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New Challenges for Local and Community Governance and
Regional Economic Performance in British Columbia

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Abstract: This paper is the introduction to a series of four research papers on the topic of new challenges for local and community governance and regional economic performance in British Columbia. It provides an overview of the changing local governance landscape in the context of the New Community Charter and, more specifically, the political economy of local government in Canada. In doing so, the paper addresses the three questions of (1) whether the economic and political environment is germane to those changes; (2) how the Community Charter reforms affect the interplay of market and local - provincial relations and; (3) what impact these changes have on the capacity of municipalities and other local governments to mediate economic changes.

Apart from this introduction, the working paper series on regional economic performance in British Columbia includes the following papers:

1. Economic Performance and Economic Regions in the New Economy: Foundations, Strategy and Governance (Ben Brunnen, MPA Candidate);
2. Regions and Economic Development Policies: A Comparative Perspective (Scott Coe, MPA Candidate);
3. Cooperation and Competition in Region-Building: The Role of Incentives (Sam Broadbent, MPA Candidate); and
4. Water Management and Local Government Institutions: A Comparative Perspective (Scott Mathers, MPA Candidate).

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Introduction

With the adoption of the Community Charter, the local governance landscape in British Columbia has shifted. Municipalities have gained powers and have less incentive to engage with each other or with the provincial government. Such changes will make the relationships between the Ministry of Community Services (the Ministry) and local communities more complex. There is less scope for the Ministry to rely on traditional prescription and regulation to influence local governance and policy choices. Strategic leadership will be based on developing and sharing knowledge, monitoring developments in local communities, and fostering the communication of best practices within British Columbia and with other jurisdictions.

The new Community Charter gives municipalities fewer incentives to engage with the provincial government, and the latter has given up tools to intervene in how local governments work. However, an important factor contributing to strong and vibrant local communities is the quality of vertical intergovernmental relations with the provincial and the federal governments. As governance becomes more asymmetrical and complex, such vertical relations become even more important.

These changes also require that, depending on the issue, Ministry staff work across traditional boundaries of the BC public service, with local, federal and First Nations governments, and other stakeholders. Keeping abreast of leading edge knowledge and developments in other jurisdictions will be central to the conduct of effective inter-governmental relations. To move towards a knowledge-based ministry, it needs to foster professional development and opportunities to facilitate learning with colleagues elsewhere in the BC public service and outside as required.

Together, these observations have important implications for the Ministry. (1) It must find new ways to monitor and secure information about local government and community developments across BC. (2) The Ministry must find ways to foster learning and build expertise in local governments, and promote the exchange of best practices across local

government boundaries. (3) Its staff must work assiduously across ministry boundaries to understand the full impact of BC government policies on local communities. And (4) the Ministry must ensure that current and new staff are well-informed, prepared to work horizontally within the BC public service, and able to reach out effectively to key stakeholders on local and community governance issues.

The BC Local Government Knowledge Partnership addresses these challenges. It seeks to foster professional development, strategic learning, and stakeholder engagement by bringing together Ministry staff, scholars and other professionals from inside and outside the BC public service to explore complex policy and governance issues, and to identify new knowledge and best practices. These events could also lead to opportunities for the Minister to engage key stakeholders involved in local governance issues.

The following is an introduction to our Local Government Knowledge Partnership on *New Challenges for Local and Community Governance and Regional Economic Performance*. It frames the New Community charter reforms and overall changing governance environment of British Columbia in the larger context of the political economy of local government in Canada, in order to inform three questions:

- (1) Is the economic and political environment germane to those changes?

- (2) How do those reforms affect the interplay of market and local – provincial relations, and specifically what is the impact of those changes on the capacity of municipalities and other local governments to mediate economic changes?

Market Forces, Territory and Government Jurisdiction

The global economy, as many scholars have noted, modifies the politics of state relations in the intergovernmental arenas.¹ New technologies of information and communication also change the global economy and affect states: free trade integrates the economies of Europe and North America; free trade regimes pressure governments to ease regulations and to open new markets² and, furthermore, seem to enhance sub-national entities as economic players.³ The North American Free Trade Agreement regime promotes free trade and, some argue, also enhances sub-national entities as independent economic players.⁴ The global economy, new technologies, and free trade transform the relations of states and other government tiers with market forces and make governing much more complex.

In addition, for the last 20 years, scholars have increasingly questioned the relationship between market forces and territories. The traditional views that focused on territorial competitive advantage and infrastructures have progressively given way to new ideas that now point to the social construction of a territorial economy. For instance, the European debate on the nature of different capitalisms⁵ and the rediscovery of regional economies, the “Italian industrial districts,” both suggest that modes of production are culturally embedded and take different forms in different times and places.⁶

The social construction of a territorial economy suggests that modes of production and economic performance are culturally embedded and take different forms in different times and places, which also suggests that it is the articulation (institutionalization) of culture and individual choices that make a difference in the global market place. Thus institutional arrangements, in particular, become critical to the capacity of every local community to compete in the market economy.

