software, R&D, corporate services and two manufacturing operations (electronics assembly and specialty chemicals).

36 It should be however noted that the Canadian dollar has begun to appreciate since the beginning of 2003

37 The three infrastructure programmes (Canada-Quebec, Infrastructures-Quebec and Quebec Municipalitiés) represent investments totalling CAD 2.6 billion. Infrastructures-Quebec and Quebec-Municipalities use 60% of their

respective budgets for accepted and confirmed projects of the municipalities. Only 44% of the budget of Canada-Quebec is devoted to such projects. In addition, municipalities do not receive financing before construction begins. The programmes were launched in 2000. Canada-Quebec is a programme endowed with CAD 1.69 billion to be spent over a six-year period. Infrastructures-Quebec has a budget of CAD 320 million for three years, and Quebec-Municipalities has CAD 609 million budget for an 18 month period (La Coalition pour le renouvellement des infrastructures du Quebec 2002).

38 The EIU cost of living index is not generally applied to base salary but to spendable income (EIU 2003).

39 Statistic Canada: http://www.statcan.ca/english/Pgdb/econ45a.htm.

40 See Florida and Gates (2001) for a study examining the strong association between the level of ethnic diversity, bohemian lifestyle choices and social tolerance with the success of knowledge intensive industry in the 50 largest metropolitan areas of the United States.

41 In the metropolitan region of Montreal, the majority are French speakers (68.0) whereas 12.5% are English speakers and 19.5% are allophones. The figures are similar at a more local scale: in the city of Montreal, 52.1 and 16.9 are French and English speaking, respectively (Tourisme Montreal 2003).

42 In the absence of an official poverty line, low-income cutoffs (LICOs) are used to indicate poverty levels. LICOs are income thresholds below which families are likely to devote a larger share of income to basic necessities (i.e. food, shelter and clothing) than the average family. LICOs were not created to measure poverty although they are often referred to as poverty lines. They can be used to show the extent to which some Canadians are less well-off in relation to others (Paquet, 2002).

43 Large CMAs have populations of 500 000 or higher and small CMAs have populations of 500 000 or less.

44 Vancouver CMA and Toronto CMA had poverty rates of 23.3 and 21.1% respectively. Ottawa-Hull CMA had the lowest at 18.9% (Lee, 2000).

45 Figures come from the 1996 Census (Statistics Canada).

46 The Market Basket Measure (MBM) is a new tool to assess low income. It is not an official poverty line. Its purpose is to provide another perspective on low income in Canada and complement existing Statistics Canada measures of low Income Cut-offs (LICOs). As its name implies, the Market Basket Measure is a “goods and services” rather than a “relative” indicator of low

income. The MBM estimates the cost of a specific basket of goods and services for the year 2000 assuming that all items in the basket were entirely provided for out of the spending of the household. This cost would be lower, for example, for those households who meet all or part of this standard of consumption through direct services provided by governments, other institutions or other households.

47 Whether in the centre or on the periphery, their presence alters the pattern of metropolitan employment and investment, reducing the capacity to pursue area-wide goals, such as competitiveness and sustainability. In particular, they engender higher public expenses for rehabilitation and infrastructure maintenance. Rising levels of spatially concentrated poverty undermine social cohesion and directly impact the quality of life and social capital.

48 Urban distressed areas are the result of an interlocking mix of environmental, social and economic circumstances: young populations and high rates of single parenthood in a context of broken families, low income levels and high dependency on income transfers, high levels of informal economic activity, low levels of socio-occupational mixity, high crime rates and rates of drug and alcohol abuse, few local commercial enterprises and poor access to shopping centres, and high mortality and disease rates. These different characteristics interact to produce cycles of decline (OECD 1998).

49 Hajnal 1986 quoted in Seguin and Divay 2002.

# CHAPTER 2

# MAKING GOVERNANCE WORK

From 2000 to 2002, the metropolitan region of Montreal underwent one of the most radical metropolitan governance reforms in OECD countries. As a response to territorial fragmentation – which is considered to be the root cause of metropolitan wide problems such as urban sprawl, fiscal disparities and inadequate local public services, the government of Quebec, in 2000, created the Montreal Metropolitan Community (CMM). The new body is responsible for the entire metropolitan area and its primary task is to ensure policy co-ordination and coherence for economic and spatial development not only on a city- but on a metro-wide scale as well. In 2002, the Quebec government amalgamated the urban conglomerate of independent municipalities into two new cities: Montreal and Longueuil. The new cities were divided into boroughs (*arrondissements*) — corresponding roughly to the former municipal borders - and become responsible for a number of neighbourhood services. In record time, the government set up a new institutional framework and rearranged responsibilities and, albeit in a limited way, certain funding sources.

It is certainly too early to assess the medium and long term effects of the reform. As is often the case, the institutional reform has left questions unanswered. The anticipated results depend on appropriate implementation and carefully designed steps for further reforms. The CMM, comprised of 63 municipalities of which the city of Montreal alone accounts for 53% of the total metropolitan population, will have to consolidate its internal structure and establish its role between the provincial and local governments. While the amalgamation of Montreal and Longueuil has certainly made cities bigger, it did not necessarily make them fiscally stronger. The role of the boroughs and the extent to which they will be entitled to their own responsibilities and resources is cause of debate within the amalgamated cities. Above all, the new provincial government, in power since 2003 and which has not supported the amalgamation, submitted a law that will allow former municipalities to disamalgamate. Moreover, the institutional reform has not addressed long term stability of municipal and metropolitan resources. Finally, current vertical relationships, particularly between the province and the CMM, will have to be adapted. This chapter surveys governance reforms in the Montreal metropolitan area and discusses them in view of the recent political debate as well as experiences of other OECD countries.

## Main challenges of metropolitan governance in Montreal

The main challenges of metropolitan governance in Montreal are similar to those in other OECD metropolitan regions in many respects. In the new globalised economy, cities and their regions have to compete with one another around the world while facing increasing strain on the social and environmental sides (social exclusion and disparities, urban sprawl, pollution, declining infrastructure and neighbourhoods). Their ability to meet all these challenges will substantially depend upon the institutional capacity to mobilize public, private and community resources in the long term. The problem is that in most OECD countries, metropolitan regions are still governed through inadequate, still overly complex institutional and financial structures. Among the main challenges that affect metropolitan governance are:

- *The fragmentation of administrative jurisdictions within metropolitan areas* which results in a lack of correspondence between administrative and functional territories. As major cities of OECD countries expand geographically outward, old administrative boundaries usually remain in place, creating a patchwork of municipalities within the urban area, each with its own vested interests to defend. This creates a complex policy environment in which area-wide consensus is difficult to reach on medium and long-term goals in environmental quality, economic development and competitiveness, social cohesion, equitable public finance, and the level and quality of public services across the urban region.

- *Increasing strain on the financial/fiscal ability of local authorities* in metropolitan areas who face additional charges at a time when economic and social conditions have deteriorated for many segments of the population, and when major investments in infrastructure are required to enable metropolitan areas to compete in the global economy. In many countries, decentralisation has produced unfunded mandates, *i.e.* upper levels of government downloaded responsibilities to the local level without introducing the corresponding, but politically difficult, financial and fiscal reforms. The reform of urban public finance is lagging behind the institutional changes in metropolitan areas.

- *Lack of policy co-ordination*. Controlling urban growth on a metropolitan scale implies strong intergovernmental policy co-ordination. For example, urban sprawl engenders heavy costs for central governments in terms of infrastructure and amenities, but it is on the other hand, a new revenue resource for suburban municipalities that rely strongly on income or property tax. Although it could be more profitable to concentrate certain industrial activities within the central city, suburban jurisdictions would still like to benefit from the revenues stemming from firms located in their jurisdiction. Confronting national, sub-national and local priorities in terms of economic development and limiting urban sprawl in metropolitan areas have thus become real challenges for every level of government.

In Metropolitan Montreal, strategic thinking on metropolitan governance had been closely linked with concerns of the main causes of Montreal's decline and elaborating a strategy for its development (Box 2.1). Whether commissioned by the provincial or federal governments or by different political parties in power, reports since the 1970s, share a concern for the lack of regional leadership and the need to have an appropriate governance structure to face the challenges of economic development.

**Box 2.1. Historical trends in the strategic thinking of Montreal**

Since the early 1970s, the main strategic thinking in Montreal has been based on the view that the old first economic city of Canada had not only lost its position but was somewhat in decline. Long regarded as the pivotal point for trade in goods between Canada and Europe and North America, Montreal endowed itself with a good transport infrastructure. As well as playing an important role in the development of Western Canada, since its foundation, Montreal had been the catalyst of economic development in other regions of the province where the economy was based on the exploitation of natural resources. The extension of the navigable waterway of the St. Lawrence River to the Great Lakes had adverse effects on the activities of the Port of Montreal. No longer a compulsory stop for ocean-bound ships, Montreal saw a considerable drop in good transport activities. At the same time, throughout North America, there was a progressive shift of economic activities to the centre and later to the West. The fallout from the 1965 Automobile Pact between Canada and the U.S. mainly benefited Ontario, primarily because the major American automobile industries already established in the Detroit region preferred to have their subsidiaries close to their American plants. Inevitably, over the years Montreal lost a considerable number of financial company headquarters, which moved to Toronto, causing Toronto to then became the real economic centre of Canada.

**Box 2.1. (continued).**

Two strategic trends can be identified in the development of Montreal. Between 1970-1980, the federal government led the efforts to revive the economy of the Quebec capital, the results of which are documented in the Higgins-Martin-Raynauld (HMR) Report (1970) and the Picard Report (1986). In the HMR Report, Montreal is part of a broader review on regional development in Canada, which was commissioned by Ministry of Regional Economic Expansion of the federal government (created in 1969). Considering the importance of creating a "*pole of development which by its multiplier effects would lead to the development of the whole of Quebec*", the ideal approach would have been to strengthen and consolidate the Montreal economic area through investment which would spread to the regions through various multiplier effects[1].

The publication of the Picard Report (1986) came amid a more difficult economic climate. The Universal Exhibition in 1967 and the Summer Olympic Games in 1976, which generated considerable infrastructure costs, did not have the expected results. Moreover, the decline in heavy industry, on which the Montreal economy relied, prevented the city from coping with the two oil shocks in the late 1970s and early 1980s. In addition, governance in Montreal was characterised by a "*divided, competitive, contradictory and combative leadership*" (Picard, 2002). It was then that the Federal Government Ministerial Committee on the development of the Montreal Region set up in 1986 a consultative committee composed of sixteen people from various backgrounds headed by Laurent Picard, Dean of the Faculty of Administration of McGill University[2]. The Committee then proposed a development strategy drawing on Montreal's strengths and identified seven major pillars on which to base the revival of the city's economy: international activities, high technology, finance and international trade, design, cultural industries, tourism and transport. These pillars illustrate that the Committee already foresaw the value of an approach focussing on industrial clusters. The Committee also sought the development of promising new economic sectors such as biotechnology and telecommunications and recommended the establishment of the Canadian Space Agency in Montreal (it is actually in Longueuil) and to concentrate airport activities in a single airport, Dorval. Lastly, the report stressed the lack of leadership as a main obstacle to economic development.

Since 1990, the provincial government has begun to develop a strategic thinking on the future of Greater Montreal. This took the form of the Pichette Report by the *Working Group on Montreal and its region* published in 1993 and the Bédard Report by the *Commission Nationale sur les finances et la fiscalité locales* (National Commission on local finance and fiscal policy, 1999), published in 1999. Compared with the federal approach, these studies did not directly address the concerns related to economic development strategies, but focussed more on governance structures. They underlined the lack of coordination and the absence of a metropolitan vision. Furthermore, for the first time, the emphasis was on the metropolitan region and the need for leadership to improve its competitiveness. One of the main recommendations of both reports was the creation of a metropolitan authority responsible for planning and coordination in a number of strategic areas, including economic development and transport.

There has been a wide diversity of metropolitan governance reforms across the OECD area (Box 2.2). The recent institutional reform in Metropolitan Montreal is part of a trend that began a few decades ago in other metropolitan areas. Whether it be the amalgamation of municipalities in Montreal and Longueuil or the creation of a Metropolitan Community, the institutional reform provides a valuable opportunity to meet the challenges of Montreal's competitiveness. Reforms are ongoing in some respects, in that the new metropolitan governance framework needs to be consolidated, especially with regards to clarification of competencies and fiscal responsibilities and resources.

**Box 2.2. Main trends in metropolitan governance in OECD countries**

Confronted with the new challenge of globalisation, decentralisation and metropolisation, OECD countries are experimenting with a variety of institutional metropolitan solutions to achieve greater policy coherence, to reduce internal disparities and to enable the efficient delivery of public services across metropolitan regions. The different approaches developed in the following typology are not mutually exclusive as some metropolitan regions combine several of the following aspects.

1/ The **status quo** is an option which rarely yields positive results and is often surrounded by a long term discourse on reform.

Relying on the assumption of mobile citizens, ***competition between jurisdictions*** may provide incentives for governments to raise public sector efficiency. However, experiences in Western Europe or North America show that fiscal competition may lead to declining or less cost-efficient services and wasteful rivalry between areas.

2/ Intermediary solutions include all forms of **horizontal collaboration** ranging from metropolitan-wide fiscal arrangements to the creation of metropolitan single- or multi-purpose agencies.

Purely ***fiscal measures*** have been a preferred approach in many OECD countries. Metropolitan-wide fiscal arrangements could be undertaken by the national government such as equalisation programmes in Sweden or emerge as a horizontal collaboration initiative like a tax base sharing programme (Minneapolis-St. Paul-USA).

For pragmatic reasons, ***sectoral agencies*** have been created to operate metropolitan-wide public services such as transport (SEPTA in Philadelphia-USA, Strathclyde Passenger Transport Executive in Glasgow-UK). These agencies are generally financed by farebox, contributions from member municipalities or complementary sources. More expansive are some horizontal institutions similar to the CMM that play the role of *co-ordinating and planning bodies* at the metropolitan level and thus are ***multi-purpose agencies***. Their responsibilities range from transport, police, fire and emergency planning, economic development, culture, environment and health (Greater London Authority in the UK) to parks, land use, waste disposal, recycling (Metro Council of Portland, Oregon-USA).

**Box 2.2. (continued)**

Often composed of directly elected officials, they can sometimes levy their own taxes (*e.g.*, the Metro Council of Portland gets 14% of its USD 200 million budget from levying a property tax) but also rely on contributions from their member municipalities (54% for the Stuttgart Regional Association in Germany), intergovernmental grants (most of the GBP 49.9 million cost for the Greater London Authority in the UK) or user fees and charges of metropolitan-wide operated firms (in Portland for example, more than 50% of the Metro Council's budget comes from the solid waste disposal plan, the zoo, the Convention Center, the Expo Center and the Portland Center for art performances).

3/ **Informal metropolitan governance.** Instead of creating new metropolitan-wide institutions, some OECD countries have sometimes adopted original solutions relying on pre-existing institutions that ensured *de facto* the informal governance of a metropolitan area. For instance, the *Comunidad Autónoma de Madrid* progressively imposed itself as a "meso" government with administrative boundaries that correspond to the former province of Madrid. In other cases, new regulatory mechanisms emerged from city networks that spontaneously filled in the institutional blank and ensured free dialogue and co-operation among the cities in the metropolitan territory. This light form of metropolitan governance contributed for instance to the development of a Greater Lyons in France.

4/ **Radical solutions** are also in evidence whether they be large scale re-organisation including amalgamation and the abolition or creation of metropolitan government (London). However, while amalgamation led to the disappearance of municipalities, the establishment of the metropolitan level as a new tier of government does not necessarily lead to the suppression of former local structures.

## The new institutional architecture: an unfinished reform?

The Quebec Government's recent institutional reforms were based on two main pillars: (i) the creation of a metropolitan authority, the Montreal Metropolitan Community (CMM), which is primarily responsible for planning and co-ordination, as well as funding (Law 134), and (ii) a municipal reorganisation creating two new large cities within the metropolitan region, Montreal and Longueuil (Law 170), through the merger of surrounding municipalities. These innovations led to a new division of responsibilities among the various actors (Table 2.1). The creation of the metropolitan body should provide the tools to allow the emergence of an overall vision of metropolitan issues and a fairer way to finance metropolitan-wide infrustructure. The creation of boroughs (*arrondissements*) within the two newly created large cities is also an important innovation stemming from recent municipal re-organisation. The boroughs have been given responsibility for neighbourhood services, while the city is responsible for establishing norms at the city level that are binding for the boroughs and managing services designed for all inhabitants of the city. In addition to the new division of responsibilities, the recent reform should allow for the introduction of a fairer distribution of service costs within the new cities.

Despite the extent of the reforms, the task remains unfinished in many respects. The municipal reorganisation allowed a reduction in the number of local authorities in the CMM area, but the metropolitan region is still an intricate institutional mosaic[3], comprising:

- 63 municipalities, including the three main cities of Montreal, Longueuil and Laval that represent 75% of the metropolitan population. Most of these municipalities have their own elected municipal council and some have their own executive committee as well.

- Within the amalgamated cities, 27 boroughs in Montreal and 7 boroughs in Longueuil, replaced the former cities[4]. They constitute new decision-making and consultative bodies designed to adapt decisions to local conditions and provide local management of neighbourhood services. Each borough has its own borough council.

- 14 Regional County Municipalities (RCM) that are other supra-municipal bodies grouping certain municipalities in a given area. Out of the 14 RCMs, 8 are entirely included and 6 are partially included within the territory of the CMM. RCMs are administered by a council composed of the mayors of the member municipalities, one of whom is appointed by his/her peers to the rank of Head of the Council of the RCM (Warden). The cities of Montreal, Longueuil, Laval and Mirabel also have powers attributed to RCMs.

- 2 administrative regions (Montreal and Laval) under the supervision of the Department of Municipal Affairs, Sport and Leisure and 3 parts of administrative regions (Montérégie, Laurentides and Lanaudière) under the supervision of the Department of Economic and Regional Development in the Provincial Government (Quebec being divided into 17 administrative regions).

The new institutional framework shows a tangled muddle of institutions, especially among the RCMs, the administrative regions and the CMM. Unlike Laval, which is at the same time a municipality, a RCM and an administrative region, the north and south shores of the CMM (*i.e.* the peripheral municipalities of the CMM, situated on either side of the St. Lawrence River) are torn between the CMM and their administrative region. This institutional complexity is not unique to the Montreal metropolitan region. In many OECD countries where major metropolitan reforms have been introduced, old bodies continue to co-exist alongside the new. This is often due to historical reasons, feelings of belonging to a region or simply the existence of acquired rights. Generally, good metropolitan governance is more likely to be hindered due to an unclear delineation of competencies than the retention of old bodies. However, when there is a lack of harmonisation between the different institutional structures' territories combined with unclear delineation of competencies and the lack of co-ordination mechanisms, the situation can become unsustainable. This seems to be the case in the metropolitan region of Montreal.

At the supra-municipal level, the CMM has planning and co-ordinating responsibilities in strategic metropolitan functions, including land use, waste management, the metropolitan arterial network, water and air purification, economic development as well as artistic and cultural development. In addition to land use planning, the CMM also has funding responsibilities for social housing, public transportation and equipment, infrastructure, services and activities of metropolitan scope. With the CMM's creation, RCMs' competencies will be modified, including land use planning, one of their main functions. On the one hand, RCMs that are entirely included in the CMM's territory will no longer have any spatial planning responsibilities from 2005, *i.e.* after the adoption of the CMM's Metropolitan Plan. On the other hand, partially included RCMs will continue to engage in land use planning, but only for their municipalities that are located outside of the CMM. Although the RCMs will lose an important share of their responsibilities to the CMM, they still have competencies in economic development, civil security and fire protection. They are also the operating area for local development centres (CLDs) that are responsible for centralising and co-ordinating services for entrepreneurs[5]. A major concern regarding the status of partially included RCMs in the CMM is that they face difficulties in establishing coherent strategies. Moreover, considering that some RCM competencies are optional, a certain asymmetry in the distribution of responsibilities in the CMM area can be noted. This situation can lead to potential conflicts between the institutional levels due to the confusion of responsibilities.

