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MUNICIPAL FINANCE AND GOVERNANCE

No. 19 • 2015

Cooperation and
Capacity:
Inter-Municipal
Agreements in Canada

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Institute on Municipal Finance and Governance



UNIVERSITY OF
TORONTO

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Inter-Municipal Agreements
in Canada

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Series editor: Philippa Campsie

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ISBN 978-0-7727-0935-6
ISSN 1927-1921

About IMFG

The Institute on Municipal Finance and Governance (IMFG) is an academic research hub and non-partisan think tank based in the Munk School of Global Affairs at the University of Toronto.

IMFG focuses on the fiscal health and governance challenges facing large cities and city-regions. Its objective is to spark and inform public debate, and to engage the academic and policy communities around important issues of municipal finance and governance. The Institute conducts original research on issues facing cities in Canada and around the world; promotes high-level discussion among Canada's government, academic, corporate, and community leaders through conferences and roundtables; and supports graduate and post-graduate students to build Canada's cadre of municipal finance and governance experts. It is the only institute in Canada that focuses solely on municipal finance issues in large cities and city-regions.

IMFG is funded by the Province of Ontario, the City of Toronto, Avana Capital Corporation, and TD Bank Group.

Author

Zachary Spicer is a SSHRC postdoctoral fellow with the Laurier Institute for the Study of Public Opinion and Policy at Wilfrid Laurier University. From 2013 to 2014, he held a postdoctoral fellowship at the Institute on Municipal Finance and Governance.

Acknowledgements

The author would like to thank Enid Slack and Dina Graser for their input on earlier drafts of this paper.

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Cooperation and Capacity: Inter-Municipal Agreements in Canada

Zachary Spicer

Abstract

The challenge of governing regions that fall within the jurisdiction of more than one municipality is a long-standing policy problem for local governments. While institutional changes are often suggested as a solution to coordination and servicing difficulties in metropolitan areas, recent research suggests that decentralized, voluntary means of inter-local cooperation may help ensure service and policy continuity. Little research has been conducted on voluntary cooperation arrangements in Canadian metropolitan areas. This IMFG paper examines inter-local agreements in six Canadian metropolitan areas. Overall, the researcher found few inter-local agreements, largely because provincial governments have not actively encouraged municipalities to pursue inter-local cooperation. There is, however, evidence that this attitude is changing. Inter-local cooperation is a topic worthy of more scholarly research and this paper proposes several potential lines of new research.

Keywords: inter-local agreements, voluntary cooperation, Canada, metropolitan governance

JEL codes: H19, H70

Cooperation and Capacity: Inter-Municipal Agreements in Canada

I. Introduction

Policymakers have long searched for the best method of governing metropolitan areas in which there are dozens, if not hundreds, of municipal governments. Layered on top of these municipalities is a range of special-purpose bodies, such as school boards and transportation districts. In short, metropolitan areas can appear chaotic and disorderly, as decision-making is often shared between various authorities. Coordination, therefore, can be challenging.

How best to govern these metropolitan regions has long been a topic of debate within the academic community. The role of institutions is central to this debate. Should we create institutions and formal structures to provide mechanisms for coordination on a regional level? Or are we better off creating a “governmental marketplace,” whereby governments work together in a decentralized policy environment?

For many years, most of the academic community has focused on the institutional side of this debate, but recent research has indicated that decentralized solutions to metropolitan coordination and governance deserve further consideration. Much of this work focuses on the role of inter-local agreements and voluntary methods of cooperation in linking municipalities (Gulati and Singh 1998; Post 2004; Baird 1990; Feiock 2007; Nunn and Rosentraub 1997; Frieseman 1970; Hirlinger and Morgan 1991).

Most work on inter-local agreements focuses on American metropolitan areas. We know less about inter-local cooperation elsewhere. This paper focuses on inter-local cooperation in Canada, where few scholars have systematically studied voluntary cooperative relationships between local governments.¹

Canada and the United States have very different municipal regulations and legal contexts. Due to the fragmented nature of American metropolitan areas, Canadian municipalities are often geographically larger than their American counterparts.² Canadian cities also tend to have greater functional scope, but are subject to more intervention from provincial governments than American municipalities receive from state governments (Sancton 1993, 5; Siegel 1997, 129). Canadian municipalities are also routinely subject to downloading from provincial governments and may have their borders unilaterally adjusted—situations largely unknown in American local government.

This paper examines inter-local agreements in six Canadian metropolitan areas: Toronto (Ontario), Regina (Saskatchewan), Saskatoon (Saskatchewan), Winnipeg (Manitoba), Calgary (Alberta), and Edmonton (Alberta).³ For the

1. See Alcantara and Nelles 2009.

2. While Canadian municipalities may have geographically larger borders and service areas, American cities are generally more populated than Canadian cities.

3. A listing of the municipalities included in each CMA is provided in Appendix A.

purposes of this paper, a metropolitan area is the Census Metropolitan Area (CMA) defined by Statistics Canada.⁴

2. Inter-Municipal Cooperation in Theory

As cities grow, suburban communities grow around them. This growth creates difficulties in area-wide policy coordination and planning, as these regions often have dozens of municipal governments intertwined with other institutions, such as school boards. Finding common ground among so many institutionally distinct actors can prove challenging.

Determining how best to manage metropolitan areas has sparked debate among academics, who have developed three broad theories about the most appropriate approaches: consolidation and reform, public choice theory, and new regionalism (Slack and Chattopadhyay 2013; Slack and Côté 2014).

Consolidationists believe that metropolitan areas are best linked through institutions. They favour policy tools such as annexation and amalgamation, believing that the institutional fragmentation that exists within metropolitan areas is inherently negative and harmful (Studenski 1930; Jones 1942; Gulick 1962).

Public choice scholars take an opposing view, believing that the institutional fragmentation within metropolitan areas is functional (Bish 1971; Bish and Ostrom 1974; Ostrom, Tiebout, and Warren 1961). These jurisdictions, they believe, engage in competition, which benefits the public (Atkins, Dewitt and Thangavelu 1999). They advocate for little, if any, institutional change in metropolitan regions.

While these two paradigms consumed the debate around metropolitan organization for decades, a new perspective emerged in the 1990s: new regionalism. Proponents of new regionalism emphasize the use of governance—which they describe as the creation of flexible networks that address regional problems principally through voluntary means—as opposed to government, which new regionalists see as the traditional, hierarchical structure of formal institutions. New regionalists advocate for voluntary linkages among jurisdictions as well as the inclusion of non-governmental actors in regional governance, creating complex networks of linked functions.

Effective governance, new regionalists remind us, can be achieved through cooperative arrangements between governing units (Salet, Thornley, and Kruegels 2003; Savitch and Vogel 1996; Vogel and Harrington 2003). The new regionalist paradigm emphasizes easily reached, voluntary means of cooperation. Table 1 provides a summary of the tools used to ensure coordination within metropolitan areas.

New regionalists advocate for the tools listed in the “easiest” category, which are generally voluntary and flexible means. Of particular interest to this study are these types of cooperative mechanisms. The more structurally challenging mechanisms, such as those listed in the “hardest” and “middling” categories,

4. Other large, internationally recognizable Canadian cities, such as Vancouver, Montreal, and Halifax, were excluded from the study because their CMAs are entirely covered by regional governments, inevitably reducing the need for voluntary cooperation between CMA municipalities.

*Table 1: Regional Governance Approaches—Walker’s Classification*⁵

Approach	Summary Description
<i>Easiest</i>	
Informal Cooperation	Collaborative and reciprocal actions between two local governments
Inter-local Service Agreements	Voluntary but formal agreements between two or more local governments
Joint Powers Agreements	Agreements between two or more local governments for joint planning, financing, and delivery of a service
Extraterritorial Powers	Allows a city to exercise some regulatory authority outside its boundary in rapidly developing unincorporated areas
Regional Councils/ Councils of Government	Local councils that rely mostly on voluntary efforts and move to regional agenda-definer and conflict-resolver roles
Federally Encouraged Single-Purpose Regional Bodies	Single-purpose regional bodies tied to federal funds
State Planning and Development Districts	Established by states in the 1960s and early 1970s to bring order to chaotic creation of federal special-purpose regional programs
Contracting (private)	Service contracts between municipalities and private providers
<i>Middling</i>	
Local Special Districts	Provides a single service of multiple related services on a multijurisdictional basis
Transfers of Functions	Shifting of responsibility for provision of a service from one jurisdiction to another
Annexation	Bringing an unincorporated area into an incorporated jurisdiction
Regional Special Districts	Region-wide districts providing services such as mass transit or sewage disposal
Metro Multi-purpose District	A regional district providing multiple functions
Reformed Urban County	Establishment of a charter county ⁶
<i>Hardest</i>	
One-Tier Consolidation	Consolidation of city and county
Two-Tier Restructuring	Division of functions between the local and regional
Three-Tier Restructuring	Agencies at multiple levels of government that absorb, consolidate or restructure new and/or existing roles and responsibilities

5. Adapted from Walker (1987).

6. Charters, which are mainly used in the United States, are formal written documents that confer powers, duties or privileges on a county. They resemble state or federal constitutions and must be approved, along with any amendments, by the voters of a county.

would involve more “government”—the use of formal institutions to create policy—rather than “governance.”