Federal and unitary states adapt and mediate these international market and governance changes with varying difficulties.⁷ Focusing on the impact that globalization has on states, Saskia Sassen explains that new legal regimes “un-bundle sovereignties” and

“denationalise territories,”⁸ a process that also reconfigures the links between rights and territories and so has “disturbing repercussions for distributive justice and equity.”⁹ Keating, focusing on multination states in Europe, finds that along with constitutional reforms, an asymmetry of right develops which further differentiates local and regional constituencies in a process where federal and centralized states seem to progressively resemble each other.¹⁰ When looking at economic development policies in the Spanish regions of Catalonia and Galicia, he finds it is not culture or leadership that are key here; instead, different forms of institution building are central to understanding variances in development and policies.

This literature suggests that decentralizing, devolving, or constitutional reforms and/or statutory prerogatives have implications for institutional structures and allocation of functions, particularly for the governing capacity of lower level governments. Central governments are also less able to regulate, organize fiscal equalization, and reduce inter-regional or provincial competition. In some instances central governments actually encourage intergovernmental competition at lower government levels. In Canada, the constitution places local governments under the authority of provincial governments, which to a certain extent shelters local governments from those forces.¹¹ Free trade and increasing market competition, however, are undermining the capacity of provincial governments to shelter lower level governments as capital mobility and intergovernmental competition increase.

These changes in territorial and constituency politics are best described as tendencies towards greater legal, institutional, and functional complexity and an asymmetry of rights, while institutional capacity, as well as functional allocation, increasingly characterizes disparate and decentralized politics.¹² These issues about size, form, and functions of governments across all government tiers are neither uniquely Canadian nor do they signal a new trend. Throughout Europe, for instance, in Germany, the Netherlands, the United Kingdom or even France, central governments have attempted to merge local governments.¹³

The size, i.e. the territorial scope of government, and the form of government, whether centralized, decentralized, or multilevel, may be informed by local culture and history. It is also informed by trends. For instance, at the turn of the last century, amalgamation or annexations were viewed as the best methods to expand services in urban regions.¹⁴ During the 1960s and 1970s—a new period of vast expansion—there was also a trend to consolidation of local governments or upper-tier reforms. The basic assumption at that time was that centralization and consolidation of non-central government institutions to encompass large territories into metropolitan would lead to economies of scale and, thus, more efficient governments. It was assumed that efficiency required larger units for the delivery of services and that economies of scale would bring costs down but also to allow services to be extended from urban to rural areas alike. At the time, senior government encouraged local governments to spend more to complete the development of the welfare state; for instance, planners suggested that cities and their rural hinterlands should be planned together. Planners conceived large and coherent regional units that would encompass most economic and social activities—the living, work, recreation, and shopping patterns—of the population of those regions. Infrastructures were needed for these regions, and plans had to coordinate current and future development of services, including schools in relation to housing, housing in relation to the workplace, and the workplace in relation to shopping.

A number of structural and ideological transformations that occurred in the 1980s shed new light on these trends towards consolidation. First, there was a growing disenchantment, among academics as well as public officials, with the economy-of-scale argument; instead, arguments that upheld the efficiency of smaller units gained ascendancy. Second, the economic crises of the 1970s taught that planning in an unpredictable world was a difficult, if not impossible, activity. Third, public-choice scholars, reflecting neo-liberal ideologies, asserted that competing local governments better served democracy, efficiency, and consumer choice. Finally, problems had arisen out of the design of upper-tier governments, in particular, with their modes of election and their powers. Higher-level governments feared directly elected upper-tier governments might become too powerful, to the point where they became assemblies of

municipalities fighting for their own interests, rather than for the good of a region, a province, or state. Thus, the 1980s was a period of upper-tier reform during which central governments reversed decisions they had taken in the 1950-70s. A prime example is British Prime Minister Margaret Thatcher's decision to abolish metropolitan councils, including the Greater London Council. Other similar examples were the dismantling of the regional authorities in Spain (Barcelona) and the Netherlands (Randstad). These changes were all symptomatic of key ideological shifts in which the emphasis was not on service delivery or economies of scale, but rather on economic development and planning in the global economy.

Today, in British Columbia and elsewhere around the world, the debate on the ability of these reforms to institute either democratic or efficient local government institutions continues. Democracy as it is presented in the literature may vary with local government size, specifically, according to the size of electoral constituencies. Democracy is also influenced by the electoral mechanisms that organize direct or indirect representation of the electorate or citizen participation in policy making. The issue of efficiency is found in the economic literature favouring inter-urban, market-like competition, as well as in the literature favouring consolidation. One argument is that the market regulates cost-efficient services to the best level; the other argument is that economies of scale are possible in larger local governments.

Territory and Functions: Regional Economic Development and Performance

A considerable body of literature suggests that local/regional governments should do nothing about the economy. The central argument promoted by this view is that they cannot influence market forces; all they can do is be as competitive as possible in a highly constraining economic environment. Peterson's public choice approach makes a strong case by identifying the influence of market-economy mechanisms on the offer of public goods.¹⁵ He suggests that fragmented, overlapping, and competing jurisdictions may permit more efficient provision of services. Based on the assumption that the

provision of competitive services is in the interest of consumer-voters, he proposes that the ultimate economic development policy is to lower taxes.