Table 2.1. **Distribution of main municipal responsibilities in the Montreal RMR**

| | **Borough** | **Local Municipalities** | **MRC Totally included in territory of the CMM** | **MRC partially in territory of the CMM** | **CMM** |
|---|---|---|---|---|---|
| Spatial Planning and Urban Planning | Fixing the borough zoning plan, conducting zone change consultations, issuing permits (construction) | Preparation of the City urban plan | Lose the competency for the planning and development plan for local municipalities as soon as the CMM plan is adopted | Preparation of a planning and development plan for local municipalities outside of CMM | Preparation of a metropolitan land use and development plan |
| Park and Wooded Areas | Local parks | Local parks | Regional parks | Regional parks | Green spaces development program (not yet implemented) |
| Economic Develop-ment | Provide financial support to local economic, social and cultural development bodies | Plan and elaborates rules for boroughs regarding boroughs' support to economic development (Montreal et Longueuil only) | Support bodies in charge of economic development. Local investment funds | Support bodies in charge of economic development. Local investment funds | International economic promotion, elaborating economic development stakes relatives to the CMM territory |
| Waste | Waste collection | Transport and disposal | | Waste management planning for composing local municipalities | Residual material management for the metropolitan region |
| Fire Protection and Civil Protection | | Police, fire protection and emergency measures | Planning of a risk cover plan | Planning of a risk cover plan | |
| Property Value Assess-ment | | Fixing property tax rates, assessing and collecting taxes | Can carry on this role for rural municipalities | Can carry on this role for rural municipalities | Establishing a tax base sharing program |
| Water | | | Local water streams | Local Water streams | Openshore enhancement program |

| Table 2.1. (continued) | | | | | |
|---|---|---|---|---|---|
| Public Transport | | Funding, managing and operating public transportation networks through municipal "*sociétés de transport*" | Public transport management (optional) | Public transport management (optional) | Plan, coordinate and finance the aspects of public transportation that have metropolitan scope |
| Road Networks | Local roads (regulation on car parking, local traffic and road signs on roads) | Local roads | Local road network management (optional) | Local road network management (optional) | Metropolitan arterial system |
| Housing Regulation and Social Housing | | Social housing development fund (mandatory for certain cities, including Montreal and Longueuil) | | Funding and management of social housing utilities for the municipalities outside the CMM (optional) | Funding of new housing projects and operating deficits of municipal housing bureau |
| Equipment, Activities and Services of Metropolitan Scope | | | | | Designate the activities, equipment and services and contribute to their funding |

Notes:

1. Optional responsibility

2. The Agence métropolitaine de transport (AMT) is a provincial government agency than plans, integrates and coordinatesactions related to public transit acoss the metropolitan area. Moreover, the AMT manages commuter trains network and is also responsible for the integration of fares and services (Source: AMT).

*Source*: Montreal Metropolitan Community.

Maintaining the administrative regions in their current state is also problematic. Therefore, there is a rationale to consider a single administrative region that will correspond to the CMM's functional area. Administrative regions were introduced in the 1960s by the provincial government to co-ordinate the interventions of the different provincial departments. They are the seat of regional development boards (CRD) that are responsible for advising the government on all matters related to regional development, adopting a regional strategic plan and concluding agreements with departments and governmental organisations. Administrative regions do not have any functional competencies[6]. The main concern with maintaining administrative regions in their current shape is that the provincial government implements policies based on the administrative regions, which does not necessarily take into account the reality of the functional region of Montreal. Since an important share of the regions of Lanaudières, Laurentides and Montérégie's territories are not included in the CMM, regional-based governmental policies do not, by design, correspond to the functional metropolitan area's priorities and needs and may even complicate the exercise of certain CMM competencies. Moreover, two of these administrative regions are under the responsibility of the Department of Regional and Economic Development (MDER) while the other three are under the authority of the Department for Municipal Affairs, Sport and Leisure (MAMSL). This differentiation can generate conflicts between these two ministries.

In addition to local and supra-local municipal administrations, the presence of governmental agencies in the same area of competency exacerbates the problems inherent in the division of responsibilities among the actors in the metropolitan region. The most pronounced example is found in transport, a competency that the CMM shares with the Metropolitan Transport Agency (AMT), a provincial body created in 1995 to co-ordinate public transport in the metropolitan region. In terms of economic development, numerous state agencies coexist, especially Investissement Quebec, the Société Générale de Financement (SGF) and public-private partnership agencies such as Montreal International. It is generally common to come across a panoply of actors with complementary and sometimes quite similar mandates. However, the fact that agencies encroach upon each other's activities, for example in the field of economic development, shows that there are still some conflicts of jurisdiction and a lack of mechanisms to ensure that institutional actors stick to their mandate. Therefore, the capacity for the CMM to meet its mandate as a co-ordinating and planning metropolitan body will depend on political will.

The newly elected provincial government of Quebec recently announced its intention to re-organise government activities (Quebec Liberal Party, 2003). With the objective of redefining the government's functions, the Quebec's new government put forward the idea of the territorial decentralisation of decision-making powers. In this sense, local and supra-local jurisdictions are likely to receive more responsibilities and relevant financial resources in fields such as education, economic development, health care and social services. Up until now, it remained unclear who would be awarded these new competencies. The new liberal government has already affirmed its reluctance to create new structures, whilst being more favourable to the increased participation of local actors in the decision-making process. Government officials should think of an appropriate way to download responsibilities, using an approach based on each region’s specificities. In the other regions of Quebec, RCMs and local municipalities are likely to benefit from this decentralisation option, but the situation could be different in the Montreal metropolitan region where some competencies could be attributed to the CMM.

## Building on the new "metropolitan institution"

The creation of the CMM in 2001 was the answer to the spatial and economic dynamics in the metropolitan area of Montreal, particularly the expansion of the commuting zones and the spatial extension of the labour market. The CMM represents a regional layer, that is somewhat “lighter” than a two-tier system (a number of municipalities superposed by a regional level covering roughly the metro area), *i.e.* responsible for selected policy areas only, with limited or no direct representation and essentially driven by municipal co-operative agreements. Its rationale is roughly the same as for most large cities that created new metropolitan-wide bodies to cope with increasing jurisdictional fragmentation of the metro area. Its objectives are coherent with those found in other countries: to prevent urban sprawl, to provide the area with efficient metro-wide infrastructure and to guarantee policy coherence across municipal borders. Although metropolitan governance in Montreal dates back to the 1920s, the CMM is the first attempt to harmonise functional integration with political decision-making (the creation in 1970 of the Montreal Urban Community only covered the island before amalgamation[7]). Considering that Montreal is already somewhat “over-governed” (Collin, 2000), the consolidation of the CMM’s achievements could enable it to fulfil its role as a useful and trustworthy intermediary between the municipalities and province. While its competencies and responsibilities have been clearly defined in the *Act respecting the Communauté métropolitaine de Montréal* (known as draft law 134), which led to its creation, there are still some areas that overlap with other existing structures. This is partly due to the fact that some of these structures continue to assume responsibilities that are beyond their legal mandates. Moreover, for the CMM to fulfil its role, the institutional structure of the metropolitan region should be streamlined. Further reinforcement of the metropolitan body's responsibilities will require reconsidering its funding mechanisms and legitimacy and therefore, its representation modalities.

### *Competencies and responsibilities*

Like a number of other “light regional governments” in North America and Europe, the CMM is essentially a co-ordinating and planning body, with little executive power concerning sectoral policies. While a role for the CMM as a substantive policy “implementor” within the region is probably not justified at the present time, its role as a broker of regional political conflict and a coordinator of public investment could be very important. The CMM can help to enhance the overall competitiveness of the metropolitan area, minimize congestion, reduce environmental externalities and enhance the quality of life. This can be achieved by integrating planning and investment in transportation and other strategic infrastructure. The CMM is the only agency with the mandate to measure and compare the full social costs of development in alternative locations. Thus, it is in a unique position to channel development to the areas with the highest potential. Its global perspective of the region can help to offset political forces that would channel infrastructure investment to the most politically powerful areas, which may not be the most economically beneficial for the entire metro region.

Policy makers might find it useful to transfer a number of responsibilities to the CMM that have been either municipal or provincial until recently and to clarify overlapping competencies. Without creating additional structures, a sound metropolitan institutional level could be established by linking metropolitan scale functions within a unified and global structure. First, the most important task is to streamline the governance of the metro-wide public transport system that is causing friction and duplication. Presently, the Transport Metropolitan Agency for Montreal (*Agence Métropolitaine de Transport*) is responsible for transportation. Created in 1994, the AMT is an agency under the provincial government's direct control, sometimes creating tension since it is also funded by the municipalities. The AMT sets the zone fares and in certain cases, tenders services (*e.g.* trains). In the future, it will be more efficient to have one metropolitan entity solely responsible for public transport planning and co-ordination. Then, the institutional structure would come closer to the one most common in large European and North American cities.

Second, one of the main competencies of the CMM is the planning and the co-ordination of economic development. Presently, co-ordination with other local entities is complicated by the retention of the RMCs and the administrative regions, due to, as mentioned before, the lack of harmonisation between their territories and that which is covered by the CMM. For example, the CMM is currently preparing an economic development strategy for the whole metropolitan region. Meanwhile, the regional development boards (CRD) are preparing their own strategies of economic development for the administrative regions. Moreover, legal provisions give the CMM the possibility of contributing to the promotion of the region's economic development abroad. Montreal's competitiveness would be enhanced through the better integration of the different functions of co-ordination and promotion of economic development.

The challenge is to strike a fair balance by placing the co-ordination and planning function at the metropolitan level without precluding local authorities from participating in their own development. Streamlining institutional structures is a necessary condition for better coherence of economic development in the metropolitan region. But it is not a sufficient condition. In the future, appropriate incentives and sanction mechanisms will be necessary to ensure the co-ordination with local authorities. This could be achieved through a regional development fund. For instance, the existing Metropolitan Development Fund, which finances development projects such as the current open shores enhancement project, could be extended for this purpose through conditional and performance mechanisms.

***Funding mechanisms***

The CMM has its own independent funding mechanism but no own taxing power. The CMM is funded by participating municipalities (roughly 75%) and the province (roughly 25%). The 63 municipalities contribute tax points of their property tax to the CMM, and Quebec provides conditional grants for projects that are taken over by the CMM. The CMM can also impose additional fees on new development and use them to promote development endeavours. The municipalities forming the CMM have agreed to an innovative funding mechanism, *i.e.* they agreed to a sharing mechanism that takes into account a specific proportion of both the property tax base growth and property wealth of each municipality. With around CAD 70 million, the CMM's budget is relatively small. It represents less than one-third of the Stuttgart metropolitan authority budget (Box 2.3). While this reflects the CMM's restricted capacity, primarily limited to co-ordinating and planning functions, it also still appears weak and limited. In this sense, the CMM reflects the fiscal problems found at the municipal level of most Canadian provinces.

The question of a larger independent fiscal source becomes more urgent when faced with the CMM's increasing responsibilities in financing metropolitan-wide infrastructure and its eventual, possible establishment as a regional service planner and provider. This pertains to an increase in the fiscal resource (which has to be carefully evaluated with other government levels and according to the responsibilities assumed with respect to the tax structure). It would be favourable to open the regional tax base towards something other than the property tax (coming from municipalities) and to reallocate the gasoline tax and licence plate fees (both are provincial levies but only levied within the metropolitan range) to the CMM if it absorbs the AMT. Presently, the metropolitan gasoline tax (a supplement of CAD 0.015 per litre on the provincial gasoline tax) is allocated to the AMT to fund public transport.

### *Legitimacy and representation*

As a facet of its "light institutionalisation", the CMM has an indirect form of public representation. This is logical because of its limited role as a co-ordinating and planning regional body. Even though the CMM Board is composed of representatives of member municipalities, it is not politically accountable *vis-à-vis* the population[8]. A main disadvantage is that it lacks direct visibility and thus political support. Some of the member representatives of the CMM Board might often be reluctant to partake in a metropolitan political culture. As their individual legitimacy stems from their local electorate, they could be inclined to set local priorities above metropolitan commitments. If the CMM is to increase its funding responsibility and later become a regional service provider, better forms of popular legitimacy and representation need to be designed. In this regard, the case of a directly elected metropolitan parliament in Stuttgart or a directly elected mayor and a separately elected assembly in the Greater London Authority (GLA) may serve as pertinent examples (Box 2.3). In the Metropolitan Service District of Portland, members are also directly elected by the population. In the case of the CMM, a possible option would be direct elections of one or more of the CMM President, Board and Steering Committee.

**Box 2.3. Metropolitan governmental authorities: the Stuttgart Regional Association and the Greater London Authority**

The ***Stuttgart Regional Association***, founded in 1994, represents 179 municipalities or five counties covering the metropolitan area of Stuttgart in the German Land (province) of Baden-Württemberg with around 2.6 million people and a surface of around 3 600 square kilometres. The legal framework of the association was established through a provincial law passed in 1993. The association's assembly is directly elected through a general ballot. The association's main responsibilities are regional spatial planning, transport infrastructure and operation, and regional economic development.

The association is funded by municipal contributions (54%) and intergovernmental conditional grants from the Land of Baden-Württemberg (46%). The municipal funds consist of a general contribution (11%) and an earmarked contribution for public transport (35%). Both contributions are negotiated annually and then split between the municipalities according to tax raising capacity and structural factors. The association has no taxing power and does not levy user fees. Both remain within the exclusive authority of either the municipalities or the Land. Most expenditure (88% of the associations' budget of around EUR 140 million, approximately CAD 214 million) goes to the funding of regional express trains and the regional transport body that manages buses and tramways.

**Box 2.3. (continued)**

After the Greater London Council was abolished in 1986, a new ***Greater London Authority*** (GLA) was established in 2000. Unlike any previous local or regional government in the UK, it is made up of a directly elected Mayor – the Mayor of London who is elected by a single constituency of 7.3 million people – and a separately elected Assembly – the London Assembly.

There is a clear separation of powers within the GLA between the Mayor – who has an executive role, making decisions on behalf of the GLA – and the Assembly, which has a scrutiny role and is responsible for appointing GLA staff. The Mayor is London's spokesman and leads the preparation of statutory strategies on transport, spatial development, economic development and the environment. S/he also sets budgets for the GLA, Transport for London, the London Development Agency, the Metropolitan Police and London's fire services. The Assembly scrutinises the Mayor's activities, questioning the Mayor about her/his decisions. The Assembly is also able to investigate other issues of importance to Londoners, publish its findings and recommendations and make proposals to the Mayor.

The GLA's competencies include a number of existing government programmes such as police, fire, transport and economic development. These four key functional responsibilities are in the hands of boards: Metropolitan Police Authority, London Fire and Emergency Planning Authority, Transport for London and London Development Agency. Other functions include environment, culture, media and sport, public health and inward investment. The GLA has no taxing power. Its budget amounted to GBP 4.7 billion budget in 2002-2003, and most of the cost of the GLA itself is met by central government grants, with a small contribution from London council taxpayers.

Building metropolitan governance can only be tangible through a true public dialogue initiative. Presently, the CMM Board can establish standing committees composed of elected representatives and their terms of reference. Upon completion of their mandate, the committees submit recommendations on their respective topics, but do not have independent powers to initiate consultation studies. However, when preparing the metropolitan planning and development plan, the CMM intends to institute a committee responsible for gathering public views on the project before adopting it and submitting it to the provincial government. The low level of public participation is more the result of ignorance of the CMM than the lack of consultation mechanisms. For that reason, the CMM should introduce a strategy of public awareness-raising and mobilisation, which could then be disseminated through local outlets at municipal or borough levels. It could also alleviate the lack of metropolitan identity by developing a more aggressive communication policy by seeking original ways of informing and involving the public. Other metropolitan regions have already adopted a dynamic communication policy, such as Portland (Oregon, US) where the Metro Committee for Citizen Involvement

(MCCI) involves citizens in regional planning activities[9]. Metro (Portland) has more than a dozen other advisory committees, whose membership is opened to a wide variety of people, ranging from staff and elected officials of other jurisdictions, to citizens, special-interest advocates, business people and more. Citizen involvement is also highly encouraged through workshops, public meetings, open houses, mailings, flyers, surveys and paid advertising. Beyond simple communication with civil society, metropolitan actors should also develop a dynamic policy to participate in public life. In this respect, Metropolitan Montreal could refer to several experiences in OECD countries (Box 2.4).

**Box 2.4. Civil society and the private sector in metropolitan governance**

In Germany, the Stuttgart Regional Association works closely with a series of economic and social groups on various initiatives. For example, it joined *KulturRegion Stuttgart* (an association set up in 1991 to promote the cultural identity of the Stuttgart region) and *SportRegion Stuttgart* (an association of municipalities, specialised sports associations and sports clubs) in 2001. It also produced a joint study with *FrauenRatschlag Region Stuttgart*, a feminist network of female experts and politicians, defending women's interests in regional transport planning. It incorporated this study's findings into its own regional transport plan. Learning from such judicious initiatives, the CMM could gain more ground as a citizen-responsive and friendly metropolitan body and even go further in terms of collaboration.

Broader and closer collaboration between public and non-public actors could also be facilitated by bringing together the metropolitan authority and the private sector through mutual participation of their respective bodies. For example, the metropolitan authority of Hanover (KGH) in Germany is a member of several chambers of commerce (*e.g.* the bilateral German-Italian Chamber of Commerce). In Hungary, the Act on Regional Development and Planning imposed the legal obligation to involve voluntary associations and businesses in the consultation process preceding the planning process. The business sector is also represented through the local Chamber of Commerce in the Development Council of the Budapest Metropolitan Region.

In Spain, the draft law on the modernisation of local governments (currently under review in the Parliament) plans to make it compulsory for all big cities (municipalities of more than 250 000 inhabitants and capital cities of the provinces between 200 000 and 250 000 inhabitants) to create a "City Social Council" composed of representatives of economic, social, professional and community groups. City Social Councils would be in charge of preparing studies, proposals and reports on local development policies, strategic planning and the main urban projects[10]. Each city would have to regulate its City Social Council according to these basic criteria.

## Amalgamation and beyond

In 2002, the city of Montreal was created out of 28 independent municipalities. The amalgamation was promoted on the following grounds: (i) the merger would reduce per capita cost of municipal services and would remedy territorial spillovers and the ensuing undersupply of those services; (ii) a unitary tax system, uniform tax rates and the creation of a single budget independent of local tax raising capacities would allow for more fiscal equity within the amalgamated city and to target the higher cost of welfare in the old part of the city; and (iii) the amalgamation would allow for better policy co-ordination across the territory, particularly in the field of infrastructure, spatial planning and economic development. In the case of Montreal, it is too early to derive conclusions from any assessment. While there is some rationale to think that amalgamation could help to increase a city's critical mass to better position itself at the national and international levels, its benefits will depend crucially on the realisation of economies of scale in the cost of delivering municipal services, in particular, by limiting growth of municipal wages. Fiscal equity should certainly be improved but amalgamation sacrifices some of the benefits of competition between jurisdictions, and reduces the ability of citizens to choose their desired level of public services. Improving the statute of the boroughs will certainly help. Local competencies and democracy holds true despite the outcome of the disamalgamation debate.

### *Potential effects of amalgamation*

One of the main rationales for amalgamation is that municipalities will save money by technically exploiting economies of scale. However, econometric evidence finds that for most public services, economies of scale are exhausted at relatively low population levels (Bish, 2001). Above 150 000 inhabitants, per unit cost for most services appears to remain constant. Some studies even suggest that large cities show diseconomies of scale, but this seems to be the result of structural factors (density or age of a city) rather than of institutional organisation. The question as to whether institutional change has affected per unit cost of service provision is left open. It is thus difficult to discern the overall impact of amalgamation on cost and service levels in Canada. For example, the new city of Toronto claims annual savings of CAD 135 million (Kitchen, 2003), but this is contested by Schwartz (see Askin, *et al.*, 2003). In general, it appears that whether cost savings actually result from amalgamation depends largely on the quality of public administration in the amalgamated area and the impact on municipal wages and service levels, rather than the technical properties of the provided services.