American local government literature extensively uses the Institutional Collective Action (ICA) framework—introduced by Feiock (2004, 6) as a “second-generation” rational choice explanation for voluntary cooperation—to explain cooperation, competition, and policy variation within metropolitan areas.⁷ As a rational-actor approach, the ICA framework ignores cultural or normative variables that may also affect cooperation.⁸ Instead, the framework is concerned with identifying factors that could tangibly affect the nature of cooperation between two (or more) municipalities.

Cooperation is the most flexible alternative to formal institutional reform, as it allows local governments to decide which regional issues should be addressed collectively (Nelles 2009, 22). In many cases, externalities can spill over jurisdictional borders, necessitating cooperation between two or more governments to mitigate the impact on both communities.⁹ For example, growth and development often spill over borders, creating common challenges for planning and servicing land. The ICA framework aims to resolve such dilemmas.

Cooperation is attractive to local governments because it allows for partnerships generally without the intervention of senior levels of government. Hulst and van Montfort (2007) argue that local cooperation leaves the policy domains of local government intact and typically does not result in a permanent transfer or loss of local policy capacity, which they contend prevents local democracy from being “hollowed out.”

Most municipalities practice some form of inter-local cooperation.¹⁰ When the benefit is clear or the goal is unreachable alone, cooperation is likely to occur.

7. Ostrom (2005) argues that rational-choice schools of thought can be divided into first- and second-generation models. She contends that first-generation theories are based on “rational egoist assumptions,” that is, individuals have perfect information, have consistent preferences regarding outcomes, and seek to maximize material benefit (2005, 100). Second-generation models, on the other hand, acknowledge the role of contextual factors, such as differing institutional structures and regional networks, in shaping the incentives of agents. The assumptions of perfect information, consistent preferences, and the maximization of material benefit are relaxed, and the idea of cost-benefit pay-off structures are examined within the institutional context of these areas (Feiock 2007; Vanberg 2002)

8. Normative and cultural variables could include individual-level variables, such as actor stress or attitude towards others, and environmental factors, such as political or organizational culture. The ICA framework is based upon rational choice assumptions of actor motivation and incentive.

9. Broadly defined, an externality is the cost or benefit that affects a party that did not choose to incur that cost or benefit. For example, manufacturing activities cause air pollution, which may impose health and clean-up costs on the surrounding area.

10. Cooperation between municipalities may take various forms, ranging from informal information sharing between municipal departments or municipal officials (either elected or staff), to informal agreements over policy issues, to formal inter-local service agreements. See Hulst and van Montfort (2007).

Table 2: Motivations and Incentives for Inter-Local Cooperation

Fiscal Incentives	Contract services from another municipality to avoid delivering the service internally Lower the contribution for capital projects Reduce cost for services through shared administration and/or delivery Overcome challenges with local capacity
Fill Service Gaps	Allow municipalities to deliver a service they would be unable to deliver alone Overcome geographic/environmental isolation
Control Externalities	Manage policy spillover Better direct growth and development Provide for transportation continuity between jurisdictions Monitor shared resources
Mandated Integration	Provide a service mandated through central governments

Aside from these general motivations, there are three general incentives for pursuing inter-governmental agreements, outlined in Table 2.

The first incentive is fiscal. Municipalities often experience challenges providing services on limited budgets. Partnering with another municipality to share the cost of delivering a service can be one way of saving money. Contracting services is often seen in the same light. When one municipality does not have the resources to deliver a new service, it may contract another municipality to provide that service within its jurisdiction, thereby avoiding the initial start-up costs associated with service delivery.

An excellent example is transit. Several communities around Edmonton have agreements in place for transit extension from the city. Establishing a transit system is very costly—both for capital and operating expenses—so contracting services from a municipality that has already made an investment has financial benefits.

Finally, partnering with another municipality on infrastructure projects can help reduce capital costs. For example, two municipalities could divide the construction and operating costs of a recreation complex, thereby avoiding the large costs associated with building the facility independently.

Second, policy and service cooperation may help some municipalities overcome geographic and environmental challenges and fill service gaps. Simply put, some municipalities cannot deliver some services to residents. For example, some municipalities may not have access to source water for the entire community. Partnering with another municipality to provide this service will ensure service continuity, overcoming problems with geographic and environmental isolation that may otherwise limit community size. York Region and Toronto have an agreement for water servicing, overcoming York’s distance from Lake Ontario and its lack of adequate sources of water.

Table 3: Conditions for Effective Inter-Local Cooperation

Willingness	Capacity
<i>Needs, Desires, Benefits, Incentives</i>	<i>Resources, Institutions, Leadership</i>
Is there a need to cooperate?	How constrained are leaders?
Are there political benefits?	How constrained are institutions?
Are there fiscal benefits?	How significant is the commitment?
Is there a history of cooperation?	What is the term of commitment?
Is there consistent communication?	Are multi-level actors involved?
Are there high or low transaction costs?	Are multi-level actors exerting influence?
Is there community support?	Can partnership fulfil agreement terms?

The third incentive is to control externalities. Municipalities close to each other often experience common servicing or policy dilemmas. Growth and development, for example, often spill over borders, creating a need for common policy cooperation or regional growth initiatives. Creating mechanisms to jointly manage these externalities can avoid the long-term fiscal burden of improper planning. Cooperation can also help monitor shared natural resources, such as trans-boundary waterways.

Finally, cooperation can be mandated by central authorities. Ontario's Consolidated Municipal Service Manger (CMSM) system is one example. The provincial government downloaded social services to municipalities under the CMSM system, thereby mandating a local role in the delivery and partial funding of social services, which necessitated a need for municipalities in certain regions to form inter-local agreements to manage the array of services. In such instances, the provincial government provided the directive to cooperate, but allowed the details of the arrangement to be sorted out locally.

While all municipalities have certain incentives to pursue cooperation with neighbouring municipalities, two main conditions must still be satisfied for cooperation to take place: willingness and capacity.

First, municipalities must be willing to cooperate. Potential partners must be motivated by the prospect of cooperation. Will they be able to satisfy a policy objective that is unachievable alone? Will cooperation result in financial savings? Will it enhance services for local residents? Such questions must be satisfied prior to seeking a cooperative arrangement.

Second, cooperation hinges upon capacity. A municipality cannot enter into an agreement if it does not have sufficient resources to negotiate, fund, or monitor the agreement. It cannot partner on capital investments without adequate financial or administrative resources. Similarly, political actors must come to agreement and be unencumbered by council indecision.

As a theoretical and conceptual tool, the ICA framework links the prospects for establishing cooperative agreements to transaction costs, of which there are three identifiable types:

- coordination problems resulting from information deficiencies;
- negotiation costs derived from dividing mutual gains;
- enforcement costs associated with monitoring any agreement (Maser 1985).

Consequently, cooperation between local governments increases when the potential benefits are high and transaction costs are low (Lubell, Schneider, Scholz, and Mete 2002). Additionally, five variables influence cooperation between local jurisdictions: social capital, group composition, geographic density, power asymmetry, and political leadership.

Social capital positively affects cooperation (Ostrom 1998; Gulati and Singh 1998). Often, this capital is derived from social networks or patterns of interaction with others (Cook, Hardin, and Levi 2005). Thus, consistent interaction between localities is more likely to result in a positive relationship between both political actors and city staff (Matkin and Frederickson 2009). Increased interaction leads to mutual trust among the parties, making the emergence of cooperative arrangements more likely.

The composition of a group is also important in reaching agreement, in particular, group size and group homogeneity or heterogeneity. The size of the group determines how benefits can be distributed to members and the transaction costs associated with negotiating and monitoring an agreement. Smaller groups are easier to form and have fewer problems determining the allotment of benefits and monitoring agreements (Post 2004, 74). Larger groups are harder to organize, produce smaller benefits to members, and create opportunities for some jurisdictions to free-ride. Research demonstrates that the increased number of actors in any particular region limits cooperation (Visser 2004). Additionally, the homogeneity of the actors helps in reaching a cooperative agreement (Post 2004, 84). Thus a smaller group with a homogenous population will achieve cooperation more easily than a larger group with a more heterogeneous population.

Geographic density increases the likelihood of cooperation between local governments (Bickers and Stein 2004; Post 2002). The relative closeness of local governments within an area increases the likelihood that residents of one jurisdiction work in the other and vice versa. Individuals see themselves more as regional citizens, increasing the pressure on politicians to similarly cooperate with other areas (Post 2004, 73). Also, a higher density of local governments implies greater spillover effects between jurisdictions. Consequently, externalities and economies of scale motivate governing units to cooperate (Shrestha and Feiock 2007).

Power differentials also help determine whether governing units reach cooperative arrangements. The degree by which partners vary in their power affects the motivation of actors and ultimately determines whether or not the

Table 4: Transaction Costs

Transaction Cost	Description
Information/Coordination Costs	Information on the preferences of all participants over possible outcomes and their resources must be common knowledge
Negotiation/Division Costs	The parties must be able to agree on a division of their mutual gains
Enforcement/Monitoring Costs	The costs associated with monitoring and enforcing the agreement must be low
Agency Costs	The bargaining agents must effectively represent the interests of their constituents

relationship is coercive (Steinacker 2004). Where power asymmetry is greatest, the stronger actor may exploit the weaker and coerce it into participating in an agreement. The relative position of weaker actors may make cooperation a necessity if the stronger actor holds more resources, especially if those resources are unattainable for the weaker actor without cooperation.