However, other scholars hold a different view, pointing to the influence of political entrepreneurship, which links economic performance and democratic choice.¹⁶ Clarke and Gaile, for instance, in *The Works of Cities*, challenge public-choice approaches arguing that it is the articulation and alignment of local groups with local economic issues that is central to regional economic development successes. Their research shows that since the 1970s urban regions have shifted economic development policies away from locational strategies to providing strategies that facilitate a climate of growth. Governments have withdrawn from specific policy sustaining specific sectors or even firms to providing strategies that facilitate economic performance. This shift has brought the creation of local/regional institutions / infrastructures that bridge market needs with local democratic values and priorities.

The above shift in approaching the question of economic development and performance reflects the legal, economic and social features of each community/constituency, of their own perception in the global world. Each community / constituency may choose “contextually specific paths in responding to globalization,”¹⁷ which means that focusing on performance and innovation results in policies that are different from programs serving other interests and values. What remains essential for our purpose is that those policy initiatives are about linking localities to global markets, and critical investment in human capital and new information technologies.

Clarke and Gail conclude that *unsuccessful* strategies result from community fractures. They insist that it is the articulation and alignment of local groups with local and global economic issues that is central to regional economic development successes. Their work demonstrates that *successes* do not depend on private or public strategies, but rather are grounded in community-based consultation and decision-making processes. They also maintain that it is the creation of institutional processes of policy decision-making that are fundamental to economic development policy successes, and regional economic performance.

In conclusion, there is a large literature on globalization and the interplay of governments and market forces, which clearly underlines important governance changes, and point to the fundamental role of social capital in matter of regional economic performance, and particularly to mechanisms that bridge local with global interests. In British Columbia, the New Community Charter is a reform that affects the interplay of market and local – provincial relations. Finally, the literature on economic development also underlines the importance and strategic strength of local/regional decisions.

In the province of British Columbia, which is comprised of strikingly diverse regions with different geographical assets, economic foundations, communities, challenges, and needs, governments have always sought to strike the right balance between centralization and decentralization of public services. As underlined above, recent research suggests successful economic competition in continental and global contexts is driven by effective governance systems that require the adroit combinations of public policy making mechanisms. This is something the New Community Charter legislation addresses when it legislates on local – provincial relationships and consultation, and it is at the core of the policy question on regional economic performance and performance addressed in this introduction and following four papers.

Indeed, British Columbia is also facing increasing complexity of governance and policymaking. Policy makers are confronted with vertical and horizontal policy networks involving a multiplicity of actors from the public and private sectors. The new environment of multi-level governance policy making also involves citizen groups, experts, and local, provincial, and federal government departments and agencies. This has different implications for elected officials and managers at each government tier. To address such complex governance issues, these officials need distinct regional policy making mechanisms, skills, knowledge, and processes, to work effectively with one another, to work across government boundaries, and to engage citizen. And there may be a leadership role for the government of British Columbia in working with those local/regional policy makers to develop B.C. specific mechanisms of regional economic development and policy making/cooperation that would enhance economic performance.

Four Papers

The authors of the following four papers set their research-work in four overlapping questions that further explore those issues as they are relevant to British Columbia. The first paper is an in depth discussion of institutional, social and geographic variables and their effect on regional economic performance. The second paper provides an overview of regional economic networks and patterns of cooperation in comparable jurisdictions. The third paper addresses the extent to which incentives like revenue sharing can successfully be used to encourage innovative local government thinking and decision-making. The fourth and final paper investigates issues of water treatment and distribution for BC's regions and communities.

These first four papers thus address issues of regional performance and the governance issues associated with social and economic performance. In "*Enhancing Regional Economic Performance in British Columbia: Determinants, Strategies and Governance Arrangements*," Ben Brunnen argues that an ideal economic development governance arrangement should structure functional economic regions. These economic regions should group current Regional District on a voluntary basis but also include representatives from business, academic and community sectors. A strong incentive system would have to bring those partners together to encourage them and local governments to develop sustainable regional economic development strategies. His views branch out onto the work of Scott Coe on functional regions and governance, and on the work of Sam Broadbent on regional networking, cooperation and competition and the role incentives may have to enhance those linkages. Scott Coe in "*Regional Economic Development, Collaboration and Functional Governance*" argues that increasingly regional economic development is viewed as a matter of functional governance. A comparative analysis of specific B.C. regions with case studies in Washington State, U.S., New Zealand and Ontario, Canada, follows a brief review of the literature. Sam Broadbent in "*Cooperation and Competition in Region Building, The Role of Incentives*" reviews ten different incentives mechanisms to explain how the appropriate incentive system leads to regional cooperation and regional economic performance. The last paper

is a specific case study of the water management system in British Columbia. Scott Mathers in “*Water Management and Local Government Institutions: A Comparative Perspective*” reviews the B.C. water management system, suggests specific managerial regions and compares them to similar water management regions in New Zealand, the Seattle region, Black-River and London, Ontario.

This project would not have been possible without the support of the B.C. Ministry of Community Services and the University of Victoria Centre for Public Sector Studies. Furthermore, as co-editor of these four papers, I would like to thank my co-editor David Good, and also Thea Vakil for their invaluable and generous comments on each paper and this introduction.