In the Montreal case, economies of scale appear to be of little practical significance (*e.g.*, only fire brigades have been merged since amalgamation). In 2002, the municipal budget of the new city of Montreal was CAD 3.6 billion, representing a modest 2% increase over the previous year (combined budget of the former cities that were amalgamated). While changes in a single year are not necessarily indicative of long-term trends, the modest rate of expenditure increase does not suggest an initial burst of cost inflation as a result of the amalgamation. However, a crucial question in determining the long-run costs of amalgamation is the effect on wage levels. Municipal wages in some former municipalities, including the former city of Montreal, are significantly higher than the rest of the metropolitan area[11]. If all municipal wages in the amalgamated city are allowed to rise to the highest existing level, without any significant effort to slow the rate of increase of public sector compensation, there is a significant danger of cost inflation. The greater bargaining power of the city of Montreal should help allow a moderation in the rate of increase in employee compensation, even though the City's unions are reputed to be strong.

***Fiscal equity***, a strong explicit objective of the amalgamation in Montreal, should be significantly improved. Disconnection of tax revenue and expenditure at the local level, together with a single tax rate for the merged area, provides for greater equity in terms of taxes paid and, if service levels are also equalised, in terms of public services received. The degree of tax base sharing which results from amalgamation may be expected to be greater than that which stems solely from combining tax bases, because the new municipality is moving to a common or harmonized tax rate. Property tax rates tend to be lower in the richer areas of a new amalgamated entity and higher in the poorer areas. This is the case in Montreal, where the former city of Montreal had a higher tax rate than the richer suburban jurisdictions on the island. Hence, the transition to a common tax rate will increase the net contribution of the richer areas of the amalgamation. In Montreal, the additional sharing of the tax base is moderated by the fact that the former city and its suburbs already shared a substantial portion of their respective tax bases, prior to amalgamation. Police and public transit have been provided on an island-wide basis since the 1970s.

Finally, amalgamation should reduce competition for fiscal base within the amalgamating jurisdictions, with a reduction in inefficient beggar-thy-neighbour policies. However, given the limited power of the local level, this advantage is muted. The adaptation process – also given the fierce resistance of some former municipalities where taxes were low – will be relatively slow; tax rates can go up (or down) by no more than 5% per year, until they reach a common level. This gradual approach is sound, limiting the unfairness and resultant citizen resistance that would be caused by any abrupt changes in the net fiscal position.

The amalgamation of the municipalities had a limited impact with respect to the better ***co-ordination*** of services. Indeed, the creation of the CMM is a much more critical factor when it comes to observing progress in planning and co-ordinating the provision of local and regional services. The planning of strategic services was allocated to the metropolitan level following the CMM's formation. The amalgamation of the municipalities made only a marginal contribution to improving co-ordination in the metropolitan region, especially as several services had already been managed at the Montreal Island level since the creation of the MUC in 1970. However, since the new amalgamated cities of Montreal and Longueuil speak with a single voice in the CMM Council, consensus in decision-making is more easily achieved.

***Reconsidering the role of the boroughs***

With amalgamation, the former municipalities which were transformed into boroughs lost many decision-making powers. Amalgamation thus gave rise to an upwards transfer of responsibilities. Although borough councils are responsible for managing their budget and have a certain degree of autonomy, the exercise of their powers is heavily circumscribed by the City Council. First, the City Council decides the boroughs' financing by means of appropriations. Second, it establishes the level of services for which the boroughs are responsible. Some citizens, coming mainly from the former suburban municipalities, were critical of the increased distance of decision-making centres and wanted borough councils to have greater room for manoeuvre.

The boroughs' role is increasingly confined to executive duties, which is reflected in their level of fiscal autonomy. In the new city of Longueuil, paid block grants to the boroughs represent 24.3% of the city's total expenditure, while in Montreal, the total amount of block grants is some CAD 950 million out of a budget of CAD 3.6 billion, which amounts to 26.4% of the city's expenditure. Although appropriations account for a considerable part of the city budget, the only autonomous means of financing for boroughs is the non-fiscal charges for certain services. As the boroughs did not spend all of their allocations in 2002, they have not yet taken advantage of this provision. An equalisation fund of CAD 5 million was established to provide additional aid to disadvantaged or under-funded boroughs.

The city of Montreal will gradually move away from the pre-amalgamation distribution of taxes and services to a more harmonized system. For the moment, the block grants received by the newly created boroughs are appreciably equivalent to the former cities' 1999 operating budgets for local competencies. During this transition phase, mechanisms should remain to allow for differentiation in service levels according to individual and neighbourhood preferences. The city of Montreal may want to sacrifice some harmonization to accommodate these preferences. One way to accomplish this would be to set a service standard base and allow individual boroughs to vote for service levels that exceed the base level, for example more frequent collection of garbage.

***Disamalgamations?***

Less than two years after its introduction, amalgamation is already being questioned. The citizens' movement in favour of the detachment of their former municipality has gained new strength following the April 2003 election of a new government. The reasons for disamalgamation are both political (increased distance from decision-making centres), fiscal (lack of an economy inherent in the amalgamation and unfair redistribution of fiscal resources) and social (preserve communities and identities). The new Minister of the Department of Municipal Affairs, Sport and Leisure proposed two bills on this issue. The first bill (*draft law 1*) envisages measures for the cities created in 2002, allowing them to propose amendments aimed at reorganising their own management. The second bill (*draft law 9*) envisages the inclusion of referenda on the possible dismantling of municipalities as well as presenting provisions governing the reconstitution of such municipalities. Initially, the project introduced equalisation measures and the obligation that a great share of competencies should be administered at the level of the amalgamated towns, including fire protection, police, civil safety, equipment of supra-local scope, social housing and municipal courts. Lastly, potential dismantled municipalities and amalgamated cities will have to agree on how the competencies will be administered at the agglomeration level and how the costs of those responsibilities will be shared among the jurisdictions.

Some reorganisation scenarios were envisaged. Apart from the option of the disamalgamation of certain sectors of the new cities, the amalgamated cities considered reform proposals designed to give more responsibility to the boroughs. Among the various models of decentralisation, decentralising options inspired by the recommendations of the provincial government representative, Louis Bernard, suggested that the boroughs should have powers of taxation and borrowing (Bernard, 2000). Bernard also proposed the introduction of variable tax rates within the city of Montreal. The city of Montreal would set tax rates applicable to all boroughs and the latter would be granted the right to impose a surtax to cover expenses incurred by the provision of additional services. Additional responsibilities and greater room for manoeuvre could thus be given to the boroughs, especially with regard to human resources management.

If disamalgamation is carried out, the costs need to be evaluated. They may be divided into two parts: direct costs, which would be more or less equivalent to the expenses incurred to implement amalgamation, and recurrent costs, which are more difficult to evaluate. The direct costs consist mainly of the transition mechanisms, re-hiring or re-assigning senior staff and new elections. It can be assumed that the direct costs of the separation of Montreal and Longueuil would be more or less the equivalent of the amount paid for the municipal amalgamations in 2000. Concerning the scale of the recurrent costs of disamalgamation, they could depend on co-ordination mechanisms established between the various administrative units. The bill requires the agreement of disamalgamated municipalities on how certain services, to be provided at the level of the existing cities, will be administered. The bill also envisages the introduction of additional agreements, state-owned agencies or the return to an inter-municipal body. Any of these options would certainly require additional bureaucracy. For example, this would lead to an increase in the costs of police or fire protection services.

An eventual disamalgamation of Montreal and Longueuil will make a metro-wide co-ordination body even more important. The CMM could be called to fill the void created by a dismantling of the large cities. For instance, it could take over a number of responsibilities that are currently in the hands of the amalgamated cities. An intermediate level that is metro- rather than city-wide would have the additional advantage of reducing fiscal disparities and fiscal spillovers, not only within the amalgamated cities of Montreal and Longueuil, but also between the three largest cities and the surrounding municipalities of the CMM. In the case of a thorough restructuration of the amalgamated city, the CMM will include municipalities that are more balanced in size - currently Montreal as a single municipality presents 53% of the CMM population – and less vulnerable to political preferences, but consensus will be more difficult to reach. In any case, if balanced metro-wide development is to be maintained, a thorough rethinking of the role of the CMM should accompany any new municipal reforms.

### Municipal and metropolitan resources

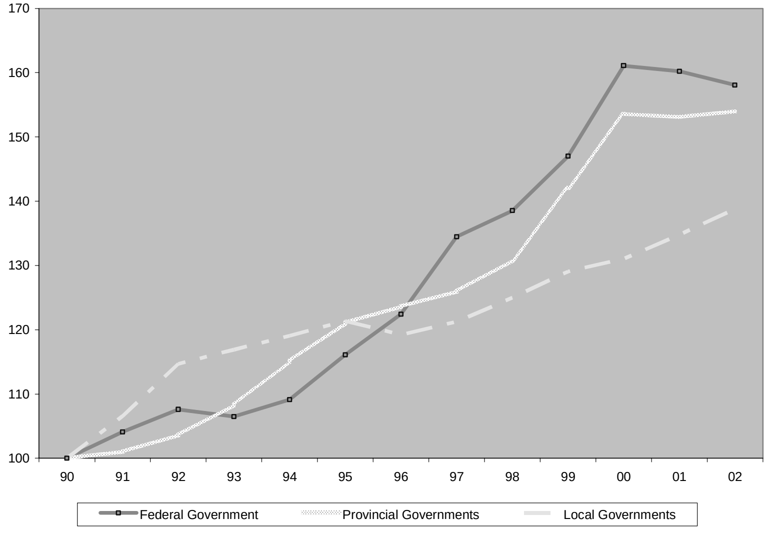
Taxation remains an issue for municipalities despite the creation of the cities of Montreal and Longueuil. The metropolitan authority shares the same constraints and problems of the municipalities since their finance structures are closely inter-related. One of the main concerns at the municipal level, and thus at the metropolitan level, is the diversification of revenue sources. Seventy-six per cent of the Quebec municipalities' revenues are derived from the taxes related to property, which is the highest rate in Canada as well as OECD countries (Union of Municipalities of Quebec, 2003). Consequently, for a period of time, the municipalities have been requesting access to new sources of financing, reluctant as they are to increase taxes to meet their financing needs. In addition, fiscal disparities can still lead to distortions in the spatial structure of the metropolitan economy. Although these arguments should be treated with reserve, there is reason to introduce some form of diversification of the fiscal base and establish mechanisms to take fiscal disparities and fiscal inequities into account.

***Decentralisation and municipal fiscal structure***

The fiscal situation of the Metropolitan Montreal's municipalities reflects the general structure of local finance in Canada. While Canada features a high degree of decentralisation in its federal-provincial relationship, the provincial-municipal relationship is much more centralised, and the provinces have ceded limited power to their municipalities. The financial role of Canadian municipalities is small and has been shrinking in recent years (Figure 2.1). In 2000, municipal expenditures made up only 17% of total provincial-municipal spending in Canada, compared to 16% in 1988. The share of municipal revenue which comes from provincial transfers is low and even falling. Between 1988 and 2000, total intergovernmental grants decreased from 23 to 18% of municipal revenues (provincial grants fell from 16.4 to 14.5%) (Kitchen 2003). At the same time, the increase in the yield of the major local tax on property has been rather restrained. Limited municipal resources have to be set within a framework where the province has the most financially significant responsibilities such as education, health and social welfare. Canada could however be considered as one of the OECD countries where the relationship between the intermediate (province) and local levels is one of the most centralised (OECD 2002*a*).

Figure 2.1. **Evolution of total revenues for the three levels of government in Canada**

1990 = 100 for each level




*Source*: Statistics Canada and Financial Group Bank TD

Within Canada, Montreal and other large Quebec cities have to function in an ever tightening fiscal environment. The dominant fiscal role of the province in Quebec – due mainly to its responsibility for the financing of education, healthcare and income support – is shown by the relatively low ratio of municipal to total provincial spending. The ratio equalled 14% in 2000, somewhat lower than the national average of 17% and lower than the 15% of 1988 (Kitchen, 2003). The Quebec municipalities rely even more strongly on own resources and on property tax than their Canadian counterparts: total municipal revenue in Quebec in 2001 was mostly composed of taxes (76%). These taxes were comprised of property tax (around three-quarters), intergovernmental transfers (12%) and fees (12%) (Kitchen, 2003).

Although a reduction of transfers is usually beneficial both for municipal autonomy and spending accountability, it could have led to a considerable gap between municipal expenditures and revenues. A particular challenge is a higher poverty rate in some parts of the metropolitan region, and the cost associated with it. The provincial government is largely responsible for services such as education, health or social welfare but municipalities also contribute to social housing or other services that are sensitive to higher poverty rates. If the concentration of the poor leads to higher expenditure needs (and more rapidly growing in recessions), as is the case in the city of Montreal, there can be negative impacts for the fiscal and economic health of the cities, especially for the metropolitan areas' vital centres. More problematic, the infrastructure in Metropolitan Montreal's older cities has been showing signs of ageing for several years. Because of the balanced budget requirement for municipalities, the cities of Metropolitan Montreal note that some important investments have been postponed, particularly in the field of public transport and other infrastructure endeavours[12]. According to the Union of municipalities, the decline in investment may have been exacerbated by a decline in provincial transfers for public investment, which decreased by 68% between 1996 and 2000 (Union of Quebec municipalities 2003).

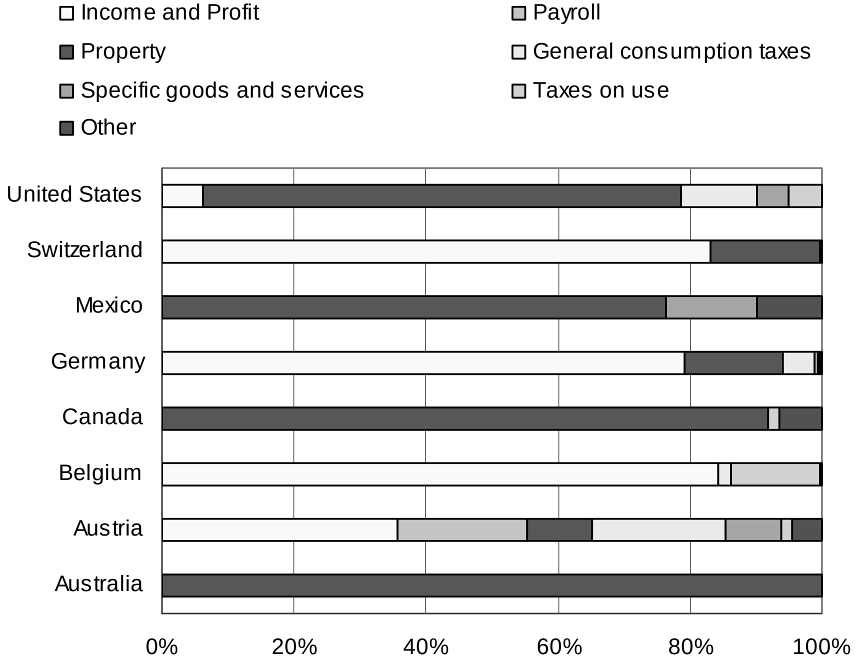
The "Fiscal Pact"[13] was Quebec's policy response to the municipalities' concern, and was later supplemented by the "city contract" (see below). Along with the decentralisation of spending responsibilities to local governments and the zero deficit objective, the municipalities had been required to contribute up to CAD 375 million to the *Fonds spécial de financement des activités locales* (FSFAL), intended to reimburse a share of infrastructure spending made by the provincial government in the 1990s. Signed for the period 2000-2005, the fiscal pact includes measures such as compensations to municipalities for crown property through Payments in Lieu of Taxes (PILOT). However, what constitutes a reasonable amount of payment is a matter of dispute. Hamel (2002) claims that PILOT amounts are still being set at the discretion of the higher level authorities, and thus do not necessarily equal the property tax yield on comparable properties. The Fiscal Pact also includes measures such as a "diversification of municipal resources" which in fact corresponds to a global provincial transfer of CAD 187.5 million. The compulsory contribution to the FSFAL was also abolished. In return, municipalities have to renounce the TGE, a tax on firms operating telecommunication, electricity and gas distribution networks. In the end, compared to the situation prior to 1996, some consider that municipalities are estimated to lose more than CAD 125 million through the whole give-and-take exercise (Hamel 2002).

***Diversifying the tax structure?***

In Montreal and Quebec's other cities, one of the most lively issues of the policy debate concerning insufficient local financial resources is the weak diversification of municipal resources or, alternatively, the strong reliance on property tax. With around 76% of total revenue, Quebec's (and other Canadian) cities are more dependent on this type of taxation than the municipal level in almost any other federal OECD country (Figure 2.2). This tax structure is the result of a process that started in the 1980s when the municipalities ceded a number of special taxes to the province in exchange for additional property taxing rights. In the U.S., to which the Canadian local level is compared for a number of reasons (proximity, federal structure, significance of the property tax for local governments), the tax structure is more diversified, with the property tax providing 44% of own revenue, and a stronger reliance on a number of direct or indirect local taxes[14]. This somewhat unbalanced fiscal structure might partially explain the financial problems of Montreal and other larger cities that date from the second half of the 1990s.

Figure 2.2**. Local tax structure in federal countries, 1999**

% of total local tax income

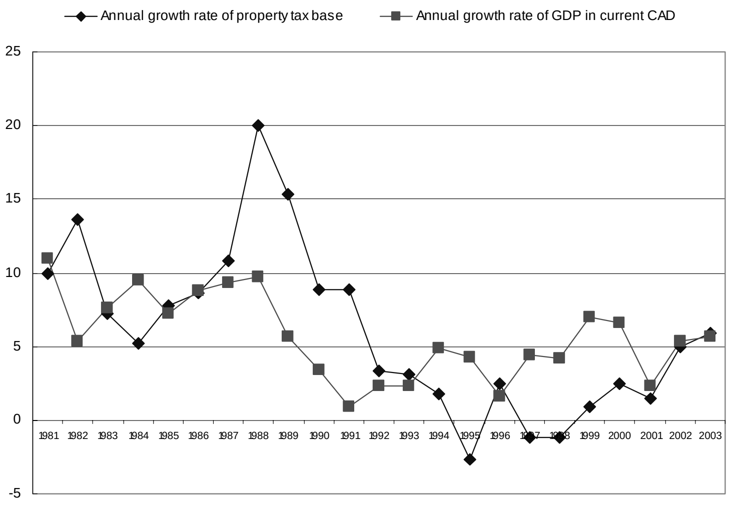



*Source*: OCDE, 2002c.

In the last few years, property tax income grew at a much slower pace than the economy, particularly during the second half of the 1990s, leaving the

Quebec municipalities in a considerable fiscal squeeze. From 1993-2001, the value of the aggregate tax base in the metropolitan area decreased by 5% over the period, while the non-residential tax base declined by more than 20%[15]. During the same period, the active population increased by almost 9% and GDP per capita by more than 15%. The more extreme decline in the non-residential tax base could be the result of the shift from the space-intensive "old" industries to the "new" economy that requires less space and thus reduces the property tax base. Nonetheless, this might be contested on the grounds that tax assessment is not based on surface but property value. The economic downturn and ensuing stagnation of fiscal revenue in the 1990s caused severe financial problems in Montreal. However, preliminary data from the province indicate that the more robust performance of the Montreal economy in the last few years has begun to be reflected in substantial growth in the assessed value of the property tax base. Since 2001, the property tax base value has risen by more than 22%. In the long run the property tax base in Quebec tends to grow at the rate of the economy. Like in most countries, the elasticity of property tax revenue with respect to GDP is close to unity. Since 1980, the annual growth rate of the Quebec economy was 5.6%, while the annual property tax base growth rate was 5.9% (Figure 2.3).