Political leaders also have a large role in initiating and formalizing agreements. Where political leaders have more autonomy to make decisions—and, consequently, are stronger—cooperation is easier to achieve; however, where a municipal government has few autonomous areas of jurisdiction, its political leadership may be wary of ceding authority through cooperative arrangements (Alcantara and Nelles 2009). Nevertheless, research generally demonstrates that strong political leaders can overcome resistance to cooperation from council and various stakeholders (Post 2004). In general, the presence of strong political leadership in a municipality increases the chances for cooperation.

Transaction costs are not mutually exclusive, and can affect cooperative or potentially cooperative arrangements. Feiock (2007) outlines each category of transaction costs represented in Table 4.

Ultimately, for inter-local agreements to be of value for participating governments, transaction costs must be addressed. If either government cannot recognize a benefit to entering an agreement, it will not cooperate.

ICA theorists have identified a range of mechanisms to resolve servicing dilemmas and promote cooperation between different governing units. Descriptions of these collaborative mechanisms are presented in Table 5.

All municipalities cooperate to some extent. The level and intensity of this cooperation varies, however. The most basic level is informal information-sharing between municipal departments or municipal officials (Hulst and van Montfort 2008). The intensity of this cooperative behaviour increases and can result in formal resources, sharing agreements, or the creation of joint bodies or extraterritorial powers. The range of agreements and the scope of institutional integration varies considerably.

Table 5: Collaborative Mechanisms for Addressing ICAs¹¹

Mechanism	Description
Informal Networks	Network interactions provide the greatest local autonomy and can foster norms of trust that help participants identify partners who are less likely to defect. Repeated face-to-face interaction is especially important for norms of reciprocity to develop and cooperative agreements to form (Axelrod 1984). Policy network structures emerge unplanned from interactions among local actors. Local actors often prefer informal networks because they not only preserve local autonomy and power but also ensure local variation.
Contracts	Contracts link individual units through joint ventures and service agreements. This approach preserves local autonomy while providing a formalized mechanism for resolving externalities and other issues of concern to the parties. Contract networks link local governments in legally binding agreements. Mutual aid agreements for emergency management are perhaps the most prominent example (Andrew 2009).
Mandated Agreements	Mandated agreements require two or more public authorities to enter into service contracts, in which the nature, scope, and some of the terms are specified in advance. In mandated agreements, the higher-level authority may provide funding, but it also mandates the formation of collaborative relations among specified local governmental actors. Single-purpose special districts provide a less obtrusive means of internalizing impacts over a broad geographic area for a specific function (Farmer 2010).
Working Groups	Working groups or councils are voluntary associations of elected or appointed public officials that meet on an informal basis to share information and coordinate service activities. Informal group decisions can take the form of collectively reinforced shared understandings and expectations that, although only socially enforced, are nonetheless binding. Working group coordination can also take the form of routine interactions through professional associations or community conferences (LeRoux 2007).
Partnerships	Partnerships and other multilateral inter-local agreements are entered into voluntarily by local units. They generally require participants to accept common terms of agreement and obligations for action. Partnerships often include both public and private organizations and take on a broad-based area. One example would be regional economic development partnerships, which have become an increasingly popular approach to organizing regional economic development efforts (Olberding 2002). Another would be watershed partnerships that collectively address a wide variety of water-related issues (Lubell et al. 2002).
Constructed Networks	Constructed networks encompass mechanisms designed or coordinated by third parties such as higher-level governments to structure multilateral relationships across related policy areas. A higher-level authority provides funds and incentives for actors to participate in collaborative service arrangements. Typically, a higher-level government designates a lead organization with responsibility for developing, managing, and coordinating intergovernmental service provision (Provan and Kenis 2008).

Continued

Table 5: Collaborative Mechanisms for Addressing ICAs¹¹

Mechanism	Description
<p>Multiplex Self-Organizing Systems</p>	<p>Multiplex self-organizing systems rely on embeddedness for policy coordination across various policies and functional areas. That is, agreements that are difficult to negotiate individually may be more feasible when embedded in a set of relationships for a related policy. Multiple relationships between a pair of actors signify more trust and, therefore, greater chances for future exchanges. Likewise, cross-policy reciprocal relationships can ensure more stable exchanges than if the relationships are one-directional. Because agreements often overlap, they may also be supported by norms of reciprocity (Thurmaier and Wood 2002). Andrew (2009) argues that ties developed locally produce general patterns of regional integration as bilateral ventures, agreements, and contracts create a unique formation of contractual ties.</p>
<p>Councils of Government</p>	<p>Councils of governments and other regional institution organizations are focused on collective and multi-policy relationships among local actors. Structure and responsibilities are statutory, rather than negotiated, often based on federal and state laws. They take a variety of forms. The most common form in the United States are regional councils of government and metropolitan planning organizations, designed to manage federal transportation issues in metropolitan areas by allocating federal funds (Kwon and Feiock 2010).</p>
<p>Centralized Regional Authorities</p>	<p>Regional authorities with sufficient functional and geographic scope can “internalize” externality and scale problems, for example, by uniting multiple local governments into a consolidated metropolitan general-purpose government. Despite this efficiency rationale, most efforts at city-county consolidation in the United States have been unsuccessful. The failures of consolidation efforts can be attributed to political conflict and the availability of alternative, less costly coordination mechanisms (Carr and Feiock 2004). The political and administrative costs of creating regional governments limit the scope of consolidation and special-district solutions to a narrow range of institutional collective action problems. Existing agencies and government units generally resist any loss of authority. The larger units gain efficiencies in production, but frequently at the cost of reducing the ability of local units to vary the provision of services to reflect heterogeneous local preferences (Carr and Feiock 2004).</p>

Agreements can generally be described as either adaptive or restrictive. Adaptive and restrictive agreements create different policy outcomes and provide clues to the nature of the relationship between the two—or more—signatories before an agreement is signed.

An agreement is referred to as “restrictive” if it is based upon and closely adheres to a specific set of rules, generally rooted in provincial or state law and local ordinances (Andrew 2008). These types of agreements provide little room for interpretation. Additionally, restrictive agreements are difficult to alter, because

11. Adapted from Feiock, 2013.

they tend to have fixed expiration dates and clear procedures for termination. Nevertheless, restrictive agreements provide stability over the life of an agreement, as both sides know what is expected of them financially and administratively, along with full knowledge of the penalties involved in breaking or deviating from the terms of the agreement. Some examples of restrictive agreements include contracts—such as service agreements—or lease agreements. While most are contracts, it is possible that other types of agreements, such as memoranda of understanding, could be considered restrictive if they have components that bind the actors or provide measures of legal recourse if a municipality refuses to uphold its obligations.

Adaptive agreements, on the other hand, are more open than restrictive agreements and are used to provide more generalized guidelines for local coordination efforts. Andrew (2008) argues that adaptive agreements are “purposely designed to complement pre-existing policies as opposed to a neatly crafted joint vision to improve the overall welfare of the participating local governments’ constituents” (10). What adaptive agreements lack in stability, they make up for in flexibility. These agreements seldom include strict financial or administrative requirements and are more easily altered if both partners deem it necessary. They also tend to lack some of the safeguards traditionally found in restrictive agreements, such as termination clauses and expiration dates. Examples of adaptive agreements include mutual aid agreements, memoranda of understanding or agreement, letters of agreement, or informal agreements.

Restrictive agreements are usually used for policy areas that have large budgets or for services that are not already provided by a municipality (Post 2004; Stein 1990). Having a more flexible agreement in place could result in one partner not fulfilling its financial or administrative responsibility, thereby creating service gaps for residents.

Adaptive agreements are generally used to complement existing services, such as mutual aid agreements for fire protection, whereby two communities sign an agreement to ensure full servicing throughout their communities. They may also be used where service gaps do not create a financial hardship, such as road maintenance or snow removal. In both cases, each municipality has the administrative infrastructure necessary to provide the service independently, but uses an adaptive service agreement to provide an additional layer of security or to cut costs (Lynn 2005). Additional examples of adaptive agreement policy areas include staff training, library services, or cultural services.

Adaptive agreements, however, also come with a degree of risk: these agreements carry a high level of behavioural uncertainty, which occurs when a supplier municipality is tempted to capture a larger share of aggregate gains (Shrestha 2010). Unlike restrictive agreements, there is a higher risk with adaptive agreements that one party will renege or ask to re-negotiate. That is not to say that restrictive agreements are without risk, since general environmental uncertainties, such as the unexpected breakdown of technology or sudden occurrences of natural incidents affecting supply, may occur with any type of agreements (Shrestha 2010).

Considerable work has been done to create a formal taxonomy of the mechanisms for resolving ICA servicing dilemmas (Feiock 2013). Figure 1 arrays these mechanisms along two dimensions: (1) whether the mechanism relies primarily upon political authority, legal or contractual arrangements, or social embeddedness, and (2) the solution mechanism, ranging from bilateral agreements on a single policy dimension to multilateral solutions to more complex problems to ultimately multiplex policy arrangements (Feiock 2013). In Table 6, the first nine cells list arrangements that rely on voluntary participation in the mechanism. The last three cells in the right hand column represent mechanisms imposed on local actors by a higher authority.

In Table 6, the four main mechanisms available for integrated decision-making—network embeddedness, mutually binding contracts or agreements, delegated authority, and imposed authority—define the horizontal dimension.

Under network embeddedness, agreements among local units are coordinated and enforced through a network of social economic and political relationships rather than formal authority (Feiock 2013).

Under contracts, local governments bind themselves to mutual action. These arrangements generally have protections in place for both actors and include provisions to ensure local autonomy.

Under delegated authority, local actors delegate power to an authority or district. In this case, actors would sacrifice autonomy, providing a third party with the authority to act on behalf of members.