¹ See, for instance: Ivo Duchacek, Perforated Sovereignties and International Relations: Trans Sovereign Contacts of Subnational Governments (Greenwood Press, 1988); Earl Fry, States and Provinces in the International Economy (1998); Thomas Courchene, From Heartland to North American Regions State (University of Toronto Press, 1999); Richard Balme, Les Politiques du NeoRegionalism (Paris: Economica, 1998); Michael Keating, The New Regionalism in Western Europe: Territorial Restructuring and Political Change (Edward Elgard Publishing, 1998); and Robert Young, Stretching the Federalism (Institute of Intergovernmental Relations, Queens University, Kingston, ON, 1999).

² Robert Keohane and Helen Milner, Internationalization and Domestic Politics (Cambridge, 1996).

³ Kenishi Ohmae, The Borderless World (Harpers Business Books, 1991).

⁴ Thomas Courchene, From Heartland to North American Region State: The Social, Fiscal and Federal Evolution of Ontario (University of Toronto Press, 1998). Thesis work on competitive advantage... citation

⁵ Michel Albert, Capitalisme Contre Capitalisme (Seuil: Paris, 1991).

⁶ The works of Piore, Sable or Porter are central to those views: Michael Piore and Charles Sable, The Second Industrial Divide: Possibilities for Prosperity (Basic Books: New York, 1984); Michael Porter, The Competitive Advantage of Nations (MacMillan: London, 1990).

⁷ See Robert Young, Stretching the Federation (Queen’s McGill University Press, 1999); Saskia Sassen, Losing Control (Columbia University Press, 1996); Trevor Salmon and Michael Keating, The Dynamics of Decentralization (School of Public Policy, Queen’s University Press, 1999).

⁸ Saskia Sassen, Losing Control (Columbia University Press, 1996), 28

⁹ Saskia Sassen, Losing Control (Columbia University Press, 1996), 29-30.

¹⁰ Michael Keating, “Asymmetrical Government: Multinational States in an Integrating Europe,” Publius 29 (1) (Winter 1999): 71-86; “Les nationalites minoritaires d’Espagne face a l’Europe” Etudes Internationales 30 (4) (1999): 729-743. Trevor Salmon and Michael Keating, The Dynamics of Decentralization – Canadian Federalism and British Devolution (School of Policy Studies, Queens University, Kingston, ON, 1999).

¹¹ See particularly Michael Goldberg and John Mercer, The Myth of the North American City: Continentalism Challenged (University of British Columbia Press, 1986); Donald Rothblatt and Andrew Sancton, Metropolitan Governance Revisited (IGS Berkeley Press, 1998); and Michael Keating, “Challenges to Federalism, Territory, Function and Power in a Globalizing World” (pp. 8-27) in Robert Young, Stretching the Federation: The Art of the State in Canada (Institute of Intergovernmental Relations, Queens University Press, 1999).

¹² This is Michael Keating’s argument in Michael Keating, “Challenges to Federalism, Territory, Function and Power in a Globalizing World” (pp. 8-27), in Robert Young, Stretching the Federation: The Art of the

State in Canada (Institute of Intergovernmental Relations, Queens University Press, 1999). An argument is also found in Salmon and Keating, The Dynamics of Decentralization (1999).

¹³In Belgium: http://www.cor.eu.int/resolutions/down/studies/decentralisation/bel/Belgique_EN.pdf;
in Germany: http://www.cor.eu.int/resolutions/down/studies/decentralisation/de/allemanne_en.pdf;
in the Netherlands: http://www.cor.eu.int/resolutions/down/studies/decentralisation/de/allemanne_en.pdf;
and in France: http://www.cor.eu.int/resolutions/down/studies/decentralisation/fr/france_en.pdf. In all four countries executive powers have been devolved progressively to local governments. In some instances, this devolution of executive powers includes some legislative authority or mandatory consultation in legislative matters, as well.

¹⁴See, for instance, the first three chapters of Andrew Sancton, Merger Mania (Queen's-McGill University Press, 2001).

¹⁵On the limited capacity of cities: Peterson, Paul, City Limits (University of Chicago Press, 1981), particularly Chapter 7; Michael Peter Smith, City, State and Market (1988); Schneider, M. , The Competitive City (University of Pittsburgh Press, 1989); King, D., Fiscal Tiers, The Economics of Multi-Level Government (London: Allen and Unwin, 1984).

¹⁶On economic development intervention: Logan, J. and Molotch, H., 1987, "Urban Fortunes", University of California Press. Stone, C. (1989) Regime Politics, Kansas University Press. Stone and Sanders in The Study of Politics of Urban Development (1987); Stone, C., Regime Politics - Governing Atlanta (Lawrence: University of Kansas Press, 1989). Reese, Laura, and Rosenfeld, Raymond, The Civic Culture of Local Economic Development (Sage Publications, 2001) and Reese, Laura, Local Economic Development Policy: The United States and Canada , Garland Reference Library of Social Science, Vol. 1109 (1997); Sbragia, Alberta, The Debt Wish (University of Pittsburgh Press, 1996); Clarke and Gaile, The Works of Cities (University of Minnesota Press, 1998). On the redistributive role of local government, see: Michael Keating, Comparative Urban Politics (Edward Elgar, 1991), particularly Chapter 6; Ladd and Yinger, America's Ailing Cities (John Hopkins University Press, 1989); Maioni, Antonia, "Decentralization in Health Policy: Comments on the Access Proposals," in Young, Robert, Stretching the Federation, Queens University Press: Kingston.