Figure 2.3**. Annual variation of GDP and property tax base in Quebec**
In percent




*Source*: Compiled data from the Institute of Statistics of Quebec and the Department of Municipal Affairs and the Metropolis, 2003

Competition for property tax revenue has a considerable impact on tax revenue and on local competitiveness in many countries but should not be overstated in the Montreal case. In the last 15 years, Montreal has not increased tax rates for fear of deterring economic development and diverting firms and people to other places. Studies on tax competition find that tax differentials indeed affect locational choice, and they point out that this competition is stronger *within* rather than *between* metropolitan areas (Bartik, 1991). Accordingly, the city of Montreal is more likely to compete with its adjacent neighbours in the same metropolitan region rather than with other cities in Canada. However, given the small weight of local taxes in the cumulative burden of local plus provincial taxes in Quebec, even substantial differences across the metropolitan area imply only very small differentials in total costs. Since the Montreal metropolitan area represents over 50% of the provincial economy, a firm's decision to locate or expand in Montreal is basically a choice of Quebec versus another Canadian province or U.S. state. Comparisons of overall tax burden suggest that current rates of property taxation in Montreal City are not excessive relative to their competitors in Canada and the U.S. (Kitchen 2001). Moreover, the potential role of taxation in local economic development has led Quebec to introduce a number of provincial tax subsidies and abatements.[16]

A diversification of the local tax base for Quebec's municipalities could be a tool to foster metropolitan competitiveness, particularly for the large cities. The property tax in general is an excellent tax base for the local level. It is immobile, cyclically stable, creates a strong link between taxes paid and local services received and causes small compliance and administrative costs. But, it also features a number of drawbacks, as is the case for any other local tax (Box 2.5). Commuters living outside the city boundaries contribute little to the funding of centrally provided services, which aggravates city fiscal imbalances. Revenue shortfalls, even if temporary, are likely to lead to underinvestment in municipal infrastructure, with adverse long-term consequences for city growth. Since economic growth does not rapidly translate into more tax revenue, city developers have little incentives to strive for local development endeavours, if not strongly driven by objectives other than fiscal.

**Box 2.5. Sub-national tax assignment issues in OECD countries**

While it is commonly agreed that some congruence between spending responsibility and revenue-raising powers is needed to exercise fiscal autonomy and improve accountability, there are few taxing powers which can be transferred to subordinate levels of government without raising efficiency and/or distributional concerns. The literature on fiscal federalism contends that subnational governments should minimise the use of mobile tax bases, redistributive taxes, unevenly distributed tax bases (*e.g.* on natural resources) and taxes subject to sharp cyclical fluctuations. It thus excludes corporate income taxes and redistributive personal income taxes. Consumption taxes could be candidates, but administrative considerations (compliance and collection costs) and the mobility of the base (cross-border shopping in boundary areas and interjurisdiction trade) reduce their attractiveness. Property taxes have many attractive features for subnational government use. However, political realities and societal norms tend to create a limit on property tax rates so that for countries with significant devolution of expenditure powers, this is insufficient. Thus, subnational governments rely on other revenue sources as well, most often on a shared basis with the central government.

*User fees and charges.* User charges follow closely the benefit principle, whereby local households and businesses pay for what they get and get what they pay for. In some countries user fees and charges account for a significant share of subnational government financial resources: 26 % of Finnish municipalities' financial resources; 14 % for Norwegian municipalities and counties; and 23 % for Danish local governments. They are frequent for waste collection and wastewater treatment, while toll systems have been introduced in some countries (*e.g.* in some large city centres in Norway, the United Kingdom and the United States). Increasing subnational government reliance on user charges however may raise equity concerns, especially where applied to core goods and services (namely education, health care and social assistance). In most countries, subnational authorities are not entitled to introduce tuition fees for public primary and secondary education, with frequent limitation on user fees for childcare and educational facilities (Denmark and Norway). User charging is an attractive option only if the implementation costs (including administrative costs but also, in some cases, the investment necessary to “individualise” consumption) are lower than the expected efficiency gains. In some countries, including Australia, Canada, Denmark, Sweden and the United States, certain municipalities have implemented weight- or volume-based charging for household waste, and there is some evidence that this has resulted in reduced waste generation. These charges, however, involve rather high implementation costs. In other countries, waste collection costs are reflected in a resident base tax (*e.g.* on a per household basis in Ireland) or incorporated into property taxes paid by residents (*e.g.* through a surcharge on the *Taxe d’Habitation* in France). These formulae provide fewer incentives to reduce the generation of waste but are less costly to implement.

**Box 2.5. (continued)**

*Property taxes*. Property taxes have key advantages as subnational taxes. Most notably, the tax base is highly immobile, there is no ambiguity about which authority is entitled to the tax on any given property, the tax is difficult to evade and efforts to improve local infrastructure are likely to be reflected in property values, thus increasing the tax yield for subnational governments. Property tax revenues are also relatively predictable. Property taxes account for all, or most, local government tax revenues in Australia, Canada, Mexico, Ireland, New Zealand, the United Kingdom, and to a lesser extent in France, Korea, the Netherlands and the United States. Furthermore, in contrast to most other tax revenues allocated to them, subnational governments have significant autonomy in setting property tax rates, though less frequently in setting the base.

*General consumption taxes.* Giving subnational governments discretionary powers with respect to general consumption taxes, either sales taxes or value added taxes, may entail high compliance and administrative costs to contain tax fraud and evasion and may create distortions in inter-jurisdiction trade. Value added taxes can be administratively cumbersome and create economic distortions when managed in a decentralised manner. In most countries where VAT revenues account for a share of subnational government resources, tax bases and rates are determined centrally (Austria, Belgium, Germany and Spain). In contrast, individual countries within the EU area and Brazilian states do have discretionary powers on VAT rates, which has increased the scope for tax evasion and fraud and made the system cumbersome to administer and comply with.

*Personal income taxes*. Personal income tax revenues account for a substantial component of sub-central government financial resources in a large number of countries (including Austria, Belgium, Canada, Czech Republic, Germany, Japan, the Nordic countries, Poland, Spain, Switzerland and the United States), but in many cases these income taxes are used by the state or regional government rather than municipal governments. Many of the Nordic countries combine local income taxes with redistributive grants to stem fiscally induced and inefficient migration flows. Very few countries have made it possible for lower levels of government to alter the progressive rate structure. The difficulties in maintaining a progressive income tax at a local level has been recognised in the Nordic countries. There, subnational governments are allowed only to set a flat tax rate on personal income (subject to band limits set by the central government in Iceland and Norway). Local governments may also not fully take into account the national externalities resulting from their income tax policies. An increase in local tax rates will lower incentives to work, save and seek education and thus affect the national growth potential. These incentive changes will also lower national tax revenues by lowering the national tax base and may create tax competition between levels of government (Goodspeed, 2002). To avoid a drift in personal income tax rates, the Swedish central government introduced in 1996 “a tax on local government tax” for any municipality increasing its tax rate, later abolished on constitutional grounds.

**Box 2.5. (continued)**

*Corporate income taxes*. Corporate income tax revenues account for a rather large part of total subnational government tax revenues in several OECD countries (Canada, Czech Republic, Finland, Germany, Japan, Switzerland, Turkey and the U.S.). In many cases, these taxes are at the state or regional rather than the municipal level. This sub-national tax has raised a number of issues including: the high volatility of the associated revenues, the potential for adverse tax competition, high administrative and compliance costs and distortions in production and trade patterns within the countries. In conjunction with balanced budget requirements in place in many countries at the subnational levels, reliance on volatile corporate tax revenues may generate an undesirable pro-cyclicality in fiscal policy stance. Recognising these drawbacks, Norway abolished the corporate income tax sharing arrangement between municipalities and the central government in 1998. In Finland, revenues are shared between municipalities according to the number of employees in each of them. Since municipal public services are more closely related to where people live than where people work, this could create financial imbalances across municipalities.

*Source*: Joumard I. and P.M. Kongsrud in OECD (2003*e*) and Goospeed (2002).

A joint study made by the UMQ (Unions des municipalités du Québec) and the Conference Board of Canada warns that unless municipalities have access to new sources of revenue, they will face an unsustainable financial situation due to the fact that "disinvestment in infrastructure has created a kind of hidden deficit"(Coalition pour le renouvellement des infrastructures, 2002). For Metropolitan Montreal, this will translate into a net long-term debt of CAD 11.7 billion in 2020 as well as an operating deficit of CAD 1.2. billion[17]. According to the report, this situation is attributed to the erosion of property values linked with the transformation of the economy towards a knowledge- and service-based model and the ageing population, factors that influence real estate values. It might have occurred while "additional responsibilities have been given to municipalities in the field of public security; public transport funding; social housing and social and economic development" that are said to be "broad social problems that go beyond the simple framework of property protection" (UMQ 2003).

Provincial and local policymakers might find it useful to establish an agenda for re-adjusting the tax base for local governments in Quebec. The UMQ/Conference Board of Canada study assessed different fiscal solutions, ranging from revenue sharing mechanisms to additional grants, and concluded that there was a need to have a combination of several revenue resources[18]. The current political debate however mainly focuses on sharing mechanisms involving the provincial sales tax (TVQ) and the Federal government's fuel tax. Regarding the sharing of the TVQ, the scenario put forward in the Bédard report that was also advanced by the City of Montreal in its Memorandum on *Bill 9* included a sharing of 20% of QST revenues from lodging, restaurant and entertainment[19]. The main disadvantage with this option is that the formula distorts the match between those who benefit from the services and those who pay for them. Tax revenues for lodging, restaurant and entertainment are often paid by non-residents who do not necessarily consume public services. This is a form of tax-exporting which lowers the cost of public services to residents, and in so doing distorts their expenditure choices. Revenue sharing is subject to the same problems that beset transfers in general. For instance, municipalities will not have any control over the rate or base and thus will lose autonomy. In addition, municipalities may be tempted to increase expenditures in the hope of obtaining more funds from the province. However, revenue sharing is used in several OECD countries. For example, in Germany, 15% of the yield on national personal income tax is transferred to the municipalities. In Scandinavian countries such as Finland and Denmark, national governments transfer up to 45% of the revenues from corporation tax to municipalities. Portugal and Luxembourg are the only two countries to share revenues from a value added tax to municipalities (Dexia 2000).

In Canada, the recent proposal of the Mayor of Winnipeg provides an original and innovative avenue for Quebec. His proposal focuses on a reduction of property taxes, a sharing of the sales tax and a selection of user fees (Box 2.6). Increasing revenues from user fees could help to improve local finance in Quebec. While on average, Canadian municipality fees provide 21% of own revenue, in Quebec, fees account for only 17%. There seems to be some reluctance in Quebec to make businesses or the population pay directly for municipal services. Farebox revenues for public transport provide less than 50% of transport companies' operating costs, and fares appear relatively low compared to other North American cities. The deficit is paid through municipal or provincial subsidies. A wider application of fees – which could replace a part of municipal taxes - would not only contribute to a more robust funding of municipal services, they would also encourage a more careful use of scarce resources and community property (OECD 2003*a*). While there is definitely a rationale for more diversification of the municipalities' tax base, any additional revenues given to municipalities will have to take into account recent changes in municipal responsibilities and be closely linked with the current decentralisation debate. Moreover, if new revenues are to be allocated to municipalities for the deficit of municipal public transport, it is important to consider that such responsibilities could be held at the metropolitan level.

**Box 2.6. Winnipeg's New Deal proposal**

In order to put new solutions to municipalities' financial difficulties on the table, the Mayor of Winnipeg (Manitoba- Canada) presented in 2003 a "New Deal" proposal, a document that could provide directions for other local authorities in Canada sharing the same concerns[20].

Winnipeg's New Deal proposes that "revenue sources should be aware of and sensitive to outcomes" and suggests that "activities one wants to discourage be taxed so individuals know there are costs involved in consuming some particular services". The New Deal seeks to reduce property taxes by half and shift more of the tax base to land instead of structures. In so doing, it seeks to diminish urban sprawl and encourage more compact urban constructions. Taxes are also proposed to discourage other externality generating activities such as the use of cars by increasing the fuel tax. The proposal aims at promoting the use of public transport and puts the emphasis on social responsibilities of citizens and their commitment to a long term sustainable environment. The New Deal also proposes to replace the business property tax with a share of the provincial sales tax, so that the amount collected from firms would best represent their financial health. The expected revenue lost would be made up by an increase in user fees such as a special telephone fee to fund the emergency 911 service. New financial sources for municipalities have been examined such as a levy on hotel rooms in order to collect more revenues from non-residents, as well as a liquor tax and the city's own sales tax. Finally, an increase of transfer payments coming from higher levels of government is mentioned, particularly in the form of a share of the excise tax on gasoline, which would provide Winnipeg and other large Canadian cities with additional funds for public transportation.

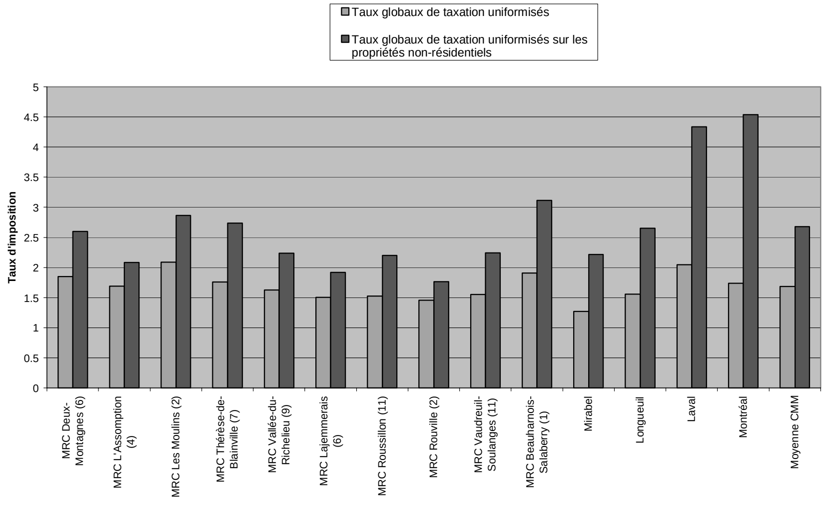
The main interest in the Winnipeg proposal lies in the fact that it presents several potential options that have not been examined with regards to the diversification of revenue resources for municipalities, and especially large cities. Moreover, the New Deal is clearly aimed at discouraging externality generating activities by imposing Pigouvian-type taxes to make such activities more expensive. However some of the above-mentioned options may cause new problems while trying to solve old ones. For example, municipalities lose control over the rate and base and thus lose autonomy under revenue sharing arrangements. In addition, municipalities may be tempted to increase expenditures in the hope of obtaining more funds from the province. Finally, user fees are regressive since poorer citizens are likely to contribute a higher share of their income compared to wealthier citizens, for the same public service.

### *Fiscal inequality*

Fiscal inequality in the CMM can be observed using three measures: an unequal sharing of the costs of regional amenities paid for by the central city, differences of tax rates among jurisdictions and finally the uneven distribution of the tax base among municipalities. First, as is the case in most metropolitan regions, the central city of Montreal provides services that benefit commuters and non-residents without receiving compensating contributions. Local property taxes do not take into account the considerable additional costs that some cities, generally central cities, belonging to a metropolitan region incur from providing services to non-residents. Such inequities are common to many OECD countries. Even though municipalities in Canada have limited social responsibilities, the concentration of needy citizens in the central city and to a lesser extent in the immediate suburbs results in additional costs for Montreal. Secondly, there is a relatively important gap between jurisdictions with regard to the tax rates on residential property and the gap is even more pronounced for non-residential tax rates. Figure 2.4 shows that non-residential tax rates are higher in two of the largest cities of the Montreal metropolitan region, Laval and Montreal. Finally, the tax base per capita of local jurisdictions indicates substantial wealth inequalities among CMM municipalities (Figure 2.5).

The CMM's creation acted as a sort of response to the lack of cost sharing of regional projects. For example, the CMM contributes to the financing of amenities with metropolitan scope. The CMM also established a social housing fund to which all municipalities contribute. With this fund, the CMM finances new social housing projects in member municipalities. The expansion of metropolitan financing to a wider range of services or assets could be considered. However, to provide an efficient level of local public services, *i.e.* that reflects the preferences of the citizens, it is important that costs and benefits be aligned on a geographic basis, so that those who benefit from the services are required to pay for them. To minimize the cost of providing the desired level of services, the scale of production and distribution should be sufficient to realize all possible economies of scale, but not so large as to introduce inefficiencies. In that sense, even if some more services like public transportation, waste disposal or fire protection could be delivered at the metropolitan level, everything should not be regionalized.

Figure 2.4. **Average municipal property tax rates in each RCM included in the CMM (2003)**

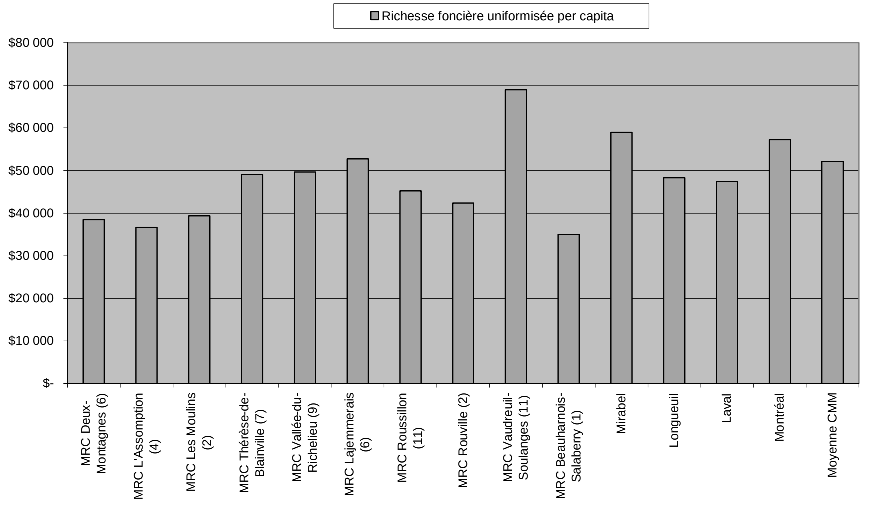



*Source*: Data from the Department of Municipal Affairs, Sports and Leisure

Note: Numbers between brackets represent the number of municipalities included in every Regional County Municipality (RCM). Revenues computed in the standardized aggregate residential tax rate include all tax revenues with the exception of revenues from non-residential taxes (non-residential tax or surtax and business tax) and the non-residential water tax imposed on the rental value of business establishments in the former cities of Montreal and Montreal-Nord.

With regard to inequalities of tax rates and bases among local jurisdictions, the most complete harmonisation comes from amalgamation. If the entire tax base in a geographic area is consolidated, and all revenues go into a single pot, then all residents contribute to the public finances in proportion to their share of the total tax base. In addition, all taxpayers are taxed at the same rate. The creation of the amalgamated cities of Longueuil and Montreal was a major step toward better harmonisation of tax rates. However, the harmonisation has occurred only for these new cities. In that sense, amalgamation does not provide any solution to the problems of inequality at the metropolitan level. The CMM is putting in place a rather modest tax base growth sharing mechanism compared to the tax base sharing program that is being implemented in the metropolitan region of Minneapolis-Saint Paul in the U.S. (Box 2.7). The CMM's program to share tax base growth will be used to finance small development projects throughout the CMM and thus would only marginally improve fiscal equity among municipalities. There are various ways to share fiscal burdens and fiscal resources in a metropolitan area; finding the "right" amount of sharing is likely to be different according to the metropolitan areas.

Figure 2.5. **Average municipal standardised property values of each RCM included in the CMM (2003)**




*Source*: Data from the CMM.

Note : Numbers between brackets represent the number of local municipalities in each RCM. The aggregate taxation rate of a local municipality for a fiscal year is the quotient obtained by dividing the total amount of estimated revenues for the fiscal year from the taxes, compensations and modes of tarriffing that will be imposed by the municipality and the taxable property assessment of the municipality for the fiscal years.