Finally, under imposed centralized authority, a higher level authority creates a new government unit or intervenes to consolidate authority and direct the actions of the underlying units in order to internalize ICA dilemmas.

In Table 6, the vertical axis represents the scope of the agreement. The boxes range in intensity from narrow, bilateral agreements to complex collective

Table 6: Mechanisms for Integrating Institutional Collective Action Problems¹²

	Embeddedness	Contracts	Delegated Authority	Imposed Authority
Encompassing Complex/Collective	Multiplex Self-Organizing Systems	Councils of Governments	Regional Authorities	Externally Imposed Authority/Annexation
Intermediate/Multilateral	Working Groups	Partnerships/Multilateral ILAs	Multi-Purpose Districts	Imposed or Managed Networks
Narrow Single Issue/Bilateral	Informal Networks	Service Contracts	Single-Purpose Special Districts	Imposed Districts/Mandated Agreements

12. Adopted from Feiock, 2013.

relationships that address multiple functions or services simultaneously and are applied collectively (Feiock 2013). In total, the relationships detailed in Figure 1 range from the easiest to form and the lowest in terms of transaction costs in the bottom, left-hand cell, to hardest to form and most expensive in the top, right-hand cell. That is, informal networks are easier to form and operate, while large-scale institutional changes, such as annexation and amalgamation are the most challenging.

Inter-local cooperation in Canada has tended to take the form of imposed authority. Provincial governments, which have the power to form, merge, and dissolve local authorities, have used these powers to amalgamate municipalities and download responsibilities (Sancton 1993; Siegel 1997). Institutions rather than decentralized means, such as inter-local cooperation, have largely been used to link regions. The extent of provincial authority has limited the amount of formal inter-governmental agreements signed in Canadian metropolitan areas. While American scholars studying inter-local cooperation generally find complex networks of local interaction and hundreds, if not thousands, of agreements, Canadian studies have identified few agreements, largely because of the influence exerted by provincial governments, resulting in institutional solutions to metropolitan governance, which reduce the need for inter-local cooperation (Spicer 2013, 2014).

3. Inter-Municipal Cooperation in Canada

Data on inter-local agreements were collected from the 117 municipalities that make up the six Census Metropolitan Areas included in this study.¹³ Copies of all available agreements signed between 1995 and 2013 were gathered.¹⁴ This time frame was chosen for a number of reasons, chiefly because it is long enough to account for major provincial initiatives—such as amalgamation and various rounds of policy downloading¹⁵—but recent enough that many of these agreements are still relevant and active. At the same time, the sample goes back only as far as 1995 because municipalities had some difficulty securing earlier documents.

Only formal agreements are included in the analysis. Although many municipalities also engage in informal agreements—that is, agreements which are understood to municipal policy makers but not officially codified or written down—this practice is hard to document. In these cases, it is challenging to

13. Agreements from the following municipalities were unavailable and therefore excluded from the study: Halton Hills, Milton, and Markham, all in Ontario.

14. The agreements were provided directly by municipalities. Best efforts were taken to ensure the accuracy in count and content, but ultimately it is not possible to independently verify the number of agreements used in each municipality.

15. Many Canadian provinces have undertaken rounds of policy downloading, transferring responsibility for certain services to municipalities. For example, in the late 1990s, the province of Ontario downloaded responsibility for the delivery and funding of social services to municipalities and uploaded the costs for education, significantly rebalancing the policy relationship.

Table 7: CMA Demographic Information and Inter-Local Agreements

CMA	Total Governing Units	Population	Land Area (km ²)	Pop. Density	Agreements
Toronto	27	5,583,064	5,905.71	955.4	132
Winnipeg	10	730,018	5,303.09	137.7	15
Saskatoon	24	260,000	5,214.52	50.0	11
Regina	16	210,556	3,408.28	61.8	13
Edmonton	31	1,159,869	9,426.73	123.0	153
Calgary	9	1,214,839	5,107.88	237.9	30

Source: 2011 Census.

understand the full scope of the informal arrangement for someone outside the organization. Informal agreements may also not be widely known to all inside the organization, but only to those directly related to the policy area.

Demographic information about each CMA is included in Table 7, which indicates considerable variation among the CMAs. The Toronto CMA is by far the largest in terms of population. This area includes four regional governments—Halton, Peel, York, and Durham. These regional governments are responsible for regional services, such as transportation and planning, and are all two-tier structures.¹⁶

Winnipeg and Calgary have the fewest governing units. This can be attributed to the amount of institutional change seen within these areas over the past four decades. Winnipeg was part of a two-tier regional government for many years and then consolidated, whereas Calgary has grown as the result of dozens of annexations. These changes, described further below, are likely the reason why there are so few governments within these CMAs.

The Edmonton CMA is the largest area geographically of the cities included in this study, covering almost 9,500 square kilometres. The region is growing, with a current population of over 1.2 million. Despite having a similar population figure and growth rate as its neighbour to the south—Calgary—the Edmonton CMA has considerably more governing units. Saskatoon and Regina have the lowest population and the lowest density of any of the CMAs in this study.

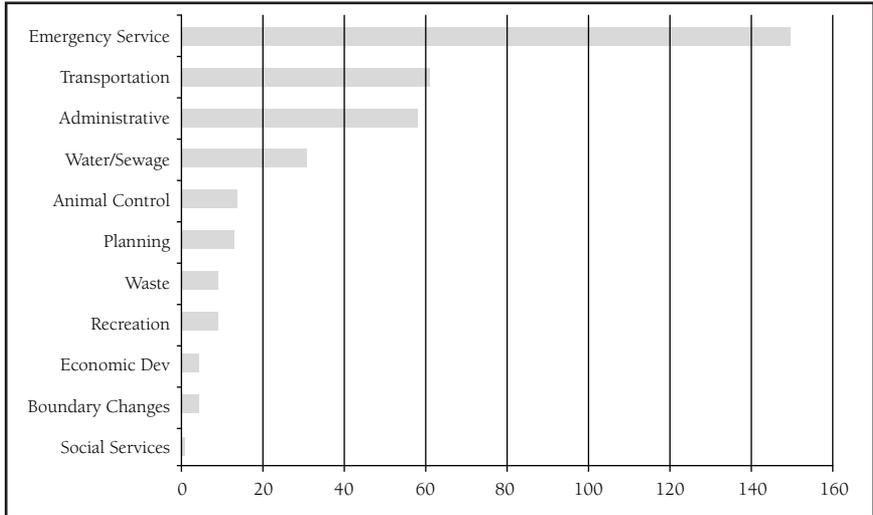
In total, 354 agreements were signed in these six CMAs between 1995 and 2013. Once again, there is a great deal of variation in the number of agreements between the CMAs. The most obvious is the disparity between the Toronto and Edmonton CMAs, and the other cases. Toronto is by far the most populated of the CMAs. Edmonton has the highest number of governing units, 31, within its CMA.

16. New Tecumseth and Bradford West Gwillimbury lie outside York, Peel, Halton, and Durham Regions, but are part of Simcoe County, a two-tier structure north of the GTA.

It also has the largest land area of the CMAs under study. Both of these factors may have led to the creation of more inter-local agreements. The other CMAs have relatively few agreements.

Figure 1 provides information on the type of service areas incorporated as formal, inter-local agreements.

Figure 1: Agreements by Policy Area¹⁷



Most agreements concern emergency services, which is consistent with American literature on inter-local cooperation (Andrew 2008). Because geographical coverage is vital in maintaining public safety, some municipalities feel the need to enter into agreements with neighbouring jurisdictions to ensure service continuity and protection. Simply put, municipalities do not want to see lives lost because of gaps in service coverage, adding incentive to the cooperative process. Most of the emergency services agreements in this study involve fire protection, usually in the form of mutual aid or fee-for-service agreements. Generally, cities provide fire services to smaller jurisdictions near their borders. Consequently, these agreements tend to involve emergency dispatch or reporting, in which county officials negotiate an agreement on behalf of their lower-tier counterparts. This is unsurprising, considering that the municipalities in this study are required

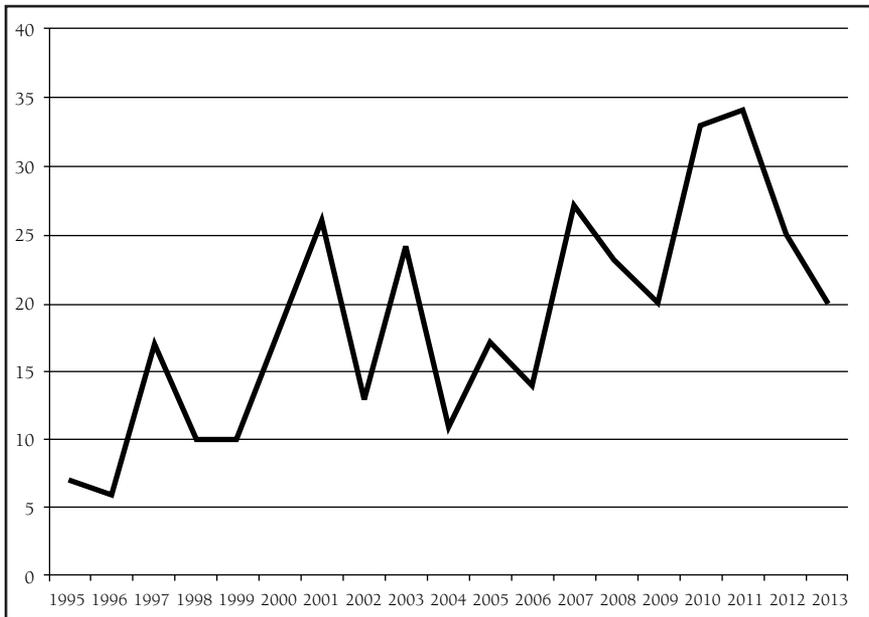
17. “Emergency Services” encompasses all areas of emergency planning or delivery, such as fire protection, dispatch, or reporting. “Transportation” includes road construction, maintenance, snow removal, and the provision of public transportation services. “Waste” includes all landfill services, collection, and recycling programming. “Administrative” includes all items relating to staffing or other maintenance, such as information technology maintenance and information sharing.

by provincial mandate to maintain fire protection and emergency education services throughout their territory.