¹⁷ Susan Clarke and Garry Gaile(1998) The Works of Cities, University of Minnesota Press.

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Economic Performance and Economic Regions
in the New Economy:
Foundations, Strategy and Governance

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Abstract: Economic performance is an important determinant of the welfare of a jurisdiction. Strong economic performance nurtures innovation and encourages investment, creating wealth and economic growth. With recent innovations in communication and transportation technologies, combined with fewer trade barriers and increased capital/financial mobility, economic forces are increasingly becoming regional in nature. As such, local governments are playing an increased role in influencing regional economic performance. From a public policy perspective, strategies designed to enhance regional economic performance should contemplate both the value of economic production and the economic well-being of entities within the region. This paper explores the challenges in seeking to enhance regional economic performance and potential strategies for achieving this objective.

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EXECUTIVE SUMMARY

Economic performance is an important determinant of the welfare of a jurisdiction. Strong economic performance nurtures innovation and encourages investment, creating wealth and economic growth. With recent innovations in communication and transportation technologies, combined with fewer trade barriers and increased capital/financial mobility, economic forces are increasingly becoming regional in nature. As such, local governments are playing an increased role in influencing regional economic performance. From a public policy perspective, strategies designed to enhance regional economic performance should contemplate both the value of economic production and the economic well-being of entities within the region.

One of the challenges in seeking to enhance regional economic performance arises through differences in the boundaries of administrative and economic regions. Economic regions are fluid and flexible entities often delineated via trade linkages and/or commodity and people flows, while administrative regions are geographically constrained entities designed to deliver public services to constituents. Consequently, economic regions often transcend administrative regional boundaries and economic development policies need to be coordinated across local administrative regions spanning economic regions. Uncoordinated, internally oriented economic development strategies can potentially lead to unhealthy competition among local governments, resulting in a zero sum “race to the bottom.”

The integrated nature of economic regions creates challenges in understanding how to influence regional economic performance. Entities within functional economic regions are mutually dependent and exhibit a high degree of interaction, and it can be difficult to isolate the impact of specific shocks or activities on regional economic performance. While historical patterns of regional economic development influence the nature of economic activity, it is in realizing economies of agglomeration that economic performance can be best enhanced.

Economies of agglomeration arise from three factors: deep labour pools, integrated local supply chain linkages and localized knowledge spillovers. Deep labour pools are concentrated, quality local labour markets that draw economic activity because of potential specialization opportunities and economies of scale benefits associated with tapping into existing pools of human capital. Integrated supply chain linkages occur through the co-location of firms to realize economic benefits associated with accessing upstream or downstream supply chains. Knowledge spillovers arise when cost-saving information is diffused among firms through local innovation networks. Social capital theory suggests that knowledge spillovers occur largely through formal and informal networks of interaction that exist in agglomeration economies.

In developing strategies to enhance regional economic performance, jurisdictions should adopt a multi-faceted approach involving complimentary strategies and multiple stakeholders. These strategies include: developing a unique activity system to promote jurisdictional advantage through differentiation; encouraging stability and economic diversification to avoid path dependence and mitigate the impacts of cyclical downturns; facilitating human capital formation to attract firms and increase productivity; undertaking research and development through academic-private sector partnerships to encourage knowledge generation; facilitating entrepreneurial activity to encourage innovation; and nurturing social capital at the community level to develop community ties and facilitate local involvement in economic development issues.

Coordinating, implementing and operationalizing these strategies in the province of British Columbia requires participation from a broad range of stakeholders, including local governments, the private sector, academic institutions, economic development agencies, and local community organizations. Of these stakeholder groups, local governments have the greatest ability to influence economic development within their jurisdictions.

In developing a governance arrangement to mobilize local governments to work together to improve regional economic performance in British Columbia, the regional district

model appears to be an appropriate vehicle for bringing local governments together – as both municipal and electoral district members are represented on regional district boards, and the regional district model encourages local governments to cooperate rather than compete in delivering services within their boundaries. Ideally, an economic development governance arrangement could be structured to include all regional districts within functional economic regions. Given the permissive nature of the local government system in the province, regional district participation in a regional economic governance arrangement would likely occur on a voluntary basis. Such a governance arrangement would also require representation from the local business and academic sectors, and would need to encourage social capital development through some form of meaningful community participation. However, efforts to encourage British Columbia local governments to work together to enhance regional economic performance have proven to be difficult to develop and sustain in the past. Additional incentives may be required to encourage local governments to form and maintain a regional governance approach to enhancing economic performance.

1. INTRODUCTION

Economic performance is an important determinant of the welfare of a jurisdiction. Strong economic performance nurtures innovation and encourages investment, creating wealth and economic growth. With recent communications and transportation innovations, combined with trade barrier reductions and increased capital/ financial mobility, economic forces are increasingly becoming regional in nature. As such, local governments are playing an increased role in influencing regional economic performance.