**Box 2.7. Tax base sharing in Pittsburgh and in the Twin Cities Metropolitan Region, U.S.**

The ***Pittsburgh*** agglomeration is one of the most fragmented American metropolitan agglomerations (418 local governments, including 412 municipalities). The alternative to a Metropolitan-wide government type of body came in 1994 in the form of a special purpose district that covers the entire region with mandates of supporting and financing regional assets. Allegheny County has been authorized by the State of Pennsylvania to levy a 1% sales tax in order to fund the activities of the District and to provide funds to the county and municipalities. The purpose of this mechanism is to provide additional funds to local municipalities so that they can reduce their property tax rates and their reliance on the property tax.

Of the revenues coming from the sales tax, 25% is allocated to the county and another 25% is allocated to the municipalities that were required to reduce other taxes, mainly the property tax, during the first year. Subsequently, the county and municipalities have to use 25% of any increase of revenues in regional-wide assets or to further reduce the property tax burden of their tax payers. “The other 50% of the tax revenues goes to the District and is distributed to civic, cultural and recreational entities”[21]. The revenue sharing formula among municipalities is an innovative mechanism that allows the central city of Pittsburgh to lighten the property tax burden of its taxpayers and to lower its expenditures. The grant allocation formula takes into account the population, fiscal potential of jurisdictions as well as the fiscal burden of its taxpayers. The tax revenue sharing program resulted in a reduction in the property tax burden for all property taxpayers of Allegheny County, including those of the central city, but at the same time, increased the sales tax burden. Revenues became more diversified (Collin, 1999).

Since 1975 an unusual Minnesota law has stipulated that a portion of the commercial/industrial tax base in each community within the ***Minneapolis-St. Paul*** metropolitan area be shared. Using 1971 as the base year, each community is required to contribute annually 40% of the ensuing growth in its commercial and industrial (C/I) tax base to a metro-wide pool, from which distributions are made, based on relative fiscal capacity. C/I property includes all businesses, offices, stores, warehouses, factories, gas stations, parking ramps, as well as public utility property and vacant land that are zoned for commercial or industrial use. Not included are properties in tax increment financing districts and the Minneapolis-St. Paul International Airport. The provision has two purposes:

*To improve equity in the distribution of fiscal resources*. Tax-base sharing reduces the imbalance between some communities’ public service needs and financial resources. The uneven distribution of commercial and industrial properties is thought to be a major cause of imbalance. Communities with low tax bases must impose higher tax rates to deliver the same services as communities with larger tax bases. Consequently, the higher tax rates render the communities less attractive for businesses. Communities then compete by offering special concessions to attract businesses, presuming that these businesses will contribute more in taxes than they require in services. Tax base sharing spreads the benefits of regional development (*i.e.* large shopping centres, sports stadiums, freeway interchanges).

**Box 2.7. (continued)**

*To promote regional planning*. Communities may be willing to accept low tax yield regional facilities (*e.g.* parks) if they are to share the benefits of other communities' commercial development. By reducing competition for development, urban sprawl is discouraged, reducing the costs of providing regional services such as sewage and transportation.

Distribution from a common tax pool is determined by multiplying each community's share of the metropolitan population by a relative fiscal capacity index, the ratio of average fiscal capacity in the region and the community's fiscal capacity. This means that communities with below-average fiscal capacity have an index greater than 1, while communities with above-average fiscal capacity have an index less than 1. A community with average fiscal capacity will receive a distributive share of the pool equal to its proportion of the entire area's population. Low capacity communities receive shares greater than their share of area population (net recipients) whereas high capacity communities receive shares smaller than their share of area population (net contributors).

## Vertical collaboration

The great institutional reform in the Montreal metropolitan region has led to the emergence of new actors and redefined the division of competencies. Thus, the relations between the local and supra-municipal levels and higher levels of government need to evolve. The need to rethink inter-governmental relations to improve metropolitan governance is a concern in many OECD countries. New forms of organisational and administrative cooperation involving different levels of government are emerging everywhere. Partnerships are the most common form of this trend. Thanks to their lever effect, they encourage synergies by sharing the expertise and abilities of different actors and enhance the viability of projects. However, inter-governmental partnerships are sometimes confined to specific projects. While this flexibility may be appropriate in some cases, it does not allow the implementation of longer-term policies, nor does it take account of the multi-sectoral aspect of metropolitan issues. This explains why more formalised relations such as contracts allow greater commitment by the actors and greater integration of projects. In Quebec, several partnerships link the local and supra-local levels with the province. The federal level also intervenes in the cities but in a precisely defined context. For the first time, a more formalised agreement, "a city contract", has been signed between the city of Montreal and the provincial government. The present arrangements could be improved and the concept applied at a metropolitan level.

***From partnerships…***

Like in other Canadian cities, there are numerous sectoral agreements between the provincial government and the municipalities, especially in the context of the Quebec-Municipalities infrastructure programme or in the area of environment, tourism or economic development. The Government of Quebec and the Montreal Island Regional Development Board have signed a framework development agreement for the period 2001-2006 setting the priorities for economic, social and cultural development, transport networks, environment and quality of life. At the metropolitan level, the first partnership between the provincial government and CMM was signed in October 2002, the "Community Agreement on Sustainable Development", which covers environmental programmes[22].

Although the municipal level in Quebec cannot deal directly with Ottawa, the federal government is very much present but its involvement is highly circumscribed. The law requires an exclusion decree to be obtained from the province by the municipalities, which may impede access by towns to federal funding. In Quebec, federal-municipal agreements are often built around a specific objective of a sectoral type, notably in the context of investment in infrastructure (*e.g.* bridges, installations and the environment). This is the case, for example, of the federal-municipal agreement on the laying out of the Lachine Canal. The federal government can also delegate its authority to a third party to assist municipalities. For instance, the Canadian Federation of Municipalities (FCM) was entrusted with the management of the Green Municipal Fund, whose budget of CAD 250 million from the government is intended to finance environmental projects in the municipalities. Finally, there are also agreements which directly involve federal, provincial and municipal governments in specific projects, such as the restoration of the Anglican Church in the city of Levis. The three levels of government may also agree to create a third party (such as Montreal International) or support an existing third party, generally a non-profit organisation. Private sector or community participation is then a precondition. An original example of this partnership formula is the *Société du Quartier international de Montréal* (QIM), a non-profit organisation that created Redevelop Downtown Montreal in 1999 through a partnership involving the Government of Canada, the Government of Quebec, the City of Montreal, the *Caisse de depôt et placement du Québec* and the *Association des Riverains du Quartier international de Montréal* (ARQIM)[23].

***…. to contracts***

Beyond these different forms of agreements, most of which are sectoral, the city of Montreal is experimenting for the first time with a new framework of inter-governmental relations that has the signature of a city contract with the Government of Quebec. Established in the beginning of 2003, the “contrat de ville (city contract)” has a budget of CAD 1.4 billion over a five year period, 2003-2007. The annual budget of the city of Montreal amounts to CAD 3.6 billion. The contract is a financial support for the city in areas such as social housing, education and public transport, and tries somewhat to relieve the city from the burden of a large city.

This instrument is innovative in several ways. Firstly, its contractual nature illustrates the principle of a commitment between two parties with respect to common goals. Secondly, the integration of all the funds earmarked for the city in one and the same envelope (ending ring-fencing of subsidy programmes) makes it possible to avoid *ad hoc* fund transfers. Not only does this integrated approach affect funds, it also covers the actors, considering that the contract explicitly includes non-governmental entities as possible providers of public services. In comparison to former financial vertical relationships, the provincial government exercises *a posteriori* control; once the objectives have been jointly defined, the city is independently responsible for the operational and financial management of the projects. Given the stronger operational prerogatives for the municipal level and the simplified procedures for grant allocations, the city contract is supposed to reduce intergovernmental bureaucracy.

For the moment, the city contract is still a juxtaposition of sectoral programmes and finally formalises what already existed. If it can lead to a diversification of financing, it may be worth considering whether it may not be consistent with the provisions of the fiscal pact in force up to 2005. Finally, the contract includes a provision for the city of Montreal to cut expenditures on a number of items. It would be appropriate if it also contains a number of measurable performance and outcome indicators that allow both government levels to assess whether objectives linked to the financial involvement have been reached or not. Outcomes can include social targets such as a measurable reduction of poverty within the city limits. Currently, the contract contains no sanctions if objectives are not met, but if it is unfulfilled, the city faces a potential non-renewal of the contract. Mechanisms of sanction could be introduced to spur the city and the government to fulfill their engagement. In this respect, the framework conditions of funding attributions to regions in Italy under the Mezzogiorno Development Plan provides an interesting example. The Plan provides that *ex-ante* determination of resources available for each region implies automatic claw-back mechanisms, so that regions pay back any funding remaining unused within established deadlines. Moreover, around 10% of all resources are allocated through a performance reserve system, which grants more resources to the administrations that spend their funds more efficiently and not only faster (OECD 2001*c*).

While a valuable concept is at the centre of the city contract's ability to raise efficiency of the public sector in Montreal, involve more actors in service delivery and ease the financial pressure on the city, there is also a rationale to set up a metropolitan contract. Many items such as social housing or infrastructure improvement, currently embraced by the city contract have a larger, metro-wide scope. With a contract covering the entire metro area, policy makers could increase policy coherence across the functional area and avoid costs and benefits from a city contract spilling over to the suburban areas. Using the same principle applied for the city contract, the provincial government might therefore find it useful to start negotiations at the metropolitan level for a contract-based, co-funding of a number of public services. This will involve the CMM, which would be likely to get a prime role in negotiation, planning, executing and monitoring the various aspects of a "metropolitan contract" (or "agglomeration contract"). With a possible major institutional reform of the amalgamated city, the contracts' focus on the metropolitan rather than the city area could largely improve a coherent delivery of public services in Montreal.

In this respect, a tripartite agreement involving the federal, provincial and metropolitan levels could be envisaged. Such intergovernmental co-operation mechanisms have proved to be efficient in some OECD countries, including France that has launched agglomeration contracts (Box 2.8). One of their main advantages is that they pool together knowledge and resources of the different levels of governments, thus increasing the project feasibility and policy coherence. In Canada, such tripartite agreements already exist in Vancouver, Edmonton and Winnipeg, three cities located in the Western provinces (OECD 2002*a*). A metropolitan contract in Montreal could be modelled after these tripartite agreements, but should exist at the metropolitan level instead of the city level. This does not exclude the possibilities of having contracts at the city level, but city contracts could be included in the framework of the metropolitan contract, as it is in the French model where the city contract and agglomeration contract are part of the same procedure. Moreover, all metropolitan contracts should target a global agreement covering a package of competencies to ensure coherence and harmonisation of policies. Unlike the Vancouver agreement, it would be useful to introduce a financial aspect (funded mandate), a precise timetable and monitoring and evaluation methods. Last but not least, such metropolitan agreements could function only if they are binding (for new governments as well).

**Box 2.8. Agglomeration contracts in France**

Like Quebec, municipal organisation in France is characterised by fragmentation which led municipalities to develop a form of pooling of certain services. This form of collaboration, which is regarded by some as an effective alternative to grouping of local authorities, has always been practised on a voluntary basis (Mévellec, 2002). Observing in the late 1990s, the proliferation of agreements and actors, the government decided to clarify the institutional framework, notably by recognising the concept of agglomeration. In addition, the government established a legal framework which allowed inter-municipal and inter-governmental relations in urban areas to be based on contracts.

With the introduction of three laws (law on spatial planning and sustainable development or LOADDT, law on strengthening and simplifying inter-municipal cooperation, and law on urban solidarity and development or SRU), the government developed a mechanism to encourage the voluntary implementation of public policies on a regional and contractual basis: agglomeration contracts. This is a bottom-up method based on "one territory – one project – one contract", which is proving increasingly successful and contributing to agglomeration-based governance.

The agglomeration contract procedure brings together the central government, the region and the *communauté d'agglomeration* (a public inter-municipal cooperation body for urban areas of over 50 000 inhabitants grouped around a centre city of at least 15 000 inhabitants) or the *communauté urbaine* (a public inter-municipal co-operation institution for urban areas of over 500 000 inhabitants). The county council (conseil general) can be associated with the signature of the contract, in particular for questions related to social policies. The central government puts forward its views regarding the directions to be promoted and the major strategic choices for agglomeration. This procedure involves several stages:

<u>The agglomeration project</u>: this is the basic document that contains a diagnosis of the functioning of the agglomeration. It also identifies the issues as well as provides a statement of development policy options and an indication of the support areas for these choices and the policies and measures to implement these choices, with a phased timetable and identification of priorities. The project must focus on regional development (economic, social and human development) rather than development and improvement of infrastructure. The project must be based on dialogue with the municipalities and the main actors involved in the area. The dialogue must be organised to strengthen the firepower of the project and the contract by mobilising non-public actors in implementing actions.

<u>The development board</u>: this represents a variety of economic, social, cultural and association groups. They must be consulted during the preparation of the project and on the final project prior to signature of the contract. They can be associated with the elaboration of the contract.

<u>The agglomeration contract</u>: the financial and programme document on the implementation of the project which identifies the partners, projects, multi-annual financing and contractors.

**Box 2.8. (continued)**

The regional coherence plan (SCOT): this document is a spatial projection of the agglomeration project which transposes the project choices into urban planning law.

Besides agglomeration contracts, there are also city contracts between the central and local governments which commit each of the partners and third parties, such as low-cost housing organisations (HLM) and transport companies, to implementing actions to improve the daily lives of the inhabitants of problem districts (rehabilitation of housing, maintenance of public spaces). Some programmes may also be implemented at the level of a municipality or group of municipalities (access to jobs, prevention and security). It is envisaged that from 2007, agglomeration contracts and city contracts will be merged into a single procedure in the interests of simplicity and consistency.

*Source* : Data from the DATAR (2001) and OCDE (2002*h*).

The concept of contract could also be applied to relations between the city and boroughs (possibly with the participation of higher levels of government)[24]. In several OECD countries, mechanisms have been put in place to address specific problems in certain urban areas, especially deprived districts (OECD 1998). The former city of Montreal also financed projects to support initiatives by local actors including community groups, aimed at creating jobs, and improving citizens' living conditions. The programme in question is reminiscent of the measures envisaged in the French city contract except that the latter, with its contractual nature, has a formal character and involves other levels of government. In this sense, the French initiative is more like the district contracts that were established in the Brussels agglomeration (Belgium). These contracts involve a public-private partnership between the regional government, private sector and non-profit sector in the field of housing, urban development, environment and social cohesion.

### *Involving civil society and the business sector*

Upgrading metropolitan governance in terms of contracts increasingly poses the challenge of exploring public-private partnerships. Several OECD cities already successfully resorted to them, especially for heavy infrastructure investment such as the Tagus Bridge in Lisbon (Portugal) or the Arlanda Airport Link in Stockholm (Sweden). Drawing on agglomeration effects, public-private partnerships could be further exploited on a metropolitan scale. Building a metropolitan Montreal should also imply the development of a partnership mechanism with civil society, either on an *ad hoc* basis by setting up sectoral partnerships with representatives of civil society in the exercise of specific metropolitan functions (such as transport and environment) or negotiating an overall partnership with civil society. An example that could inspire public-private joint interventions in Montreal is the territorial pacts in Italy (*patti territoriali*), which are part of a more integrated development policy called Negotiated Planning (*programmazione negoziata*). Territorial pacts are investment contracts (often made in industry, agro-industry, services and tourism) signed by several public and private actors: the central government that provides the majority of the funding, local governments that co-finance and manage the projects, trade associations that engage in creating new jobs and labour unions that accept a certain flexibility in employment conditions. In France, the " agglomeration contract " process provides for a development board (" *conseil de développement* "). The development board is constituted of representatives from economic, social, cultural and associative groups after deliberation of member municipalities and has to be consulted on the agglomeration project.

**Conclusion: what type of metropolitan model for Montreal?**

The metropolitan region of Montreal has made a significant step towards new metropolitan governance. Given that these institutional reforms did not pass undisputed and that some of its elements – particularly amalgamation – are still subject to fundamental modifications, the pending question is what should be the governance model of Montreal. This chapter analysed past reforms with respect to their ability to achieve stated political objectives and suggested a number of modifications to the current framework. While defining a "true" or "optimal" governance model seems presumptuous, it is probably useful to mention that there are tradeoffs in terms of efficiency, equity and accountability of governance reforms, and that policy makers have the potential to minimize them. First, while a supra-local body such as a stronger CMM could overcome the evils of fragmentation and allow for better policy co-ordination in various fields, it can also reduce the autonomy of the municipalities, requiring a careful discussion on prerogatives of the different government levels. Second, while a metropolitan-wide financial system allows for greater equity, it can deprive municipalities of the right to define scope and level of local public services. Third, the inclusion of civil society in policy implementation increases accountability, but it can also slow down political reform processes. Additionally, it puts a high demand on actors' capacity and the framework that governs them. It is probably the two key concepts of "coherence" and "competition" that metropolitan policy makers have to acquiesce when dealing with governance reforms.

Given such tradeoffs, Montreal metropolitan governance could be nurtured along five axes. First, a stronger role for the CMM, with competencies not only to plan but also to manage services, could increase efficiency for metro-wide functions such as infrastructure, transport, or economic promotion. Second, rethinking the local tax structure and diversifying the set of resources available to the municipal level could reduce fiscal constraints for large cities and stabilize local public finance. Third, neighbourhood democracy could be maintained and possibly increased by strengthening the boroughs' role in the amalgamated cities with respect to local public services. Fourth, new contract-based intergovernmental arrangements like the recently established city contract, that strive for more output orientation and less bureaucracy, can increase accountability and efficiency of policy programmes such as social housing, transport or environmental protection, especially if they are extended to include the entire metropolitan space. Fifth, involving civil society will increase the quality of local decision making and establish greater trust and accountability between policy makers and the population at large. One condition of success in any metropolitan governance reform is the recognition of the legitimacy of the new established structure by the local population.

By keeping the governance framework close to functional needs, the metropolitan area of Montreal will become more competitive and viable. Consolidating local and metropolitan governance should be a very short term priority as uncertainty surrounding the present framework will undermine businesses' confidence. Streamlining institutional structure and fiscal resources will, however, not be enough. Implementing and not simply elaborating a comprehensive economic strategy for the whole metropolitan region will be the main challenge for Montreal in the following years.

## NOTES

1 According to some authors, the HMR Report is based on an over-optimistic vision of the ability of the central government to stimulate development and of the resulting outcomes (Polèse and Shearmur 2002). Thus, contrary to the belief of Higgins, Martin and Raynauld, investment in Montreal would not necessarily have any greater impact than a similar investment elsewhere in the region. According to Polèse and Shearmur, the fact that inter-industrial relations are closer in Montreal does not necessarily mean that investments there would have a greater impact on the rest of the Quebec economy than equivalent investments elsewhere in the province. However, the effect on the immediate region could be higher inside the denser metropolitan region compared with the potential outcomes within the peripheral region. Studies on the subject show that the integration of other regions in the Montreal economy remains unequal and that the relationships, when found, relate more to services than to goods.

2 Although it was received with little enthusiasm by the Quebec Government, it was certainly not as virulent a subject of criticism as the Higgins-Martin-Raynaud Report. The latter was long identified by some of those involved, who assumed that the governments had implicitly encouraged the recommendations and thus favoured the development of the capital to the detriment of other regions, as being the cause of the poor economic performance of the Quebec regions.

3 Data referring to the institutional framework represent the situation as of October 2003.

4 In Montreal, the 27 former suburban cities were converted into 20 boroughs, while the former city of Montreal was divided into 7 boroughs. In Longueuil, 7 boroughs replaced the 8 former municipalities.

5 CLDs administer programmes and financing, one of which is exclusively dedicated to social economy projects, in addition to being one-stop shops that combine a range of services to business. We should note that CLDs also exist in some boroughs of the City of Montreal.