Most agreements in the transportation category are public transit agreements between Edmonton and its neighbouring municipalities. Only 15 of the 61 agreements listed within the transportation category concern roads. The next most frequent area of cooperation is administrative services, which includes staffing or other corporate services, such as information technology and data sharing. A growing trend in inter-local cooperation is the sharing of staff and administrative resources. The same trend is seen here, as some smaller municipalities are sharing senior staff and legal services. Outside these three main policy areas, inter-local agreements are rare.

Figure 2 shows the number of agreements signed by year in all of the CMAs.

Figure 2: Agreements by Year



Overall, there has been a general increase in the number of agreements. Very few were signed in the mid-1990s. Thereafter, the number of agreements signed within these CMAs has been increasing, albeit sporadically. One explanation is that the need for cooperation is increasing, perhaps due to budget constraints or other fiscal restrictions.

Relatively few actors are involved in inter-municipal agreements. The average number of participants for each agreement is 2.87, meaning that most agreements are bilateral. Municipalities appear to shy away from forming multi-lateral

Table 8: Summary of Agreement Types by CMA

CMA	Contract	MOU	Mutual Aid
Toronto	113	7	12
Winnipeg	8	6	1
Saskatoon	10	0	1
Regina	9	4	0
Edmonton	135	10	8
Calgary	27	3	0
Total	302	30	22

agreements, a finding that is consistent with past research on cooperation (Post 2004). According to this literature, smaller policy networks are easier to manage and direct. Achieving consensus among fewer actors is much easier than within larger group. Additionally, the transaction costs inherent with signing inter-municipal agreements are lower among groups with fewer participants.¹⁸ Additionally, only 176 agreements, nearly 50 percent of the total, are signed with the central city in each CMA, meaning that many agreements are signed among municipalities in the periphery of the region.

Table 8 lists the types of agreements signed between 1995 and 2011 in each CMA. Of all the agreements in place, 85 percent are contracts, and most are restrictive. Table 9 identifies the different component parts of the agreements. More than three-quarters of the agreements—76.3 percent—include termination clauses that allow at least one of the partners to exit from the arrangement. Many such termination clauses include procedures and timelines for withdrawal, such as

Table 9: Summary of Agreement Components

	Total	Percent
Agreements With Expiry Clauses	228	64.4
Agreements With Termination Clauses	270	76.3
Agreements Leading to the Creation of Joint Committees or Boards	11	3.1
Agreements with Dispute Resolution Mechanisms	62	17.5
Number of Restrictive Agreements	297	83.9
Number of Adaptive Agreements	57	16.1

18. Aside from this literature, there are other reasons why bilateral agreements would be preferred. These could include geography (only one other potential partner) or the nature of the service (for example, contracting services may obviate the need to involve another municipality).

submitting termination notices in writing within 60 days of the set withdrawal. The procedures and timing of the termination process vary by agreement, however. And 64.4 percent of the agreements contain expiry clauses, stating that the agreement will automatically terminate after a set period of time unless the jurisdictions included in the agreement choose to extend it.

Although most jurisdictions prefer agreements with termination and expiry clauses, very few include clauses for monitoring, such as the creation of joint boards, commissions, or dispute resolution mechanisms. Only 3.1 percent involve the creation of joint boards or commissions to oversee the execution of the agreement. Similarly, only 17.5 percent include procedures for dispute resolution. The high number of termination clauses indicates that many communities view their ability to terminate the agreement as a form of dispute resolution; consequently, each signatory's ability to leave the agreement at any time is, in itself, an incentive to seek an informal resolution to any impasse.

The prevalence of expiry and termination clauses also indicates that most jurisdictions prefer to establish agreements that carry a low level of risk. Although these agreements are formalized, they are for set durations and allow either partner to leave the agreement if it feels that participating is no longer in its best interest. Only a minority of agreements establish independent authorities to monitor and execute the content of the agreement, and a similar number have built-in dispute resolution mechanisms. This indicates that these municipalities are not intending to form long-term relationships, but rather policy-specific and purpose-driven networks of cooperation.

Most agreements are restrictive, in that they contain components that legally bind each participant to specific actions. As previously discussed, these agreements mitigate risk and ensure that the expectations for each partner are well known. Adaptive agreements are mainly used for mutual aid and protection, consistent with American ICA literature on emergency response agreements (Andrew 2009, 2010). In both mutual aid and protection, municipalities largely use cooperative agreements to supplement existing services, which—not coincidentally—are situations that call for adaptive agreements. These agreements are largely formed to add to existing services and ensure continuity. Although two municipalities may already have a fire department, a mutual aid agreement provides additional protection to potentially underserved regions. Municipalities in these CMAs use adaptive agreements for similar policy areas as American municipalities, although provincial regulations may force them to use more restrictive agreements than they would otherwise.

4. Municipal Organization and the Contours of Cooperation

Why do we see so few agreements in Canadian metropolitan areas? American studies have typically found many more agreements within metropolitan areas. For example:

- Shrestha (2005) found 6,080 agreements among 38 large American cities.

- Wood (2005) found 1,638 different agreements in the Kansas City metropolitan area.
- Thurmaier (2005) located nearly 12,000 agreements signed between 1965 and 2004 in Iowa.
- LeRoux and Carr (2007) discovered 445 road agreements in Michigan.
- Andrew (2008) found 390 public safety agreements in Florida.

The number of agreements in Canadian metropolitan areas is low in comparison, largely because American metropolitan areas have higher governmental density and exhibit more institutional fragmentation.

Another explanation is a clear Canadian preference for “government” over “governance.” In that context, provincial governments have tended to (1) construct regional institutions to facilitate coordination, and (2) allow their largest cities to absorb urbanizing territory outside their borders.

In both Canada and the United States, the federal government has no constitutional jurisdiction over local government (Sancton 1993). Canadian provincial governments, however, have much more authority over local government than their American counterparts. Constitutionally, provincial governments have sole responsibility for municipalities within their jurisdiction and can erase and create borders, as well as re-assign functions, as they have done quite often in the past (Garcea and LeSage Jr. 2005; Sancton 2000). Past research has shown that this provincial dominance in municipal policy-making has caused the creation of more robust metropolitan governmental and planning institutions in Canada than in the United States (Rothblatt 1993). Many provincial governments, therefore, saw the creation of regional governments as the answer to servicing problems, rather than local, decentralized solutions.

The Greater Toronto Area (GTA) has seen the most extensive use of regional government in Canada. From its incorporation, the City of Toronto has undergone 21 annexations. After the Second World War, Toronto emerged as a metropolis. Marked by high rates of suburbanization, Toronto quickly became a major centre in Canada for inward migration (Robinson 1991, 113). In 1941, Toronto and its immediate neighbours had a population of 925,000 residents; however, by 1961, that figure had more than doubled to 1.9 million (Nader 1975, 230). The province attempted to impose some type of regional government on the area for some time, starting in 1924 (Friskin 2007, 55). The rapid rate of suburbanization in the 1940s, however, forced the province to pass legislation in 1953 that created a two-tier structure covering Toronto and its surrounding municipalities (Friskin 2007, 70). Known as Metropolitan Toronto, the two-tier structure consisted of the City of Toronto and its 13 surrounding suburban municipalities; the upper of the two tiers was responsible for regional services, such as planning, roads, and public transportation (Kaplan 1965, 538).

In the 1960s, as growth spread beyond Metropolitan Toronto’s borders (Slack and Bird 2013), the province began to explore the possibility of creating similar

two-tier structures outside Metropolitan Toronto. Over time, the province created 10 new regional governments: Ottawa-Carleton, Niagara, York, Peel, Halton, Waterloo, Hamilton-Wentworth, Sudbury, Durham, and Haldimand-Norfolk (Fyfe 1975, 360). The establishment of these governments followed a predictable pattern: the creation of an upper-tier unit, created for a large urban centre, while its hinterland, commonly—although not universally—followed the old county boundaries, thereby reducing the number of local municipalities within the region to provide the urban centre with more control over its surrounding area (Fyfe 1975, 362).

In the 1990s and 2000s, many of these regional governments were restructured. In 1998, the provincial government amalgamated Metropolitan Toronto to create a large, single-tier municipality (Friskin 2007, 251). The regional governments of Hamilton-Wentworth, Ottawa-Carleton, Haldimand, Norfolk, and Sudbury followed suit some years later. The province has added to many of these regional institutions through the creation of individual initiatives and legislation intended to curb urban sprawl and growth, such as the Greenbelt and *Places to Grow*, which places strict limits on the growth of certain municipalities within the Greater Toronto Area—all of which adds to the institutional layering in much of southern Ontario.