Economic regions are fluid and flexible entities often delineated via trade linkages and/or commodity and people flows, and tend to span multiple local administrative regions, which are geographically constrained entities designed to deliver public services to constituents. In order to optimize regional economic performance, economic development policies need to be coordinated across local administrative regions spanning functional economic regions and, in developing strategies to enhance economic performance at the regional level, it is important to understand the nature of both economic and administrative regions, as well as factors that influence regional economic development.

This paper seeks to understand what factors influence regional economic development, and identify strategies and governance approaches to enhancing regional economic performance in the context of British Columbia. Section 2 of this paper discusses the nature of economic and administrative regions and seeks to define economic performance from a public policy perspective; section 3 discusses the economic and social foundations of regional economic development; section 4 presents strategies for enhancing regional economic performance in economic regions; and section 5 discusses governance arrangements for economic regions in the context of British Columbia.

2. REGIONAL ECONOMIC PERFORMANCE

A clear understanding of economic regions and economic performance is necessary to identify factors and develop strategies for improving regional economic performance. Economic regions contemplate the nature of economic relationships and activities among entities in space, and economic performance provides a measure of the economic activity within an area. This section seeks to develop an understanding of economic regions and economic performance from a public policy perspective.

2.1. Understanding Economic Regions

The construct of a region may refer to a variety of concepts, structures, areas, activities and/or relationships among individuals, stakeholders, entities and/or units of analysis. Gunnarsson (2000:185) defines a region from a relational perspective as “an interplay between actors and institutions within a given geographical area”, where the geographical area may be clearly defined or fluid depending on the nature of the interplay between actors and institutions.

One of the challenges with Gunnarsson’s definition is the connection to a geographic area. While regions are often defined geographically or in relation to a natural resource, they may also be defined functionally or conceptually. As such, it is important that a regional definition be able to accommodate these more elusive constructs. This can be achieved by applying a spatial approach (i.e. pertaining to the unlimited expanse in which everything is located) rather than a geographic approach (i.e. pertaining to the earth and its features and the distribution of life) to defining a region.

This idea is illustrated by Dawkins (2003:134) who defines a region as a “spatially contiguous population (of human beings) that is bound either by historical necessity or by choice to a particular geographic location. The dependence on location may arise from a shared attraction to local culture, local employment centers, local natural resources, or other location-specific amenities.”

Dawkins' definition is useful in that it considers historical and social elements in defining a region, in addition to geographic, economic and spatial factors. This is important because, as the author notes, the historical patterns of regional formation influence the evolution of modern regions, regardless of technological advancements (Dawkins 2003:134).

Hoover and Giarratani (1985: 9.5) present a definition of a region that captures all of the above listed considerations. The authors define a region as "a [spatial] area that is usefully considered as an entity for purposes of description, analysis, administration, planning, or policy" of which a normal attribute is "general consciousness of a common regional interest...[which]...makes possible some rational collective efforts to improve regional welfare" (Hoover *et al* 1985:9.1).

Common regional interests, as defined by Hoover *et al* (1985:9.1), may be manifested in terms of the areas of a region or through the interests of entities within a region, and this distinction allows for all regions to be broadly classified based on either **internal homogeneity** or **functional integration**.

Homogeneous regions are identified through some characteristic of internal uniformity (Hoover *et al* 1985:9.1, Dawkins 2003:134). A homogeneous region may be delineated based on geography, socio-economic characteristics, ethnicity, income, industrial structure, principal economic activity (or lack thereof), neighbourhood, land use, labour force, units of political or administrative control, culture, natural resource endowments, and/or the environment (Hoover *et al*, 1985, Dawkins, 2003). A key attribute of internally homogeneous regions is that their various components resemble one another more than they resemble areas outside the region (Hoover *et al* 1985:9.1). Classifying regions in terms of their homogeneity relative to other regions is a useful approach for comparative purposes.

Functional regions are internally integrated with respect to some characteristic or interest. By definition, the various components of functional regions "exhibit more

interaction with one another than with outside areas” (Hoover *et al* 1985:9.1). Noronha and Goodchild (1992:88) identify a functional region as “an aggregation of elementary spatial units (ESUs) that maximizes the ratio of within-region to between-region interaction” and note that functional regions “do not need to be composed of continuous, contiguous ESUs.”

The notion of functional regions may apply to a variety of integrated activities, including ecosystems, communications networks and social, cultural and political relationships. From an economic perspective, functional regions arise when factors of production (i.e. land, labour and capital) and/or commodity flows are more highly integrated internally than externally (Hoover *et al* 1985:9.1), and are often identified through internal trade linkages, commodity/ money flows, the movement of people, and/or the frequency of telephone calls (Hoover *et al* 1985:9.2).

A common functional economic region is the *nodal region*, in which economic activities are oriented towards a central dominant point or node (Dawkins 2003:134, Hoover *et al* 1985:9.1). An example of this is a city region with a central business district and a surrounding residential commuting or trading area. Functional economic regions may also be multi-nodal, whereby two or more separate nodes and peripheries exist, but none of which of which is dominant (Bailey and Turok 2001:698, Dawkins 2003: 134). Nodal economic regions are useful in analyzing worker dependence on adjacent employment centres, as well as business location, investment and trade activities.