6 In November 2003, the Quebec Government released the Project Law 34 that provides the replacement of the CRD with Regional Conferences of Elected Officials (CRE) in each administrative region of Quebec. The mandate of the new CRE will include the economic development planning of the Quebec administrative regions. The Quebec Government is currently assessing the

possibility that the CRE that are included in the territory of metropolitan communities, such as Montreal, will respect their territorial boundaries.

7 Although the successor of the Montreal Urban Community (MUC) is not the CMM, but the amalgamated city of Montreal, the MUC experience offers interesting avenues of metropolitan thinking for the future of the CMM. Prior to the creation of the CMM, the MUC was the first metropolitan structure to be created in the 1970s with jurisdiction over the entire Montreal Island. Managing 30 to 40% of the municipal budgets, this inter-municipal service agency exercised powers in land planning and public transport. However, the CMM must try to avoid the pitfalls of the MUC. Previously, the MUC proved unable to define a real metropolitan vision: on the one hand, the decision-making process required a dual majority of votes; on the other, the president of the MUC had to resign from the office of mayor, and his legitimacy weakened. Furthermore, the MUC was financially dependent on the good will of the elected representatives.

8 The CMM Board is composed of 28 members. Fourteen members (including the Mayor) are from the City of Montreal. The cities of Longueuil and Laval each have three representatives, and the remaining eight are the mayors of CMM municipalities (four are from South Shore and four from North Shore). The mayor of Montreal is *ex-officio* Chairman of both the Board and the eight member Steering Committee.

9 See www.metro-region.org

10 A similar council already exists in Barcelona.

11 Total compensation for municipal workers in Montreal is said to be at least 20% higher than the wages of provincial employees, or of other municipal employees in the metropolitan area. Police and fire are particularly well compensated.

12 Real underinvestment and infrastructure lag are difficult to ascertain. The extent of infrastructure deterioration can be measured by what it would cost to bring the local public capital stock up to a state of “good repair”.

13 The “Fiscal Pact” is an agreement between the Quebec municipalities, represented by their associations, the Union of Municipalities of Quebec (UMQ) and to a lesser extent, the Quebec Federation of Municipalities (FQM) and the Government of Quebec, more precisely, its Ministry of Finance. The agreement was ratified 87% by the 400 municipalities represented in the UMQ.

14 Again, it should be mentioned that US municipalities have a larger array of responsibilities than their Canadian counterparts.

15 Calculation made based on data from the Conference Board of Canada and the Department of Municipal Affairs, Sport and Leisure of the Government of Quebec.

16 Ongoing evaluation of the efficacy of these subsidies, comparing the additional business activity stimulated by the subsidies to foregone tax revenues, should be part of the research agenda

17 This estimate does not include the possibility of making up for infrastructure. If this option is included, the need for additional revenues would reach CAD 2.1 billion and the long-term debt would be CAD 17.8 billion.

18 The different reviewed solutions of the report include: giving one percentage point of the Quebec Sales Tax (QST) to the municipalities, the sharing of the federal government's Goods and Services Tax (GST) and sharing mechanisms among levels of government involving both levels of governments' income taxes and corporate taxes. An increase of revenues from vehicle registration fees collected by the Quebec Government as well as from Quebec fuel taxes have also been considered, especially to cover municipalities' public transport-related expenditures. Revenues from the federal fuel tax have also been considered. Other solutions that could help municipalities upgrade their infrastructures include a tripartite infrastructure programme (federal, provincial and local), a transfer of revenues from the Quebec tax on telecommunication, gas and electric networks, the complete refund of GST and QST amounts paid by the municipalities and finally, an increase of the Payments in lieu of taxes (UMQ 2003).

19 Memorandum on *Bill 9*. Bill regarding public consultation on the territorial reorganisation of certain municipalities, August 2003. http://www2.ville.montreal.qc.ca/asurveiller/pdf/memoire_loi9_an.pdf

20 www.Winnipeg.ca and *Local government bulletin*, no. 40, October 2003, www.localgovernment.ca

21 (www.radworkshere.org).

22 With a budget of CAD 9.5 million, the agreement is primarily intended to protect and cultivate blue spaces (shore and aquatic spaces), to provide the Montreal metropolitan region with an integrated and coherent network of green spaces (woodlands and wetlands) and to examine the problem of clean air and water management in the region. Finally, the CMM and province

committed themselves to working together in the preparation and implementation of the waste management plan.

23 Totalling an investment of over CAD 60 million, this project is based on a solid financial foundation provided by the Governments of Canada and Quebec (that contributed CAD 24 million each), but also complete support from the sector’s property owners (regrouped in the ARQIM that contributed CAD 8 million through a local improvement tax) that will be complemented by the financial participation of several major Montreal companies.

24 It should nevertheless be kept in mind that a borough contract in the context of the city of Montreal must take into account the new configuration where a borough's territory is quite large.

# CHAPTER 3

# ENHANCING METROPOLITAN ECONOMIC COMPETITIVENESS

The economy of the Montreal region presents a conspicuous enigma. On the one hand, the region has a wide-range of economic strengths. With world-class universities and research networks, strong employment concentrations in a range of dynamic knowledge-intensive industries, and highly competitive costs of production and quality of life, the region is well-positioned for success in the global economy. On the other hand, despite these strengths, the region seems to have failed to fully realize its economic potential. Since the early 1980s, Montreal's growth has consistently lagged behind other major Canadian cities. Though there have been signs of a turn-around in the last two years, unemployment and poverty levels remain higher than the Canadian average. In essence, it appears that the whole of the Metropolitan Montreal economy is less than the sum of its parts.

This chapter argues that fragmentation in decision-making, lack of integration between key actors in the regional economy and duplication of efforts signify that Montreal is not fully exploiting its technical and human resource advantages. As such, the issue of competitiveness is closely linked to the discussion of governance in the preceding chapter.

## Main institutions working on economic development

Presently, there are a large number of federal, provincial, metropolitan and municipal agencies involved in economic development, as well as the many chambers of commerce and other non-governmental organisations operating at different geographical levels (Table 3.1). Some of these actors are sector-specific, others address cross-sectoral issues (such as the labour market). Some are strategic in nature, others are involved in programme delivery.

The principal actors include:

– At the provincial level: Department of Finance; Department of Municipal Affairs, Sport and Leisure ; Department of Economic and Regional Development, Department of Transport ;

Department of Agriculture Fish and Food, as well as provincial agencies including investment agencies such Investissement Québec and the Société générale de financement du Québec (SGF), and the Caisse de dépôt et placement and finally, Union's pension funds, the most important being the Solidarity Fund of the Fédération des Travailleurs du Québec (FTQ).

- At the local and supramunicipal level: The five regional development councils (CRD), the twenty local development centres, Innovatech Montréal, the Regional County Municipalities (RCM), Laval Technopole, Développement économique Longueuil, municipalities with industrial and technology parks, and industrial commissioners.

- In the private sector: Montreal International, the Board of Trade of Metropolitan Montréal (that includes The Montreal World Trade Center), Tourisme Montréal, and the Port of Montréal.

- Other partners: Venture capital financial institutions and federal economic development organisations, such as the Business Development Bank of Canada (BDC) and the federal agency Canada Economic Development (CED).

Some of these actors operate at a strategic level, while others are more oriented towards local development, market development (*i.e.* exports), the promotion and the attraction of investments, or tourism development. While all of these organisations are concerned with the economic development of the region, hardly few of them have as of yet established how to fit their interventions into a strategic economic development planning that looks at the entire territory of the Montreal metropolitan region.

Fragmentation in decision-making, limited integration between key actors in the regional economy and duplication of efforts means that Montreal is not fully exploiting, and potentially risks losing, its competitive advantages. The need for a clear strategic approach to connect the efforts of the different institutions is apparent, the means by which to achieve such co-ordination in practice is, however, a major challenge. Recognising that an integrated regional plan, prepared jointly by the public and private structures working in the domain could certainly improve the general situation, the CMM was given a mandate to prepare a plan of the major issues for economic development of its territory, which covers the entire metropolitan region.[1]

Table 3.1. **Actors in Economic Developemnt**

| | |
|---|---|
| **FEDERAL** | • Economic Development Canada<br>• Industry Canada<br>• Department of Foreign Affairs and International Trade<br>• Export Development Corporation (EDC)<br>• Business Development Bank of Canada<br>• Human Resources Development Canada<br>• Agriculture and Agri-Food Canada<br>• Canadian Space Agency<br>• Saint Lawrence Seaway Corporation<br>• Port of Montreal<br>• Via Rail Canada<br>• Canada Mortgage and Housing Corporation (CMHC)<br>• Team Canada |
| **PROVINCIAL** | • Ministère du Développement économique et Regional (Department of Economic and Regional Development)<br>• Caisse de dépôt et placement du Québec (CDP)<br>• Société générale de financement (SGF)<br>• Société de développement industriel (SDI)<br>• Young entrepreneur assistance corporations (SAJE)<br>• Investissement Québec<br>• Ministère de l'Emploi de la Solidarité sociale et de la Famille (Department of Employment, Social Solidarity and Family)<br>• Hydro-Québec<br>• Regional Development Secretariat: Lanaudière, Laurentides, Montérégie, Métropole /Regional administrative conferences /by administrative region<br>• Ministère des Relations avec les citoyens et de l'Immigration (Department of relations with citizens and Immigration)<br>• Council of Sciences and Technologies<br>• Innovatech of Greater Montreal<br>• Ministère de l'Agriculture, des Pêcheries et de l'Alimentation (Department of Agriculture, Fisheries and Foods)<br>• Research Centres<br>• Société du Palais des Congrès<br>• Foreign Trade Zones of Montréal and Mirabel |
| **METROPOLITAN** | • Montreal Metropolitan Community<br>• Montreal International<br>• Board of Trade of Metropolitan Montreal (BTMM) |
| **MUNICIPAL** | • Tourism Offices<br>• Municipal economic development corporations or industrial commissioners: City of Montreal, Laval Technopole, Longueuil, others Regional development council (CRD) for the Island of Montreal (strategic development plan)<br>• Local development centres (CLD)<br>• Regional labour councils (5) / by administrative region<br>• Carrefour Jeunesse Emploi<br>• Société d'aide au développement des collectivités (SADC)<br>• Info-entrepreneurs<br>• Corporations de développement économique et communautaire (CDC) |

| | |
|---|---|
| | • COPIM (association of chambers of commerce)<br>• Montreal Technovision<br>• Aéroports de Montréal (ADM): lease from Transport Canada |
| **LOCAL AND REGIONAL ORGANISATIONS** | • Regional development council CRD Montérégie / SMD<br>• Regional development council CRD Laval<br>• Regional development council CRD Laurentides<br>• Regional development council CRD Lanaudière<br>• Tourism Montreal<br>• Regional tourism association ATR Laval<br>• Regional tourism association ATR Montérégie<br>• Regional tourism association ATR Laurentides<br>• Regional tourism association ATR Lanaudière<br>• Local employment centres CLE (50)<br>• Saint Hubert Airport |

*Source* : Metropolitan Community of Montreal

The elaboration of a comprehensive strategy involves integration in policymaking of two dimensions of the economy – the vertical (economic sectors/clusters) and horizontal (factors of production) dimensions of the regional economy –, and highlights regional strengths and weaknesses in each dimension. The vertical dimension essentially refers to economic sectors in the region —the specific industries and value-chains that constitute the industrial structure of the region. The horizontal dimension refers to those factors of production that cut across multiple sectors and provides a basis for sustained regional competitiveness, in particular the generation of innovation and knowledge. In both dimensions, the Metropolitan Montreal economy has important strengths, but there is also clearly room for improvement.

### Vertical dimensions—promoting sectors and clusters

In addressing the vertical dimension of regional economic development, the economic strategy of Montreal is increasingly focused on cluster-based initiatives. A cluster can be defined as a spatially limited critical mass (*i.e.* sufficient to attract specialized services, resources and suppliers) of companies that have some type of systemic relationship to one another based on similarities or complementarities (Regional Technology Strategies 2002). It is important to recognize that clusters are not simply firms that co-locate. A cluster is characterized by a significant level of interaction between firms, which enables them collectively to understand, adapt to and take advantage of changing economic circumstances. It is the interactive element of clusters that promotes innovation and economic learning.

As an economic development strategy, developing and strengthening clusters has essentially three components. The first is to build on the "natural" structure of firm networks in the economy, where significant interaction among firms has emerged through "natural" processes over a long period. A second is to increase the efficiency of services and information provided to clusters rather than individual firms. The third component of cluster-based policy is to promote "engagement", *i.e.* using the cluster as a framework for pulling together related firms into new relationships that can promote mutual benefit and innovation.

The first task for policy makers is to identify the key characteristics of clusters and understand their different dynamics and potentials. This work is being undertaken through the CMM's *Stratégie métropolitaine de développement économique par créneaux d'excellence*[2] *(Metropolitan strategy for clusters-based economic development).* Montreal's economy is based on strong specialisation in a number of sectors. The preliminary research phase identified 15 possible clusters to focus on in Metropolitan Montreal: agriculture/bio-food, professional and business services, tourism/leisure, aerospace, information technology, life sciences, nanotechnology, metals and metal products, fashion/textiles, transportation/distribution, plastics, composite materials, printing/publishing, chemicals, and environmental industries. As this list suggests, there is no shortage of possible employment sectors in the Montreal economy on which to build. The problem is weaving the multiple strengths of the regional economy into a cohesive whole.

Assessment of the relative situation of the different clusters indicates three different types of clusters: established competitive clusters (such as aerospace and biotech), emerging clusters (such as culture industries or fashion design), and horizontal, more diffuse clusters (such as IT industries). The identification of clusters is an important step towards developing a policy framework by which specific policies can be selected for particular clusters[3]. Each of the clusters has very different characteristics and will entail different policy responses. Two examples of established competitive clusters and one example of an emerging cluster illustrate the diversity that exists within the umbrella concept of clusters (*créneaux*).

### ***Existing clusters***

#### *Aerospace*

As noted in Chapter 1, Montreal is a leader in the aerospace sector. Though there are dozens of subcontractors and suppliers of specialized products and services, the sector is dominated by a few large firms, in particular

Bombardier, Bell Helicopter and Pratt & Whitney, which tend to play the role of regional system integrators[4]. As such the sector does not have the "classic" profile of a cluster characterised by inter-linkages and inter-dependencies where it is these complex inter-firm relations (usually among relatively small firms) that drives innovation. Moreover, the role of universities and public research institutions is relatively limited. Nonetheless, the sector is geographically focused and has developed over a relatively long period (over 80 years, compared to 20 or 30 for other local clusters). As a result, some of the external economies that SME clusters generate are present, such as the pool of specialised labour and the ability to adapt established product lines rapidly for world markets.

The aerospace industry remains crucial to the metropolitan economy. The sector was hit hard by the post-September 11 decline in the travel industry, with Bombardier posting a loss of CAD 615.2 millions for 2002. Economic recovery may require that the Montreal aerospace pole adopt a quasi-cluster approach in order to ensure that the industry builds on its clear advantages. This implies a stronger role for education and research institutions, more active collaborative R&D between the public and private sectors, more diversified customers for existing subcontractors, lower barriers for entry by dynamic new firms and a focus on entrepreneurial activity and better systems of venture capital for such entrants. The success of Montreal and Canada's aerospace industry has been based on strong innovation capacity. Its future will depend on renewing the sources of that innovation – including maintaining the dynamic labour supply – within and also outside the large firms that drive the sector.

*Bio-technology*

Bio-technology has been identified as a strategic area for promotion in the region. Here again despite the strengths of the industry, the evidence of fragmentation and the lack of a cohesive vision in the metropolitan region become apparent. There are many sub-regional initiatives, but relatively poor coordination and communication between them, thus limiting the strength of networks within the metropolitan region and limiting the dynamism of innovation efforts.

Montreal International developed an initiative aimed at accelerating development in life-sciences and related industries in Greater Montreal. This initiative, with significant funding and support from the provincial and federal governments, initiated a consultative process to develop a metropolitan vision and plan of action for improving the life-sciences cluster in the region. While this effort identified many strengths in the bio-technology sector in the region, and developed some valuable recommendations for future action, one of its central conclusions was that the industry was hindered by a lack of regional coordination:

> *"…Greater Montreal has never acted as an integrated cluster but rather as a series of autonomous centres that are often in competition with one another….The region abounds with initiatives and numerous promotional organizations but lacks a well-articulated strategy that would prevent the diluting of efforts. The absence of such a strategy has a negative impact on initiatives to attract investments and researchers. The various stakeholders tend to act alone and are reactive, rather than being proactive and targeted. Consequently, the region's 'centres' tend to compete instead of co-operate. The issues are too often focused solely on tax advantages and infrastructure problems instead of on developing human resources and the region's international profile"(Montreal International, 2002b).*

A case in point concerns one of the most prominent initiatives in the region, The Biotech City, which was created around a concentration of biotech related firms in Laval. The full name of this initiative (the City of Biotechnology and Human Health of Metropolitan Montreal) suggests a metropolitan focus, but in fact it is essentially concentrated in a particular zone in Laval. It brings together 65 enterprises, some of whom are among the leading pharmaceutical firms in the world. With valuable links to the Armand-Frappier campus of the *Institut national de la recherche scientifique* (INRS), the Biotech City is attempting to create a dynamic, University-linked agglomeration of bio-technology related firms. The problem with this initiative is that it is specifically focused on a relatively small piece of real estate in Laval and focused on financial incentives rather than broad collaborative networking and learning. The initiative is not yet effectively linked to a broader metropolitan strategy to promote bio-technology industries and there is some evidence of damaging competition between different actors and localities within the metro area. For example, there is concern in Biotech City that other development agencies in the metropolitan area are trying to develop clusters that compete directly with Biotech City.

### ***An emerging cluster***

*Culture/Entertainment*

Montreal is widely recognized as an important international cultural centre, within Quebec and the world. Chapter 1 sets out the impressive statistics for the sector. Nevertheless, efforts to promote culture industries in Montreal appear fragmented and insufficiently coordinated. For example, the Greater Montreal

Convention and Tourism Montreal[5] is nominally responsible for promoting tourism in the metropolitan region, but its primary focus is on the Island of Montreal itself. In fact, each of the five administrative regions in the metropolitan region of Montreal (Montreal, Laval[6], Montérégie[7], Laurentides[8], and Lanaudière[9]), has developed individual strategies based on local tourism within the specific region. The tourism web-sites for each of these regions barely mention each other. These tourism organisations do not seem to strongly market a regional identity nor emphasise the complementary attractions in the wider metropolitan region. This clearly limits the opportunities for innovative marketing and for the creation of new tourism packages based on linked tourism sites.

While Arts Councils operate in the city of Montreal and in the other administrative regions, and organisations such as Culture Montreal have been successful in building networks among different entities in specific localities and in specific sectors, overall, the level of metropolitan integration among cultural activities seems limited. Significant synergies could be developed between performance and electronic arts in promoting Montreal as a strong cultural centre, yet they have to be adequately explored. Similar synergies might also be developed by working more closely with the fashion industry – identified as an emerging cluster – as evidenced by the close links between design and cultural industries in both New York and Los Angeles. The clothing and textile industry has been a major employment area in Montreal, and still employs some 120 000 in the entire area. It has been threatened, however, by globalisation as the mass-production end of the industry has largely migrated to lower-cost areas. Strengthening the high-end, fashion-based sector of the industry is an important part of maintaining employment in the sector and building stronger ties with culture initiatives in the region could help build such mutually beneficial relationships. Again, the key point is that with fragmented decision-making and the lack of communication between firms and associations in these different sub-sectors of the economy, opportunities for innovation are unnecessarily limited.