In the 1950s, Manitoba experienced the same type of challenges associated with growth around Winnipeg that Ontario had with Toronto. Responding to local concerns of inefficiency and economic disparity within the metropolitan region, the province struck a committee to provide solutions (Kiernan and Walker 1983, 227). In 1959, the Greater Winnipeg Investigating Committee called for the establishment of a two-tier council (Higgins 1986, 235). The Metropolitan Corporation of Greater Winnipeg was created in 1960 with 10 lower-tier municipalities: Charleswood, Fort Garry, North Kildonan, Old Kildonan, the Town of Tuxedo, the City of East Kildonan, the City of West Kildonan, the City of St. Vital, the City of Transcona, and the City of Winnipeg. Much like Metropolitan Toronto, Metropolitan Winnipeg was given authority for regional services, such as planning, zoning, assessment, and sewage disposal and water. The regional government was later amalgamated to create the “Unicity”—a sprawling single-tier government that included the vast majority of the province’s population. By the late 1980s, the metropolitan region extended beyond the border originally delimited through the creation of Metropolitan Winnipeg. In response, the province created the Capital Region Committee to coordinate economic activities between the City of Winnipeg and the surrounding area (Sancton 2000, 62).

In Alberta, the provincial government has stopped short of creating the types of broad upper-tier governments seen elsewhere. Provincial interest in Calgary and Edmonton’s institutional structure peaked in the 1980s once it became clear that several rounds of annexation and outward expansion had seriously harmed the relationship between the cities and their neighbours (Sancton 2011, 130). Always a controversial process, many neighbouring communities began to resent what they saw as the unfair incursion of the province’s largest cities into their territories.

In 1994, the province abolished some of the common institutions around these areas, including the regional planning commission, establishing a need for greater coordination between each city and its surrounding municipalities (Sancton 2011, 130).

In 1998, the province commissioned a report that recommended that a “greater Edmonton partnership” be established encompassing the 21 municipalities in the metropolitan area (Lesage Jr 2005). This recommendation was written by former provincial Treasurer Paul Hyndman, who put a great deal of faith in voluntary partnerships: “partnerships are the best option for this region... the old style, centralized approach with command and control from the top is not the way to govern our region” (Sancton 2011, 130). This body acted as an extension of the Alberta Central Regional Alliance (ACRA), a voluntary inter-municipal body that had been in existence since 1995 (Sancton 2011, 131). In 2006, Edmonton withdrew from ACRA, claiming that the alliance was incapable of addressing important regional land-use issues that had implications for the fair sharing of fiscal resources in the region (Sancton 2011, 131). In January 2008, the province replaced ACRA with the Capital Region Board (CRB), a planning board in which all 25 regional municipalities were required to participate.

In Calgary, ACRA served as a model for the Calgary Regional Partnerships (CRP). The CRP has a weak structure, but has authority for land-use planning. Because of Calgary’s large population, it dominates the board of the CRP, causing tension between the city and its partnering communities (Sancton 2011, 132). In September 2009, Rocky View County left the CRP, citing concerns about governance and the voting structure (Sancton 2011, 132).

Saskatchewan has not pursued a centrally imposed regional strategy for its two largest cities—Saskatoon and Regina. Instead it has allowed the two cities to expand their borders and absorb surrounding territory. Regina has undergone 27 annexations since incorporation, enlarging its territory by 43,023 acres. The city’s most recent annexation was finalized on January 1, 2014, when the city absorbed an additional 8,500 acres from its surrounding communities. Saskatoon has undergone 30 annexations since incorporation, taking in over 53,000 acres from its neighbours. Annexations continue in both cities. Since 2000, Saskatoon has completed four annexations totalling 17,841 acres, while Regina has absorbed 15,731 acres through six annexations.

Other provinces have pursued similar strategies. Edmonton has completed seven annexations, more than quadrupling its territory, and has proposed to annex an additional 38,400 acres from municipalities to the south. The application is currently under review. Calgary has undergone 44 boundary extensions since incorporation.¹⁹

Provincial support for municipal institutional changes such as amalgamation and annexation is the likeliest explanation for the sparse use of inter-local

19. Calgary’s rapid expansion was even the subject of a 2009 book, *Expansive Discourses* (Foran 2009).

agreements in Canada. As provinces have experimented with regional institutions and allowed their central cities to expand outwards, divergences between communities become entrenched. Urban areas are absorbed into central cities, which means that outlying areas are either rural or suburban, which does not create a similar base of service demands and decreases the need for cooperation.

The different institutional and cultural context between American and Canadian municipal government is the reason that American cities generally enter into more inter-governmental agreements than their Canadian counterparts. American local government is generally more fragmented and resists regionalization.²⁰ While American cities did experience a wide range of outward annexations to capture urban growth early in their history, the postwar suburban boom led to greater resistance to annexation. Suburban areas often oppose annexations because they fear tax increases and a loss of autonomy if they are merged with a larger city. From an urban perspective, city residents often fear suburban domination of their politics and a dilution of their political power (Vogel and Imbroscio 2013). As a result, the kind of continuous, aggressive outward expansion experienced within Canadian metropolitan areas is not present within contemporary American metropolitan areas.²¹ The same trends have limited the presence of regional governments in the United States. As Vogel and Imbroscio (2013) argue, “In the United States, the political system and political culture provides no basis for a metropolitan tier of government” (319).

With limited chances to introduce metropolitan governments as well as political resistance to annexation and other forms of restructuring, American municipalities are forced to rely more heavily on inter-local agreements to fill service gaps and ensure policy continuity. Canadian provinces and municipalities have tended to see centralization as a better way to connect governments.²²

5. Discussion and Conclusion

This study has explored the patterns of inter-local agreements in six Canadian metropolitan areas. The author collected and examined all inter-local agreements signed between 1995 and 2013 in these city-regions, and found only 354 agreements, the bulk of which were in the Toronto and Edmonton CMAs. Why is this? The likeliest explanation is the unique amount of attention these areas have received from provincial governments and the institutional structures put in place

20. As of 2007, the United States had 89,527 local governments (Vogel and Imbroscio 2013).

21. In the United States, many municipalities have “home rule” provisions. In states with home rule provisions, an amendment to the state constitutions grants municipalities the ability to pass laws, free from undue state or federal intervention. These municipalities must, of course, adhere to state and federal constitutions, but have broad authority to govern their own affairs.

22. Another popular reason to pursue municipal restructuring is equity, namely redistribution from richer municipalities to poorer through improved service delivery.

in these CMAs. From the implementation of regional governments, to the creation of growth management strategies, Canadian metropolitan areas have undergone a vast amount of change, mainly directed at centrally managing and coordinating the relationships between governments within these areas. These central cities have also been allowed to expand outwards and absorb urbanizing territory.

In contrast, American metropolitan areas are more fragmented and resist the imposition of centralized regional initiatives and annexation attempts from central cities. These metropolitan areas are also becoming more multi-centred and diverse. This situation leaves inter-local agreements as the primary tool to fill service gaps.

In a way, it is understandable that Canadian provincial governments would get so involved in the governance of their large metropolitan areas; these areas contain their largest cities and the bulk of their populations. For example:

- The Toronto CMA contains 43 percent of Ontario's population.
- The Edmonton and Calgary CMAs account for over 65 percent of Alberta's population.
- The Saskatoon and Regina CMAs similarly account for 45 percent of Saskatchewan's population.
- The Winnipeg CMA accounts for more than 60 percent of Manitoba's population.

This demographic weight and provincial incentive to be involved with their metropolitan areas is coupled with legislative and regulatory power that allows provincial administrations to exercise authority over the scope and composition of municipal powers and borders.

In Canada, servicing gaps are largely solved through centralization, as opposed to inter-local cooperation. Indeed, some provincial governments have in the past actively dissuaded the use of inter-governmental agreements to solve servicing problems. A 1987 Ontario government report, entitled *Patterns for the Future*, discouraged the use of inter-local agreements. Noting that inter-local agreements can be “time-consuming to negotiate, can foster dispute, and can create confusion about accountability,” the report argues that these agreements create uncertainty about lines of policy-making responsibility (Ontario 1987, 62). Inter-local agreements, the report continues, do not necessarily provide stable administration since their terms and conditions are subject to periodic renegotiation (Ontario 1987, 65). While the provincial government has long since moved beyond this attitude, it nonetheless guided policy for many years.

Overall, the institutional changes put in place by provincial governments have decreased the need for inter-local agreements. Amalgamation and annexation not only reduce potential areas of service sharing, but also the number of potential partners. Until provincial governments change their attitudes towards inter-local cooperation, we may not see agreement formation anything like the United States. There is some evidence to indicate this change in attitudes is taking place. The Ontario government has begun to seriously examine the state of inter-local

cooperation within the province. It recently conducted a survey of Ontario municipalities in an attempt to gauge who is sharing services and why (KPMG 2013; Spicer 2014). Other provinces are beginning to accept the merit of inter-local cooperation as well.

Understanding the state of cooperation is the first step, putting the right conditions in place to enhance it is another; we have not arrived at that point and only time will tell if we ever do.

In Canada, enthusiasm for amalgamation appears to be waning. It is unlikely that we will ever see a wave of amalgamation similar to that in the 1990s. Even in Greater Victoria, where a referendum on amalgamation was recently held, many municipalities also asked residents if they wanted to increase the amount of services their government shared with regional partners. Inter-local cooperation is seen as an alternative to institutional restructuring, since the problems inter-local agreements aim to mitigate are similar to consolidation: controlling externalities, ensuring service continuity, and managing costs.