Ultimately, it is the integrated nature of functional economic regions that provides a useful framework for analyzing regional economic performance, as an in depth understanding of the interrelationships between economic factors, entities and actors within functional economic regions provides the greatest assistance in developing strategies to enhance regional economic performance. The definition of a region put forward by Hoover *et al* (1985) (as discussed above) is the most useful from an economic policy perspective, as it contemplates the integrated nature of economic activities within

regions, and is capable of accommodating a broad range of relationships among economic factors, actors and entities.

2.2. Administrative Versus Functional Economic Regions

One of the challenges in developing strategies to enhance regional economic performance arises through differences in the boundaries of administrative and functional economic regions. Functional economic regions are characterized by their degree of internal integration such as commodity, money, and commuter flows. However, administrative regions are delineated based largely on geographic boundaries and are established to represent and provide services to their constituents. Economic regions also tend to transcend administrative boundaries, particularly those of neighbouring local municipal and regional governments.

As such, economic development policies designed to attract firms and investment in a single administrative region may not sufficiently extend over an entire functional economic region, creating spillover effects and/ or inefficient economic development policies. Uncoordinated, internally oriented economic strategies developed by one administrative region comprising only a portion of a larger economic region can potentially lead to unnecessary amenity duplication across neighbouring jurisdictions in some instances, amenity under-provision in others, issues of free-ridership (i.e. where neighbouring jurisdictions receive benefits without incurring costs) and/or unhealthy competition among local governments for firms and investment.

For instance, economic policies that provide tax, cash or amenity incentives to firms willing to locate in a particular jurisdiction are not likely to be successful in the long run, as they can be easily replicated (Feldman and Martin 2004:23) and engage neighbouring jurisdictions in a zero-sum “race to the bottom.” In a study of strategic interactions among U.S. states for the competition for firms and jobs, Fredriksson, List and Millimet (2003:2) test whether localities trade off tax incentives, infrastructure spending and pollution control standards to attract firms and jobs into their jurisdictions, and conclude that “states respond to increased governmental expenditure levels of neighbours by

lowering their own pollution standards” (Fredriksson *et al* 2003:19). Such behaviour can be extremely short-sighted and is not conducive to long-term prosperity. Firms that choose to locate in a particular jurisdiction based on such incentives are not likely to be the best suited to the jurisdiction, and may not have a sustainable long-term business strategy: if such incentive arrangements between the jurisdiction and the firm become unsustainable, the long-term economic viability of the region becomes jeopardized. Rather, neighbouring jurisdictions need to cooperate and coordinate their efforts in developing strategies to enhance regional economic performance.

2.3. Understanding Economic Performance

Regional economic performance relates to the economic activities of entities, agents and/or organizations in a region over a given period. A common measure of economic performance is the value of economic production, which refers to the use of factors of production (i.e. land, labour and capital) in the creation of goods and services.

Economic production is often measured in aggregate as Gross Domestic Product (GDP) (i.e. the unduplicated value of all goods and services produced in an economy over a specified time period), but it can also be expressed in per capita terms and/or as output per production factor (productivity). Conceptually, economic production may be enhanced by expanding the factors of production (e.g. developing untapped resources), putting idle factors to work (e.g. employing the unemployed, revitalizing brownfield properties) and increasing the productivity of existing factors (e.g. developing innovations and applying new technologies to realize production efficiencies). Identifying opportunities to enhance economic production provides an indication of the unrealized production potential of an economy.

Production and productivity traditionally serve as reliable measures of economic performance from administrative benchmarking and private sector investment perspectives. However, from a public-policy perspective, the value of production as a measure of economic performance may not be sufficient in and of itself. This is because production does not necessarily contemplate the well-being of individuals within a

jurisdiction; rather, it measures the value of goods and services produced. If government is a vehicle by which individuals may further their shared interests by acting in common (Locke 1967, as cited in Feldman and Martin 2004:8), then in seeking to enhance economic performance, governments need to consider the impact of economic policies on their constituents. Indeed, the primary economic interest held in common by all individuals is the accumulation of wealth (Feldman and Martin 2004:8) which is a measure of individual welfare and a key determinant of quality of life.

Wealth is best defined as a combination of income and investments. Income is measured as the sum of real wages, dividends and transfer payments. Real wages comprise the majority of individuals' income. Economic sectors in British Columbia displaying relatively high average 2005 real wages include goods producing industries such as forestry, mining, oil & gas, and construction, as well as service industries such as wholesale/ retail trade, professional, technical and educational services, and finance and real estate services (BCSTATS 2006).

Investments, particularly at the individual or household level, are best measured through residential property values. This is because the single largest investment made by individuals and families is residential housing, the price of which tends to reflect the value of local amenities and the local quality of life (Feldman and Martin 2004:8).

In seeking to enhance regional economic performance, governments should not only contemplate increasing regional production and productivity, but also increasing the wealth of constituents within a region. In applying this concept of economic performance, to the concept of a functional economic region as presented by Hoover *et al* (1985) (as listed above), a useful definition of regional economic performance can be identified. For the purposes of this paper, **regional economic performance** is best defined as *the analysis of functionally integrated economic regions with respect to the economic production and economic well-being of entities within the region*. This definition provides a useful framework for understanding regional economic

development and in identifying strategies to improve regional economic performance in British Columbia.