**Opportunities and challenges in pursuing cluster initiatives**

Developing more ambitious cluster-based initiatives in the metropolitan region is attractive for a number of reasons. First, regional cluster policies often reflect underlying patterns of human and business interaction. In this sense, cluster policies promote greater cooperation among institutions in support of regional networking that is already underway at a firm or individual level. Second, cluster policies can be important in improving the efficiency and effectiveness of service delivery mechanisms. By providing services within a regional framework, rather than in specific municipalities or to individual companies, it is possible to reduce duplication of effort and take advantage of economies of scale and complementary areas of expertise within the entire regional metropolitan economy. Finally, cluster policies can be considered an engagement strategy—a way of engaging actors throughout the region around specific initiatives, encouraging them to collaborate with other actors within the regional economy and in the process, developing a common understanding of the importance of the metropolitan region as a whole. Promoting regional integration is also useful for engaging actors outside the metropolitan region, such as by marketing the region's strengths to potential investors or promoting regional products for export.

There are, however, major challenges in promoting cluster initiatives in the Montreal area. The principal challenge is to develop a clear and coherent strategy with an associated institutional framework that ensures co-ordination among the key actors and a clear implementation mechanism. As discussed in the previous chapter, the institutional structure of the metropolitan region of Montreal is complex. The complexity is particularly apparent in the field of economic development. The point of departure in the case of Montreal is that the strategy should take a metropolitan-region perspective. Unless cluster initiatives are specifically structured to engage actors throughout the metropolitan region, they run the risk of heightening the tensions that exist between smaller municipalities in the region and the new mega-city of Montreal itself. A second principle of the cluster strategy is that it should address problems of duplication among institutions, streamlining interventions according to an agreed set of priorities. Given the potential for conflict between proponents of specific locations or institutions, it is important that the process of identifying priority clusters and measures is both transparent and focused. In this respect, the initiative of the Department of Municipal Affairs, Sport and Leisure, and the CMM to engage a working group to elaborate a development strategy based on clusters "of excellence," appears to be an important step forward. While there is a great deal of activity around the different clusters – cluster-based associations and committees – there has not been until now an overview of their range in the metropolitan region that both diagnoses strengths and weaknesses and proposes concerted policy action. The ultimate aim of the working group is to follow an open methodology by which the diagnostic is verified and leads to agreed conclusions of the policy actions that the diagnosis implies in the context of the level and type of public investment available through the different actors engaged in the field. The methodology they are following at the moment is compatible with sections A and B of the "menu" of actions in Table 3.2 from which some regions have built their strategies. The next phase of their work will involve the other sections, such as engagement, service provision, and resource allocation.

Table 3.2. **Menu of actions for cluster strategies**

**A. Actions for understanding and benchmarking regional economies**

- Identify clusters
- Model and map systemic relationships
- Benchmark against competitors

**B. Actions for engagement**

- Recognise or, where an unmet need exists, create cluster associations
- Formalise communications channels
- Foster inter-firm collaboration

**C. Actions for organising and delivering services**

- Organise and disseminate information by cluster
- Establish one-stop cluster hubs
- Form cross agency cluster teams
- Create cluster branches of government
- Facilitate external connections

**D. Actions for building a specialised work force**

- Qualify people for employment
- Use clusters as context for learning
- Establish cluster skill centres
- Form partnerships between educational institutions and clusters
- Support regional skills alliances
- Create inter-regional cluster alliances

**E. Actions for stimulating innovation and entrepreneurship**

- Invest in innovation and business start-ups
- Support cluster based incubators
- Encourage entrepreneurs' networks
- Promote innovation networks
- Establish cluster-based technology hubs

**F. Actions for marketing and branding a region**

- Target inward investment
- Promote clusters
- Form export networks
- Look for opportunities to brand regions

**G. Actions for allocating resources and investments**

- Give incentives or set aside funds for multi-firm projects only
- Invest in cluster R&D
- Fund critical foundation factors

*Source*: Rosenfeld, Stuart 2002.

The process of diagnosing the needs of the different clusters is a complex task, involving in-depth analysis of the relations among enterprises and between enterprises and other actors (research institutions and government). This is important because the mechanisms at work within most enterprise systems are poorly understood or are sufficiently intangible to be difficult for policy interventions to reach. For example, two key "unknowns" are (i) the channels for information exchange and co-operation that firms, particularly SMEs, actually use and (ii) the current gaps – communicative, cultural, management style – among firms and between firms and other participants in the regional economy, particularly government and non-government producers/diffusers of knowledge and technology. As a result, despite the enormous interest, cluster policies still have much to prove in terms of their effectiveness and general applicability.

An element that emerges strongly from OECD work in other regions is the interdependency between sectoral specialisation in growth sectors and "horizontal" dimensions of the economy, notably those relating to innovation and knowledge generation and application. The next section will attempt to formalise the different components of an innovation system for the metropolitan region of Montreal and discuss (i) to what extent these components can be organised along the lines of a regional system of innovation and (ii) how this horizontal, cross-sectoral dimension relates to the cluster development initiatives.

**Horizontal dimensions—factors of production**

The cluster-based sectoral policies discussed above depend also on having access to the right human and technological resources to generate a flow of innovation. Innovation depends on a continuous flow of ideas among the different actors in an economic system. This means not only user-producer interactions (for example, between R&D labs and large firms) but also knowledge shared among potential competitors, ideas generated by new firms, and innovations brought into the system through foreign direct investment, linkages between SMEs and regional technical colleges, etc. OECD Territorial Reviews demonstrate the importance of the different components of the innovation system and bear witness to the interest of national and regional administrations in creating a coherent "system". For example:

- Ensuring a better allocation of human resources in the wider labour market: getting the right people to the right jobs; overcoming bottlenecks.

- Building complementarities among research institutes; strengthening specialisations and orienting R&D to "next generation" fields.

- Linking knowledge producers with users; systems of technology and innovation diffusion; commercialisation of innovation, including specific models such as science parks, technical service centres and technical education institutions.

- Enhancing availability of risk capital and other project financing options.

- Stimulating entrepreneurship; "creative destruction", dynamic firm formation.

- Embedding foreign direct investment and incorporating it into regional innovation systems.

The common denominator in current thinking about clusters, networks and innovation systems is the emphasis on place-specific externalities based on positive feedbacks, relational assets, and interlinkages. No matter which analytical approach is used, all have formal and informal multi-actor interaction as the basis for both the creation and the transfer of knowledge. The range of OECD reviews show, however, that these different components are rarely combined into a "system". Four examples from Montreal illustrate the strengths that exist in the metropolitan region, in terms of innovative capacity, but also suggest that more should be done to channel and direct resources. These examples include human capital, entrepreneurship, access to capital, and regional branding/marketing.

***Human capital development***

Up until the 1970s, education was identified as a major weakness in Montreal, as in Quebec as a whole. Three decades of significant public expenditure have dramatically raised standards. Nonetheless, as mentioned in Chapter 1, educational levels in Montreal remain lower compared to other major Canadian cities and many other OECD metropolitan regions as well.

The system remains relatively weak in an area that is crucial for building innovative capacity; namely, integration between educational institutions and the private sector, especially small and medium enterprises. Some universities do offer "co-operative programmes" in which study terms are alternated with work terms in the private and public sectors (COOP training program). In some universities, students have the opportunity to have a number of internships of four months duration in between study terms. This type of program is particularly popular in engineering training and most universities with engineering faculties offer similar types of programs and by doing so, integrate the interests of employers, educators, and also students. The University of Montreal also employs some experts from private companies to teach academic courses within the engineering faculty. For example, Bombardier (aeronautic) and EMS Technologies (aerospace) had their own experts teach courses in the University and students eventually had the opportunity to serve as interns within those industries. Other universities such as the HEC (*Hautes études commerciales*), while not providing specific work placements, do nonetheless try to address practical work skill issues in their curricula. Overall, however, the interactions do not appear as intensive as in other regions reviewed recently by OECD, such as Öresund (Box 3.1).

**Box 3.1. Higher education and industrial clusters in the Öresund region**

The Öresund is a cross-border metropolitan region comprising the Danish island of Zealand including Copenhagen the capital city and the Skåne region, with Malmö, Sweden's third largest city. Since 2000, the two cities have been linked by a rail and road bridge. This new transport infrastructure has resulted in a single functional region spanning two different countries.

The Öresund region has developed significant strength in knowledge–intensive activities including the medical and pharmaceutical industries and certain segments of information and communication technology industries. It is also strong in food processing and has developed an environmental cluster with companies that either produce environmental technologies or make production, products and services more environment friendly.

In the Öresund, the education sector has been at the forefront of promoting co-operation for knowledge development. This long-term informal co-operation was formalised in 1997 with the creation of the Öresund University. This institution which regroups most Universities of Zealand and Skåne is a leading actor in formal scientific research and education (Öresund Science Region) and in the promotion of informal networking activities and information sharing. Working in collaboration with researchers, business leaders and policy makers, Öresund University has helped in facilitating the development of networking associations in each of the above clusters. Medicon Valley Academy is the oldest and most established of these associations. The Academy animates the clusters, organising forum and workshops on subjects defined by members and catalysing interactions. It is important to underline that these associations are not trying to dictate technology developments, but rather to build soft infrastructures for the exchange of knowledge and organisational learning. The approach is flexible and rooted in organically developing projects that are likely to build effective communities of practice over time.

*Source*: OECD (2003*d)*.

While universities are, of course, important for training higher level employees and conducting basic research, technical and community colleges are emerging in many countries as an important instrument for providing more applied training and technology transfer linked with industry, particularly with local SMEs. In the U.S., for example, community colleges have been recognized as an increasingly strategic economic development institution, particularly in the arena of adult education and life-long learning. They tend to be more flexible to the needs of both employers and students, providing more customized training programmes and adjusting hours and timing of instruction to meet the needs of adult workers (GRUBB *et al*, 1997).

The CEGEPs (General and Vocational Colleges[10]), which in the educational system of Quebec most closely resemble US community colleges, appear to have the untapped potential to exploit the linkages between training provision and the local economy. At the moment, this potential is not being harnessed, even though some of the CEGEPs have built sectoral specialisations and have relations with firms in those sectors (for example, *Centre de technologie Aerospatiale du CEGEP Edouard-Montpetit).* The 15 major CEGEPs in the metropolitan region are administered as part of the provincial system, with no effective means for co-ordinating at a metropolitan level. Greater co-ordination at that level would make it more feasible for the CEGEPs to identify potential duplication of resources, to take advantage of possible specialization in skills and technological competencies, and to develop a general approach towards local businesses. This task could perhaps be promoted through the *Table métropolitaine de l'emploi*. Created in 1998 by the Quebec *Delegate Minister of Employment*, the *Table métropolitaine* is composed of 16 members coming from business associations, unions, universities, CEGEPS and school districts and government representatives. The mandate of the *Table métropolitaine* is to co-ordinate the Quebec government's employment related policies and articulate them with the needs of the metropolitan area. As such, and in the context of the general sectoral development strategy, the *Table* could perhaps guide the CEGEPs in this direction.

Many of the CEGEPs are quite small, with seven out of the 15 having enrolments of less than 4 000 students. It is not clear that all of them should be offering the same pre-university training. The percentage of students in each CEGEP enrolled in Pre-University programs (as opposed to technical degree programs) ranges from 33 to 73%. All of the CEGEPs also offer technical degree programs, designed for students to enter directly into the labour market, rather than continue on to university. There is undoubtedly a high level of overlap in the development of technical curriculum. Among the technical programmes offered in each CEGEP, only 11% are unique, meaning that 89% of the programs are duplicated at multiple institutions. While there is clearly some need for offering the same degree program at different CEGEPs in the metropolitan region, there is significant room for improving the coordination of CEGEPs in the region.

***Stimulating entrepreneurship***

Entrepreneurial activity is at the origin of technological change and development[11]. There has been a marked increase in business start-ups in many OECD countries driven in large part by opportunities that have appeared in high growth sectors such as ICT and biotechnology. In Montreal, even in the aerospace industry, where, as was discussed earlier in this chapter, the sector is organised around a few very large firms, the issue of entrepreneurship and dynamic innovation has enormous significance for Bombardier, Bell and the groups of specialised suppliers that work with them.

There are, as in most major metropolitan areas in Canada and across the OECD, a vast range of different initiatives that are aimed at would-be entrepreneurs managed by a wide range of different governmental and non-governmental organisations. The main actors in the Montreal metropolitan region include the CED (Canada Economic Development[12]), BDC (Business Development Bank of Canada), the different CLDs, which manage local investment funds for start-ups and a variety of aids for young entrepreneurs and social enterprises, and the Board of Trade and Chambers of Commerce.

It seems relatively rare for OECD regions to effectively co-ordinate policies to favour entrepreneurship, perhaps because the range of policy actions is wide and the targets are very varied. While it is important to note that there appears to be a lack of overall co-ordination in this field, the same complaint can probably be made with respect to most other major metropolitan areas. A more significant weakness, particularly given the competitiveness issue in key sectors, is the apparent absence of entrepreneurship policies directed at the main vertical sectors. There are funds, advisory services and mentoring programmes for young entrepreneurs, initiatives for start-ups in deprived neighbourhoods, programmes for female entrepreneurs, services relating to business development for members of business associations, business management training courses through the CEGEPs (community colleges) and others. While these are important as a means to broaden entrepreneurial culture within the society, it seems surprising that there is little focus on new firm formation in the key sectors of the Montreal economy. These are industries where the entrepreneurs often come from within and where they need particular targeted advisory and financial services.[13] For example, there are relatively high barriers to entry in the aerospace industry as a result of the particular structure of the sector. To improve competition and promote innovation, entry by new firms could be facilitated. In the ICT and biotechnology sectors, both of which are organised as genuine "innovation clusters," collective services for would-be entrepreneurs could be appropriate.

***Access to capital***

The financial services sector in Montreal has been declining since the 1980s, as the financial centre of Canada has shifted from Montreal to Toronto. The lack of access to appropriate and sufficient capital, and particularly to venture capital, was identified by a number of key actors as being a hindrance to economic development in the region. This gap in private sector capital is in part met by a pool of public sector investment, mainly through subsidies designed to leverage private capital. The key players in providing public financing include Investissement Quebec (IQ), La Société Générale de Financement (SGF), Canada Economic Development (CED) and the Business Development Bank of Canada (BDC). Much of this activity is devoted to attracting foreign investment, yet business leaders estimate that 75% of all new international investment in the region comes from companies that already have operations in the region, simply expanding their operations, rather than entirely new investment. In this respect, the issue of whether the role taken by the public sector in providing finance crowds out private sector risk capital becomes important.

Financial incentives, mainly in forms of tax credits from the province, are also highly focused on promoting R&D. These incentives are structured in such a way that firms can actually end up paying only 40% of total investment in R&D. This suggests significant room for expanding programs aimed at not just research but at the commercialisation of research and the production of new products and services. The approach of government tax subsidies also reflect a strong focus on research-based innovation, with less obvious assistance to manufacturing enterprises, and very little focus on building the collaborative networks and sectoral relationships that might promote more incremental innovation and learning.

***Regional branding and marketing***

A final horizontal dimension of the regional economy that shows evidence of fragmentation is in the area of regional branding and marketing. All sectors benefit from association with a quality location: an area that possesses the range of attributes for which investors and skilled workers are looking. This is partially derived from group assets under a recognised, identifiable "brand". It also has both an internal and external dimension. Internally, branding refers to the ways that residents of Metropolitan Montreal perceive the region itself, its strengths and weaknesses, and the role of the various sub-regional units in the creation of the broader metropolitan area. Externally, branding relates to how the region is marketed, what strengths of the region are highlighted, and the particular institutions and characteristics of the region that are used to try to attract international and national attention to Montreal. In both areas, there are clear signs of a need for greater co-ordination and integration.

Internally, the Montreal metropolitan region faces two challenges. The first is the continued existence of intra-urban tensions rooted in local identities of municipalities in the region and the newness of the metropolitan identity. Intra-urban tension is an inevitable component of the broader integration process. It is important to recognize that these tensions between various municipalities in the region continue to exist, thus limiting the benefits of regional integration. Similarly, many economic development initiatives are aimed at a provincial level, rather than regional level. This does little to help build the regional identify.

Externally, Montreal's 'brand' has been a kaleidoscopic jumble of the many characteristics of the region. The dynamic cultural industries of central Montreal, its bilingualism, the multi-national origins of the population, the natural attractions of the surrounding countryside, the intellectual power-house of industries and universities in the region, its geographic location as a gateway to North America — all of these elements of the region have found their way into external marketing efforts. They have yet to be integrated into a distinct regional identity that melds the region's various strengths. A clear development strategy should emphasise the issue of building a metropolitan regional identity and effectively marketing it.

**Governance for economic competitiveness**

Implementing a clear and coherent strategy for the economic development of the whole metropolitan region requires a collaborative framework. Networking in key sectors is crucial to building and maintaining the relations on which clusters draw their competitive advantage. At the same time, more general networking efforts across the wider innovation system would provide an important input to the existing clusters, but also support the several emerging and more diffuse clusters that are increasingly important in the Montreal economy. A metropolitan region-wide co-ordinating committee could thus play a critical role in facilitating interactive processes in different domains and also more generally. Such a body could also provide a vehicle for a more cohesive "learning region" type strategy that brings together the range of policy initiatives in "horizontal" fields, in particular those relating to the region's knowledge/innovation system. To be most effective, this body should be able to provide a metropolitan region perspective for the range of different organisations and bodies that currently work at different levels and across jurisdictions in the metropolitan region.

In promoting a collaborative economic development vision for the Montreal metropolitan region, it is important that these initiatives involve a wide spectrum of participants. In particular, collaborative initiatives should ensure the involvement of leadership from four strategic constituencies: the public sector, the private sector, the education sector, and civil society (as represented by unions, community organisations, non-profit organisations and other institutions). Having direct leadership from all four sectors is critical for ensuring that initiatives not only represent a wide-spectrum of perspectives, but also truly help to build integration in the region and a common vision for Montreal's economic future. Furthermore, this leadership involvement should ideally be built from the very inception of new economic development initiatives, to ensure that they are structured in such a way as to maximize the involvement and commitment of the multiple sectors in society.

**Box 3.2. Examples of strategic economic development partnerships**

In the case of the ***Philadelphia*** region and ***Pennsylvania***, the industrial regeneration strategy of the state seeks to co-ordinate the work of various players in regional development by means of broad partnership arrangements. Set up by the governor, *Team Pennsylvania* is a partnership between the governor's office, educational institutions, research centres and political leaders to guide the regeneration initiative. Its objective is to ensure the successful revitalisation of Pennsylvania's economy by networking and promoting technology transfer among educational institutions and the different clusters in both old and new economic sectors in the region. The fact that all Pennsylvania state agencies are involved in the programme is a testament to the success of this all inclusive approach.

In ***Stuttgart***, this multi-sectoral and strategic function is fulfilled by the Stuttgart Regional Organisation (SRO), a public entity with broad responsibilities and mandates (encouraging innovation, providing advice to firms, promoting tourism, attracting business, managing industrial space). The organisation is funded by contributions levied on municipalities and the four rural districts in the region and by grants from the Baden-Wurtemberg Land and the federal government. The SRO practices two types of partnership approach: a) *cooperation anchored in institutions,* and b) p*roject networking*. Within the framework of the former, the SRO holds the majority of shares in the business promotion company *Wirtschaftsförderung Region Stuttgart GmbH (WRS).* It also favours regional structures set up by economic and social groups. A whole series of social and municipal initiatives that promote regional concepts and implement individual projects have developed around the Organisation in areas such as sport, culture, events or regional studies. Concerning the latter form of partnership, the association is devoted to developing project networks, the aim being to break down barriers between different social groups and institutions in the region and to encourage them to work together on joint projects, for example in the field of biotechnology (e.g. Bio Regio Project Stuttgart Neckar).

In its mandate, the CMM was asked to prepare a general economic development plan for its territory. It is also expected to promote the region internationally and take the necessary steps to encourage economic growth and investment. While the specific actions are not specified, they include the creation of sectoral joint action groups to define priorities, and establish links and provide support to economic development organisations. As such, and given its metropolitan region-wide mandate, the CMM plays a critical role in developing an overall framework for regional development. The CMM needs to play the role of a co-ordinating committee that involves all four constituencies and needs to be seen as being primarily led by any one sector. It is important that such a co-ordinating committee be seen as representing all sectors in the metropolitan region.