Because of this trend, we need to understand inter-local agreements much better. Most of the research done on inter-local cooperation is American. Canadian metropolitan areas operate within a very different legal and regulatory context. Therefore, Canada needs its own research agenda when it comes to inter-local cooperation.

First, we need to empirically test the assumptions made by practitioners and academics in regards to inter-local agreements. For example, inter-local agreements are often touted as a way to save costs. Intuitively, this makes sense, but we have yet to confirm it with evidence. We also need to examine the financial advantages of inter-local agreements in a holistic sense: when we include the transaction costs of negotiating and monitoring agreements, do we still find cost savings?

Closely related is the role of overall municipal fiscal health in seeking out cooperative arrangements. Does poor fiscal health—for example, high levels of debt or a declining assessment base—prompt municipal officials to seek out potential partners for service sharing? Alternatively, does good fiscal health motivate municipal officials to maximize budget allocations and explore inter-local agreements to a greater extent? Thus far, we do not have an answer to either question.

Second, we need to understand how municipalities select potential partners. For example, we know which municipalities are cooperating, but we do not know *why* they chose to cooperate with certain other municipalities. In most cases, the decision is practical. Matters such as geographic distance or service availability are important, but other factors may affect the decision to cooperate. The ICA framework identifies motivators such as social capital and political leadership, but what about resource scarcity? Or a past track record of cooperation? If we can isolate such factors, it will help inform the activities of municipal officials, further strengthening the connection between the academic community and municipal practitioners.

Finally, we need to know why certain policy areas are favoured. In this paper, we have seen that cooperation in certain policy areas is clearly more common than

it is in others. Inter-local agreements are signed much more frequently in emergency services and transportation than in any other policy area. While we have speculated why this is so, we do not know why other areas, such as economic development, are not more widely shared.

American research has shown that there is merit in pursuing inter-local cooperation. Our research needs to keep pace with practice to ensure we give municipal officials the opportunity to properly evaluate the choices presented to them.

References

- Alcantara, Christopher and Jen Nelles. 2009. "Claiming the City: Co-operation and Making the Deal in Urban Comprehensive Land Claims Negotiations in Canada." *Canadian Journal of Political Science* 43 (3): 705-727.
- Andrew, Simon A. 2008. *Governance by Agreements: Why Do Local Governments Enter Into Multilateral Agreements*. Detroit, MI: Working Group on Interlocal Services Cooperation, Wayne State University.
- Andrew, Simon A. 2009. "Regional Integration Through Contracting Networks: An Empirical Analysis of Institutional Collective Action Framework." *Urban Affairs Review*, 44 (3): 378-402.
- Arganoff, Robert and Michael McGuire. 2003. *Collaborative Public Management: New Strategies for Local Governments*. Washington, D.C.: Georgetown University Press.
- Atkins, Patricia, John Dewitt and Jennifer Thangavelu. 1999. *The Emerging Regional Governance Network*. Washington, D.C.: National Association of Regional Councils and National Academy of Public Administration.
- Axelrod, Robert. 1984. *The Evolution of Cooperation*. New York: Basic Books.
- Baird, Douglas G. 1990. Self-Interest and Cooperation in Long-Term Contracts. *The Journal of Legal Studies* 19 (2): 583-596.
- Bickers, Kenneth N. and Robert M. Stein. 2004. "Interlocal Cooperation and the Distribution of Federal Grant Awards." *Journal of Politics* 66 (3): 800-822.
- Bish, Robert. 1971. *The Public Economy of Metropolitan Areas*. Chicago: Markham.
- Bish, Robert and Vincent Ostrom. 1974. *Understanding Urban Government: Metropolitan Reform Reconsidered*. Washington: American Enterprise Institute for Public Policy Research.
- Carr, Jered B. and Richard C. Feiock. 2004. *City-County Consolidation and Its Alternatives: Reshaping the Local Government Landscape*. New York: ME Sharpe Inc.
- Cook, Karen S., Russell Hardin and Margaret Levi. 2005. *Cooperation Without Trust?* New York: Russell Sage Foundation.
- Farmer, Joyce L. 2010. "Factors Influencing Special Purpose Service Delivery Among Counties." *Public Performance and Management Review* 33 (4): 535-554.
- Feiock, Richard C. 2004. "Introduction: Regionalism and Institutional Collective Action." In Richard Feiock, ed., *Metropolitan Governance: Conflict, Competition and Cooperation*. Washington: Georgetown University Press.

- Feiock, Ricahrd C. 2007. "Rational Choice and Regional Governance." *Journal of Urban Affairs* 29 (1): 47-63.
- Feiock, Richard C. 2013. "The Institutional Collective Action Framework." *Policy Studies Journal* 44 (3): 397-425.
- Friesema, Paul L. 1970. Interjurisdictional Agreements in Metropolitan Areas. *Administrative Science Quarterly* 15 (2): 242-252.
- Friskin, Frances. 2007. *The Public Metropolis: The Political Dynamics of Urban Expansion in the Toronto Region, 1924-2003*. Toronto: Canadian Scholars' Press.
- Fyfe, Stewart. 1975. Local Government Reform in Ontario. In R. Charles Bryfogle and Ralph R. Krueger, eds., *Urban Problems Revised*. Toronto: Holt, Rinehart and Winston of Canada.
- Garcea, Joseph and Edward C. Lesage Jr. 2005. *Municipal Reform in Canada: Reconfiguration, Re-Empowerment and Rebalancing*. Toronto: Oxford University Press.
- Grady, Elizabeth and B. Chen. 2006. "Influences on the Size and Scope of Networks for Social Service Delivery." *Journal of Public Administration Research and Theory* 16 (4): 533-552.
- Gulati, Ranjay and Harbir Singh. 1998. The Architecture of Cooperation: Managing Coordination Costs and Appropriation Concerns in Strategic Alliances. *Administrative Science Quarterly* 43 (4): 781-814.
- Gulick, Luther Harvey. 1962. *The Metropolitan Problem and American Ideas*. New York: Alfred A. Knopf.
- Higgins, Donald. 1986. "The Process of Reorganizing Local Government in Canada". In *Canadian Journal of Political Science*, 19 (2): 219-242.
- Hirlingter, Michael W. and David R. Morgan. 1991. Intergovernmental Service Contracts: A Multivariate Explanation. *Urban Affairs Quarterly* 27 (1): 128-144
- Hulst, Rudie and Andre van Montfort. 2008. "Intermunicipal Cooperation: A Widespread Phenomenon." In Rudie Hulst and Andre van Montfort, eds., *Intermunicipal Cooperation in Europe*. Dordrecht: Springer: 1-21.
- Jones, Victor. 1942. *Metropolitan Government*. Chicago: University of Chicago Press.
- Kaplan, Harold. 1965. Politics and Policy-Making in Metropolitan Toronto. *The Canadian Journal of Economic and Political Science* 31 (4): 538-551.
- Kiernan, Matthew and David C. Walker. 1983. "Winnipeg." In Warren Magnusson and Andrew Sancton, eds., *City Politics in Canada*,. Toronto: University of Toronto Press: 222-254.
- KPMG. 2013. *Sharing Municipal Services in Ontario: Case Studies and Implications for Ontario*. Toronto: KPMG.
- Kwon, Sung-Wook and Richard Feiock. 2010. "Overcoming the Barriers to Cooperation: Intergovernmental Service Agreements." *Public Administration Review* 70 (6): 876-884.
- LeRoux, Kelly. 2007. "Nonprofits as Civic Intermediaries: The Role of Community Based Organizations in Promoting Political Participation." *Urban Affairs Review* 42 (3): 410-422.

- LeRoux, Kelly and Jered B. Carr. 2007. "Explaining Local Government Cooperation on Public Works: Evidence from Michigan." *Public Works Management and Policy* 12 (1): 344-358.
- Lubell, Mark, Mark Schneider, John T. Scholz and Mihriye Mete. 2002. "Watershed Partnerships and the Emergence of Collective Action Institutions." *American Journal of Political Science* 46 (1): 148-163.
- Lynn, Phill. 2005. *Mutual Aid: Multijurisdictional Partnerships for Meeting Regional Threats, New Realities: Law Enforcement in the Post-9/11 Era*. Washington, DC:US Department of Justice, Office of Justice Program, Bureau of Justice Assistance.
- Mandell, Myrna. 2001. "Working with the State: Exploring Interagency Collaboration within a Federalist System." *Journal of Public Administration Research and Theory* 20: 757-778.
- Maser, Steven. 1985. "Demographic Factors Affecting Constitutional Decisions: The Case of Municipal Charters." *Public Choice* 47: 121-162.
- Matkin, David S. and H. George Frederickson. 2009. "Metropolitan Governance: Institutional Roles and Interjurisdictional Cooperation." *Journal of Urban Affairs* 31 (1): 45-66.
- Meier, Kenneth J. and Laurence J. O'Toole. 2002. "Public Management and Organizational Performance: The Impact of Managerial Quality." *Journal of Policy Analysis and Management* 21 (4): 629-643.
- Milward, H. Brinton and Keith G. Provan. 2000. "Governing the Hollow State." *Journal of Public Administration Research and Theory* 10 (2): 359-380.
- Nader, G.A. 1975. *Cities of Canada. Vol. 1: Theoretical, Historical and Planning Perspectives*. Toronto: Macmillan.
- Nelles, Jennifer. 2009. *Civic Capital and the Dynamics of Intermunicipal Cooperation for Regional Economic Development*. PhD Thesis: University of Toronto, Department of Political Science.
- Nunn, Samuel and Mark Rosentraub. 1997. "Dimensions of Interjurisdictional Cooperation." *Journal of the American Planning Association* 63 (2): 205-219.
- Olberding, Julie C. 2002. "Does Regionalism Beget Regionalism? The Relationship Between Norms and Regional Partnerships for Economic Development." *Public Administration Review* 62 (4): 480-491.
- Ostrom, Elinor. 2005. *Understanding Institutional Diversity*. Princeton: Princeton University Press.
- Ostrom, Elinor. 1998. "A Behavioral Approach to the Rational Choice Theory of Collective Action: Presidential Address, American Political Science Association, 1997." *American Political Science Review* 92 (1): 1-22.
- Ostrom, Vincent, Charles Tiebout, and Robert Warren. 1961. "The Organization of Government in Metropolitan Regions: A Theoretical Inquiry." *American Political Science Review* 55 (December): 831-842.
- Post, Stephanie. 2002. "Local Government Cooperation: The Relationship Between Metropolitan Area Government Geography and Service Provision." Paper presented at the Annual Meeting of the American Political Science Association, August 29–September 1. Boston, MA