Building a co-ordinating committee might involve the creation of a new organisation. For instance, *Joint Venture Silicon Valley Network* has played an important role in regional development since the early 1990s, bringing together public, private, educational and civil society actors together in an independent organisation funded by a combination of private, public and foundations. Similarly, in the Pittsburgh region, the *Allegheny Conference on Community Development* has played a prominent role since the late 1940s, with strong private sector leadership but significant public sector and community involvement.

In Montreal, however, given the large proliferation of organisations and initiatives, involved in economic development, creating a new organisation with significant commitment from all sectors might be problematic and inefficient. Instead, to deal with the complex institutional politics and help minimize potential conflicts and turf battles, it might be more appropriate to conceptualise the co-ordinating committee as more of a virtual organisation, with direct involvement (including staffing) from all major organisations/institutions in the region. It should be conceptualised not in a hierarchical way in relation to various cluster initiatives or other economic development efforts in the region, which could have their own organisational structure, and with sufficient autonomy to develop programs and governance structures appropriate to their sector. As an alternative, the role of this co-ordinating committee would be more to build networks across the various initiatives, and help weave them together into a more cohesive framework for regional development. Thus, the focus should be on building interactive processes, relationships and networks, and helping to coordinate activity (through networking), rather than on building formal organisational structures and policies.

Nonetheless, a region-wide co-ordinating body should have a high level of visibility, with wide-spread commitment to creating metropolitan-wide strategies for economic development. Within this context, there are clearly a number of specific organisations that should play a critical role:

*Public sector*. As the organisation responsible for region-wide planning, co-ordination and financing for a range of socio-economic development functions, the Metropolitan Community of Montreal (CMM) obviously needs to play a leading role in co-ordinating the development of a regional economic strategy. In the interests of building regional integration, the CMM should probably be clearly recognised as the leading public-sector entity. Nonetheless, given the on-going intra-urban tensions and the importance of building coherence between local, regional, provincial and federal initiatives, the CMM needs to ensure that the viewpoints of a wide-range of other public sector entities are represented in such a co-ordinating body. This is clearly the case for the municipalities within the Montreal metropolitan region, particularly Laval, Montreal and Longueuil, which retain the majority of local government competencies important for urban development. But it is also the case for the appropriate various provincial ministries.

*Private Sector*. The Board of Trade of Metropolitan Montreal (BTMM) is the largest and most prominent organisation representing a broad spectrum of businesses in the region, and thus could play a significant role in co-ordinating private actors in the development of a regional economic strategy. Nonetheless, there is also a wide-range of business associations active in the region that are organised on more of a sectoral level, whose input should also be incorporated into regional metropolitan strategies.

*Education Sector:* In the education sector, both, Universities and CEGEPs in the region need to be centrally involved in the process of developing a regional economic strategy. At the moment, however, there is little co-ordination amongst the different institutions and no association that brings together educational institutions at a regional level. In the short-term, individual institutions could certainly be represented directly on a region-wide economic strategy co-ordinating body, but in the long-run this is less than ideal, since it would likely do little to address the institutional isolation that currently characterises the education sector. In the long run, it would be ideal to create a co-ordinating body within the education sector to be responsible not just for providing input into economic strategies for the metropolitan region, but for assuming a much stronger role in building better collaboration and co-ordination in educational programs in the entire region. A useful model is the Öresund University[14], a consortium that brings together twelve Universities and Colleges in Öresund Region (Copenhagen and southern Sweden). Directed by the twelve chancellors of the member institutions, the Öresund University increases quality and efficiency among the participating institutions by opening up the courses, libraries and facilities to students, teachers, and researchers in the region (OECD 2003*d*). This helps to build more complementary programs in the region and to avoid unnecessary duplication and waste of valuable resources. A specific recommendation of a Montreal Regional Economic Strategy should be to promote a similar level of co-ordination amongst the educational institutes in the Montreal metropolitan region.

*Civil Society:* The complexity and diversity of civil society organisations in the region makes it difficult to identify all those that should play a critical role in formulating a regional economic strategy. Nonetheless, certain principles can be applied. First, given their prominence and importance in the region, unions should be adequately represented in a co-ordinating committee. Second, since a key part of Montreal's future is centred on its diverse ethnic and cultural composition, organisations, representing the range of minorities in the region, should also play a prominent role. Finally, given the importance of working through intra-urban tensions in the metropolitan region, organisations that represent a more neighbourhood or community perspective on economic development should also have a prominent leadership role.

The *Table métropolitaine d'innovation* project currently under discussion represents a good metropolitan region-wide basis for bringing the vertical and horizontal dimensions of the Montreal economy together. The project involves several partners including the CMM, the Board of Trade of Metropolitan Montreal, the Department of Economic and Regional Development of the provincial government and Industry Canada/Canada Economic Development. The *Table métropolitaine d'innovation* has the advantage of specifically aiming to bring a specific cluster strategy within a broader economic development framework that emphasises the regional innovation system. As such, the *Table,* if it becomes fully operational, should be able to create synergies between sectoral potential and improvements in input factors such as entrepreneurship, education and research, access to finance and marketing. Given the newness of the institutional structures, a prudent way to proceed might be to start the process of engaging different actors in the overall strategy through some limited-scale, specific initiatives that demonstrate the value of integrating vertical and horizontal dimension (see below). In each case, an objective of each initiative would be to "mainstream" progress made into other sectors and bring in other actors.

### Implementing strategies

Underlying the previously covered points in this chapter is the assumption that innovation drives economic competitiveness and that collaboration and communication drive the process of innovation. Developing interaction among economic actors can be vertical (*i.e.,* focusing on a specific sector) or horizontal (*i.e.,* designed to improve a specified factor of production in any sector) or the intersection of the two. The latter enables improvements in factors of production according to the particular needs of specific clusters. The three specific initiatives that follow use this framework. These should be seen as suggestive, rather than exhaustive.

#### *Linking regional branding and culture amenities/industries*

The first recommended initiative would be designed to simultaneously promote culture industries, and to build collaboration around the branding or regional identity of Montreal. The key goal would be to build on current initiatives focused on promoting culture industries, while helping to integrate a region-wide perspective on culture and bringing together the various regional marketing initiatives. Such an initiative should include at least the following components:

- Take a broad perspective on what constitutes cultural industries, bringing together representatives from live performance (theatre, music), art, electronic arts and multi-media, graphic arts, film and television, fashion, and the tourism industry around developing a strategic vision for the role of culture in Montreal's economic development.

- Tourism and culture demand a specific effort to link together the other institutional structures that are included in the CMM, which identifies, articulates and publicises the existing synergies between attractions throughout the metropolitan region. In particular, this should include exploring both urban and rural-based attractions of the regions, and developing joint tours and marketing efforts that help link tourism opportunities in the region together.

- Focus specifically on identifying and strengthening existing networks that cut across sub-sectors of this broad cultural milieu. For instance, identify the networks in the fashion industry that are served by the CEGEP-based technology transfer centres in the region,[15] examine the overlaps and potential overlaps with multi-media development and the entertainment industries. Similarly, examine the computer animation component of the film industry, and the potential overlap with other culture and multi-media initiatives in the region.

- Bring together cultural leaders with leaders of the various institutes involved in attracting international investment, to develop linked campaigns that can help highlight the diverse cultural assets of the region and link this with specific investment opportunities.

- Make an explicit effort to build synergies between the Francophone and Anglophone communities.

The focus in these initiatives should be a combination of the strategic content and value of cultural industries on the one hand, and the processes of regional engagement and communication on the other. The value of taking a broad, rather than a narrow approach to defining what constitutes cultural industries is that it would help to knit together diverse networks, and provide opportunities for exploring new synergies between diverse actors in the regional economy. Such an initiative would simultaneously help build a cluster around cultural industries (vertical dimension) building cohesion in the branding of the Montreal metropolitan region (horizontal dimension), in both its internal and external manifestation.

***Human capital and ICT***

Another valuable initiative could be developed at the intersection of information and communication technology industries in the region (vertical dimension), and the range of educational institutions that constitute the human capital creation network in the region (horizontal dimension). On the level of cluster development, here the focus should be on building a greater understanding of the specialities within ICT industries that are particularly strong in the Montreal region. For instance, studies of the ICT sector in Montreal have identified three sub-sectors: manufacturing, applications development and services. Within those sectors, however, there has been little effort to identify and support specific areas of expertise. Without more specificity, it is difficult to mobilise the adequate resources to truly develop and promote an area of unique expertise in the metropolitan economy. For example, it is extremely difficult to develop an economic development strategy around 'computers and peripheral' manufacturing, since these categories are so large. It would be easier to develop a strategy to promote expertise in a more narrow area that may in fact cut across this division. One example might be promoting the hardware, software tools and financial investment required for promoting 3-dimensional simulations. Montreal seems to have a particular expertise in this area, with major companies including CAE (design and fabrication of flight simulation systems), Matrox (graphics cards, video tools and imaging software), Cine Group (animation), UbiSoft (Interactive Gaming), Discreet Logic (special effects and 3D animation), SoftImage (2D and 3D special effects for film and gaming), Artificial Mind & Movement (video games), and Kaydara (3D animation software). There are likely to be other sub-sectors within ICT, that cut across hardware, software and services, and provide a more intuitive and natural basis for organising economic strategies in the region.

In identifying and strengthening such sub-clusters, the key goal is to bring together multiple educational institutions throughout the region that can help develop the appropriate training and educational expertise to support the industry. The focus should be on building a strategic understanding of the human resource needs from the top to the bottom of the industry, including engineers, programmers, technicians, technical communicators, marketing and sales agents, and assemblers. Existing ICT technical transfer centres[16] should obviously be part of the initiative, along with CEGEPs that have ICT-related technical degrees. Technical programs at the universities in the region should also be part of this initiative, with the goal of both improving co-ordination between different CEGEPs and Universities in the region, and between the CEGEPs and universities themselves, as well as between the educational institutions and the private sector.

Again, there are two simultaneous goals in pursuing such an initiative. The first is to strengthen the vertical dimension of cluster-based initiatives in ICT. The second is to improve horizontal co-ordination and regional integration of the human capital system in the metropolitan region of Montreal.

***Bio-tech/life sciences, and financial industries***

A third potential initiative could be developed at the intersection of the biotechnology/life-sciences cluster, and financial services in the region. From a cluster perspective, the focus of such an initiative would be not so much on the R&D end of the industry, but instead on the commercialisation of research and the development of production facilities. Such an initiative would fit within the broader set of recommendations developed as part of the Montreal International initiative to “Accelerate Development” in the Life-sciences cluster. Within this broader initiative, supporting the development of firms in the industry is the third of six key areas of action that form their broader strategy:

- Mobilise and integrate resource—Creation of the Metropolitan Montreal life sciences committee (CSVMM).

- Accelerate recruitment and development of human resources in the centre.

- Support the development of life sciences industries.

- Build on Metropolitan Montreal's centres of excellence in the life sciences.

- Use investments in teaching hospitals to leverage the life sciences industries.

- Build a distinctive image for the cluster and launch a strategy to raise its international profile (Montreal International 2002*b*).

Raising the visibility of the need for effective venture capital and of financial and business services in this cluster would help not only support this particular cluster, but it could help strengthen financial services within the region that could then have a positive effect on other key clusters within the region. There are a number of aspects of financial support for the biotechnology/life-sciences cluster that could be strengthened, including:

- *Organising networks of angel investors*[17] *to help provide start-up rounds and early-stage investment for local entrepreneurs*. Such networks could then be tapped for early investment in other industries. Examples of networks of angel investors that have been active in Silicon Valley, for instance, include Angel Investors International,[18] the Angels Forum,[19] and the Band of Angels.[20] Similarly in Pittsburgh, Innovation Works, a state-sponsored Venture Capital Firm, has been instrumental in setting up an angel network called SPAN, the Southwest Pennsylvania Angel Network.

- *Strengthening networks between entrepreneurs and Venture Capital networks in the region*. Montreal International has identified at least 25 Venture Capital funds in the region that invest in biotechnology and related industries, yet it is not clear the extent to which these funds network with each other and with industry associations. Promoting networking among these various actors helps endorse greater understanding of investment possibilities in the region and helps build a critical mass of funding in strategic areas of the industry.

- *Building management and financial services targeted at start-up enterprises*. Many scientists and entrepreneurs in technical fields have a much greater appreciation of the technology than they do of business practices. Helping develop a viable company out of an idea or a research breakthrough requires specialised management and financial services that are specific to the start-up stage of a company. This includes everything from setting up accounting systems, to developing and managing human resource and benefits systems, to complying with regulations and legal requirements. Strengthening these services could help accelerate commercialisation of new products.

By building the financial networks and infrastructure necessary to promote development in the bio-tech/life-sciences cluster, such an initiative would strengthen both vertical and horizontal dimensions of the regional economy. By developing this dual goal, and choosing to target initiatives at the intersection of these dimensions, strategic initiatives can go a long way towards helping build a broader, more collaborative vision for Montreal's economic future.

The three initiatives suggested here are by no means exhaustive. There is certainly a wide-range of other possible areas where strategic intersections of cluster-initiatives and regional factors of production could be identified and developed. The key point in elaborating briefly on these three examples is simply to illustrate the potentially catalytic role of working at the intersection of these different dimensions of the regional metropolitan economy.

## Conclusion

In the historical context of a traditional industrial-based economy, this lack of regional integration would not be a major problem. With relatively stable consumer markets and mass-production based industries dominated by large firms, economic success depends little on regional coherence and integration, and more on basic factors of production and the efficiency of enterprise. Due to a rapidly changing, globalised, knowledge-based economy, however, these dynamics change. In this new environment, cities and regions must not only build strong education systems and knowledge-based industries, they must be able to innovate at all levels—to constantly learn and adapt to changing competition, technology and economic opportunities. Effective learning cannot happen in isolation, and is ultimately dependent on communication and interaction amongst a wide-range of economic actors.

This kind of economic interaction, however, does not necessarily happen through simple market processes. It requires strategic intervention aimed at understanding economic trends at multiple scales, and developing effective responses to those trends. Focusing on processes for developing a strategic regional strategy can be a useful way of identifying and capitalising on valuable opportunities. More important than that, however, is the fact that with the high levels of uncertainty in the contemporary economy, it is often very hard to predict future economic trends.

In these new economic circumstances, economic development policy should not be focused on only the specific needs or trajectories of firms or clusters. Instead, the very process of promoting appropriate communication and interaction amongst economic actors can be an important part of an innovation process. The common language, concepts, ideas, and very culture that are developed through repeated interaction become an economic asset for a region. These 'relational assets' can be built around specific products or services, or around cross-cutting factors of production in the economy, or even at the intersection of these vertical and horizontal dimensions, as these recommendations have tried to illustrate. The most important point, however, is that the process is as important as the product, and that by building these processes, it is possible to build a regional metropolitan economy whose whole is greater than the sum of its parts.

# NOTES

1 Article 150 of the Act respecting the Metropolitan Community of Montreal

2 "Identification de créneaux d'excellence sur le territoire métropolitain", CMM's internal document.

3 See Chapter 1.

4 They have been trying in certain cases to pass on this role to SMEs in the system, but apparently SMEs are not keen to take over.

5 http://www.tourisme-montreal.org/

6 http://www.tourismelaval.com/

7 http://www.tourisme-monteregie.qc.ca/

8 http://www.laurentides.com/

9 http://www.tourisme-lanaudiere.qc.ca/

10 CEGEP stands for Collège d'enseignement général et professionnel.

11 A number of recent OECD reports on the factors of economic growth and policies to promote them have highlighted the importance of entrepreneurial activity. The reports have emphasised the role of "creative destruction” in generating innovation and improving productivity. Creative destruction is the turbulent process in which the competitiveness of some existing firms is increasing, others is falling, sometimes leading to bankruptcy, while new firms are constantly arriving on the market. The net effect of this inflow and outflow is that new technology, management methods and organisational structures are integrated into the production process, thereby increasing aggregate productivity. Thus increasing productivity depends on uncompetitive firms leaving the market, existing firms improving their functioning, and on new firms joining and bringing with them new ideas and a structure that is adapted to current market conditions. OECD research has also shown that new firms, particularly in high technology sectors, and especially in ICT industries, are responsible for an increasing share of patent

applications and growth in private sector R&D (OECD 2002*e* and OECD 2001*d)*.

12 CED is the federal agency for regional development in Quebec regions.

13 Only the *Centre d'entreprises and d'innovation de Montreal (CEIM*) and *the Maison des hautes technologies de Montreal* seem to play this role.

14 http://www.uni.oresund.org/

15 For example, the Centre for Technology Transfer for Fashion (http://www.cttm.ca) and the Centre for Textiles Technologies (http://www.ctt.ca )

16 Such as the Institute des Technologies de l'Information du College de Maisonneuve (http://www.cmaisonneuve.qc.ca/iti/), and the Quebec Institute of Graphic Communications (http://www.icgq.qc.ca/)

17 Angel investors are wealthy individuals who provide capital to start-up firms at an early stage, typically prior to the first round of venture capital funding of start-ups. Since they are able to provide investments for ideas long before they are at a stage of development, they are more critical in supporting entrepreneurship than even a venture capitalist, much less more mainstream investor, would be ready to invest. To be effective in promoting economic development, though, they should be networked together in an organisation that can provide some information gathering and review processes to be strategic in targeting investments.

18 http://www.angelinvestors.org

19 http://www.angelsforum.com/

20 http://www.bandangels.com/

# APPENDIX 1. IDENTIFYING THE DETERMINANTS OF REGIONAL PERFORMANCES

GDP per capita (in logarithms) can be written as:

$$1.\quad \frac{GDP}{Population} = \frac{GDP}{Employment} + \frac{Employment}{Labour\ \ force} + \frac{Labour\ \ force}{Population}$$

GDP per capita = Productivity + Employment rate + Activity rate

Therefore, the difference in GDP per capita between a give metropolitan region and the average of all metropolitan regions is equal to:

| | | | | | | |
|---|---|---|---|---|---|---|
| Difference in GDP per capita | = | Difference in Productivity | + | Difference in Unemployment rates | + | Difference in Activity rates |

**Decomposition of differences in productivity**

Average labour productivity in region *i* is equal to a weighted average of sectoral productivity:

$$2.\quad \frac{GDP_i}{E_i} = \sum_j \frac{E_{ij}}{E_i} * \frac{GDP_{ij}}{E_{ij}}$$

where j indicates the sector.

From-the-average difference in productivity can be decomposed as:

$$3.\quad \left(\frac{GDP_i}{E_i} - \frac{GDP}{E}\right) = \sum_j \left(\frac{E_{ij}}{E_i} - \frac{E_j}{E}\right) * \frac{GDP_j}{E_j} + \sum_j \frac{E_{ij}}{E_i} * \left(\frac{GDP_{ij}}{E_{ij}} - \frac{GDP_j}{E_j}\right)$$

The first term on the right-side of the equation measures the proportion of the difference in productivity due to regional specialisation.

**Decomposition of differences in activity rates**

Activity rate in region *i* is equal to a weighted average of activity rates by age groups:

$$4. \quad \frac{LF_i}{P_i} = \sum_j \frac{P_{ij}}{P_i} * \frac{LF_{ij}}{P_{ij}}$$

where *j* indicates the age group.

From-the-average-difference in activity rates can be decomposed as:

$$5. \quad \left( \frac{LF_i}{P_i} - \frac{LF}{P} \right) = \sum_j \left( \frac{P_{ij}}{P_i} - \frac{P_j}{P} \right) * \frac{LF_j}{P_j} + \sum_j \frac{P_{ij}}{P_i} * \left( \frac{LF_{ij}}{P_{ij}} - \frac{LF_j}{P_j} \right)$$

The first term on the right-side of the equation measures the proportion of the difference in activity rates due to the age-profile of the regional labour population.

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