- Post, Stephanie. 2004. Metropolitan Area Governance and Institutional Collective Action. In Richard Feiock, ed., *Metropolitan Governance: Conflict, Competition and Cooperation*. Washington, D.C.: Georgetown University Press.
- Provan, Keith G. and Patrick Kenis. 2008. "Modes of Network Governance: Structure, Management and Effectiveness." *Journal of Public Administration Research and Theory* 18 (2): 229-252.
- Robinson, Guy M. 1991. *A Social Geography of Canada*. Toronto: Dundurn Press.
- Rothblatt, Donald N. 1993. "Summary and Conclusions." *Metropolitan Governance: American/Canadian Intergovernmental Perspectives*, eds. Donald N. Rothblatt and Andrew Sancton. Berkley: Institute of Governmental Studies Press: 433-467.
- Salet, William, Andy Thornley and Anton Kreukels. 2003. *Metropolitan Governance and Spatial Planning: Comparative Case Studies of European City Regions*. London: Spon Press.
- Sancton, Andrew. 1993. "Policymaking for Urban Development in American and Canadian Metropolitan Regions." *Metropolitan Governance: American/Canadian Intergovernmental Perspectives*, eds. Donald N. Rothblatt and Andrew Sancton. Berkley: Institute of Governmental Studies Press: 1-12.
- Sancton, Andrew. 2000. *Merger Mania: The Assault on Local Government*. Montreal and Kingston: McGill-Queen's Press.
- Sancton, Andrew. 2011. *Canadian Local Government: An Urban Perspective*. Don Mills: Oxford University.
- Savitch, H.V. and Ronald Vogel. 1996. *Regional Politics: America in a Post-City Age*, Thousand Oaks: Sage.
- Shrestha, Manoj. 2005. "Inter-Local Fiscal Cooperation in the Provision of Local Public Services—The Case of Large US Cities." Presented at the annual meeting of the American Society for Public Administration. Milwaukee, Wisconsin, April 2–5.
- Shrestha, Manoj. 2010. Do Risk Profiles of Services Alter Contractual Patterns? A Comparison Across Multiple Metropolitan Services. In Richard C. Feiock and John T. Scholz, eds., *Self-Organizing Federalism: Collaborative Mechanisms to Mitigate Institutional Collective Action Dilemmas*. Cambridge: Cambridge University Press.
- Shrestha, Manoj and Feiock, Richard. 2007. "Interlocal Cooperation in the Supply of Local Public Goods: A Transaction Cost and Social Exchange Explanations." *Working Group on Interlocal Services Cooperation, Paper 29*. Detroit: Wayne State University.
- Siegel, David. 1997. "Local Government in Ontario." *The Government and Politics of Ontario*, eds. Graham White. Toronto: University of Toronto Press: 126-157.
- Slack, Enid and André Côté. 2014. "Comparative Urban Governance," *Future of Cities: Working Paper*. London, UK: Government Office for Science.
- Slack, Enid and Richard Bird. 2013. "Merging Municipalities: Is Bigger Better?" *IMFG Papers on Municipal Finance and Governance No. 14*. Toronto: Institute on Municipal Finance and Governance, University of Toronto.
- Slack, Enid and Rupak Chattopadhyay. 2013. *Governance and Finance of Metropolitan Areas in Federal Systems*. Toronto: Oxford University Press Canada.

- Spicer, Zachary. 2014. Linking Regions, Linking Functions. Inter-Municipal Agreements in Canada. IMFG Perspectives 10. Toronto: Institute on Municipal Finance and Governance, University of Toronto. December 2014.
- Spicer, Zachary. 2013. Regional Organization and the Dynamics of Inter-Municipal Cooperation. PhD Thesis: University of Western Ontario, Department of Political Science.
- Stein, Robert. 1990. *Urban Alternatives: Public and Private Markets in the Provision of Local Services*. Pittsburgh: University of Pittsburgh Press.
- Studenski, Paul. 1930. *The Government of Metropolitan Areas in the United States*. New York: National Municipal League.
- Thurmaier, Kurt. 2005. "Elements of Successful Interlocal Agreements: An Iowa Case Study." *Working Groups on Interlocal Services Cooperation, Paper 2*. Detroit, MI: Working Group on Interlocal Services Cooperation, Wayne State University.
- Thurmaier, Kurt and Curtis H. Wood. 2002. "Interlocal Agreements as Overlapping School Networks: Picket-Fence Regionalism in Metropolitan Kansas City." *Public Administration Review* 62 (5): 585-598.
- Vanberg, Viktor. 2002. "Rational Choice Versus Program Based Behaviour: Alternative Theoretical Approaches and their Relevance for the Study of Institutions." *Rationality and Society* 13 (1): 7-54.
- Visser, James. 2004. "Townships and Nested Governance: Spoilers or Collaborators in Metropolitan Services Delivery." *Public Performance and Management Review* 27 (3): 80-101.
- Vogel, Ronald K. and David Imbroscio. 2013. Governing Metropolitan Regions in the United States. In Enid Slack and Rupak Chattopadhyay, eds., *Governance and Finance of Metropolitan Areas in Federal Systems*. Don Mills, Ontario: Oxford University Press.
- Vogel, Ronald and John Harrington. 2003. *Political Change in the Metropolis*. New York: Longman.
- Wood, Curtis H. 2005. "The Nature of Metropolitan Governance in Urban America: A Study of Cooperation, Conflict and Avoidance in the Kansas City Region." *Working Group on Interlocal Services Cooperation, Paper 9*. Detroit, Michigan: Working Group on Interlocal Services Cooperation, Wayne State University.

<i>Appendix A: Composition of Census Metropolitan Areas Included in Study</i>	
CMA	Municipalities
Calgary Census Metropolitan Area	Cities: Airdrie, Calgary
	Municipal District: Rocky Mountain County
	Towns: Chestermere, Cochrane, Crossfield, Irricana
	Village: Belseker
	Hamlet: Langdon
Edmonton Census Metropolitan Area	Cities: Edmonton, Fort Saskatchewan, Leduc, St. Albert, Spruce Grove
	Specialized Municipality: Strathcona County
	Municipal Districts: Leduc County, Parkland County, Sturgeon County
	Towns: Beaumont, Bon Accord, Bruderheim, Calmar, Devon, Gibbons, Legal, Morinville, Redwater, Stoney Plain
	Village: Spring Lake, Thorsby, Wabamun, Warburg
	Summer Village: Betula Beach, Golden Days, Itaska Beach, Kapasiwin, Lakeview, Point Allison, Seba Beach, Sundance Beach
Regina Census Metropolitan Area	City: Regina
	Regional Municipalities: Edenwold No. 158, Lumsden No. 189, Sherwood No. 159
	Towns: White City, Pilot Butte, Balgonie, Regina Beach
	Villages: Grand Coulee, Pense, Buena Vista, Pense No. 160, Edenwold, Disley, Belle Plaine
	Resort Village: Lumsden Beach
Saskatoon Census Metropolitan Area	Cities: Martensville, Saskatoon, Warman
	Towns: Allan, Asquith, Colonsay, Dalmeny, Delisle, Dundurn, Langham, Osler
	Villages: Borden, Bradwell, Clavet, Elstow, Meacham, Vanscoy
	Resort Villages: Shields, Thode
	Rural Municipalities: Blucher No. 343, Colonsay No. 342, Corman Park No. 344, Dundurn No. 313, Vanscoy No. 345
Winnipeg Census Metropolitan Area	City: Winnipeg
	Towns: Richot, Tache, Springfield, East St. Paul, West St. Paul, Rosser, St. Francois Xavier, Headingley, St. Clements
Toronto Census Metropolitan Area	Cities: Toronto, Mississauga, Brampton, Vaughan
	Regional Governments: Peel, Halton, York, Durham
	Towns: Markham, Richmond Hill, Oakville, Ajax, Pickering, Milton, Newmarket, Caledon, Halton Hills, Aurora, Georgina, Whitchurch-Stouffville, New Tecumseth, Bradford West Gwillimbury, Orangeville, East Gwillimbury, Mono ²³
	Townships: Uxbridge, King

23. Note that these are defined as “towns” by Statistics Canada, even though the local entity may be known as a city: for example, the City of Markham or the City of Pickering.



ISBN 978-0-7727-0935-6
ISSN 1927-1921