3. FOUNDATIONS OF REGIONAL ECONOMIES

The integrated nature of economic regions creates challenges in understanding how to develop strategies to influence regional economic performance. Individuals, entities and economic factors within functional economic regions are mutually dependent, and exhibit a high degree of interaction. It can be difficult to isolate the impact of specific shocks or activities on regional economic performance and, therefore, it is important to understand how economic regions form and develop. This section draws upon the theoretical foundations of regional economic activity to develop an understanding of the factors that influence regional economic performance.

Hoover *et al* (1985:1.2) identify three phenomena that underlie the patterns of location of economic activity. These include: [1] differential natural resource endowments which create comparative advantages (i.e. imperfect mobility of land and other productive factors); [2] transportation and communication costs (i.e. imperfect mobility of goods and services); and [3] economies of agglomeration (i.e. imperfect divisibility of production factors and goods/ services).

The presence of differential, particularly immobile, natural resource endowments such as rich energy and mineral deposits, forests, fisheries and/or favourable growing climates influences the location decisions of both firms and individuals. An example of economic activity developed around immobile resource endowments in British Columbia is the creation of the resource municipality of Tumbler Ridge in 1981, which was developed by the province to tap into rich coal mining deposits.

Transportation and communication costs also influence the patterns of location of economic activity. The Province's plan to transform Prince George into an inland port to move air, sea and land cargo to Asian and North American markets, and develop Kamloops and Ashcroft as southern interior inland ports as part of *Canada's Pacific*

Gateway project (British Columbia, 2006) will influence the economic makeup and location decisions of firms and households within these municipalities and along strategic trade routes. Similarly, the multiple commuter corridors across municipalities in the Lower Mainland and in the Capital Region are the result of individuals making location decisions based on proximity to centres of economic activity.

Firms will also co-locate to access agglomeration economies, in which firms co-locate to realize external benefits and economies of scale. Manufacturing firms in British Columbia, for instance, are based in the Lower Mainland to access local labour resources and major trade and consumer markets to the south and across the Asia-Pacific, and also seek to be in proximity to intermediate suppliers and producers of manufacturing outputs. It is in realizing agglomeration economies that the productivity of existing factors is enhanced, attracting additional firms and investment, and ultimately enhancing economic performance by developing untapped resources and putting idle factors of production to work.

Geographic concentration is a prerequisite of agglomeration economies because externalities in the process of production have a spatial dimension. Agents are bounded by distance and time (Lopez-Baso, Vaya and Artis 2004:44) and firms must balance natural geographical endowments and cost advantages against scale economies in selecting a location. This explains why cities and regions develop in proximity to transportation hubs, immobile factors of production, or deep labour pools. Ellison and Glaeser (1999:311) estimate that observable resource and labour market natural cost advantages account for one fifth of the concentration of manufacturing firms in the United States and that a large number of other concentrated industries may be explained through intra-industry spillovers.

Economies of agglomeration arise as a result of three observed phenomena: deep labour pools, integrated local supply chain linkages and localized knowledge spillovers (Koo, 2005:106, Dawkins 2003:137, Duranton 2004:5). **Deep labour pools** are concentrated, quality local labour markets that draw economic activity because of potential

specialization opportunities and economies of scale benefits associated with tapping into existing pools of human capital. Labour, in general, tends to be less mobile than capital, and workers accumulate human capital through education and workplace skill development over time (i.e. “learning by doing”), which they bring with them as they transfer into new positions throughout their careers. Deep labour pools facilitate the transference of knowledge and ideas among co-locating firms in similar industries or that use similar technologies through the transference of workers that share cost-saving information and stimulate innovation (Koo 2005:108).

Integrated Supply Chain Linkages occur through the co-location of firms to realize economic benefits associated with accessing upstream or downstream supply chains. As Koo (2004:99) notes “well-developed intermediate input supplier networks create market-driven externalities through scale economies”. Integrated supply chain linkages lead to agglomeration economies through the co-location of firms involved in different stages of production of similar industries, which allows for increased productivity through specialization and greater local competition, providing incentives for innovation and greater opportunities for knowledge transfer through the complementary nature of firm production activities (Casey 2004:99).

Knowledge spillovers arise when cost-saving information is diffused among firms through formal and informal local innovation networks (Koo 2005:111). Knowledge spillovers arise because knowledge, as a tradable commodity, displays attributes of a public good – it is both non-rival (its use by one entity does not diminish its use for others) and non-excludable (once provided, it cannot be prevented from being consumed).¹ However, like all commodities, knowledge does not diffuse instantaneously across space. Rather, it is developed and implemented over time by firms and acquired by workers throughout their careers. As knowledge is accumulated, a region experiences greater cost advantages through productivity enhancements, which stimulates economic

¹ It should be noted that to some extent, patents protect knowledge and innovations from unauthorized uses, allowing for some degree of excludability.

growth (Dawkins 2003:150) and firms will co-locate to access the external benefits associated with localized knowledge spillovers.

One of the challenges associated with understanding knowledge spillovers lies in framing the mechanism by which knowledge is transferred within agglomeration economies. The economic benefits associated with deep labour pools and supply chain linkages are pecuniary in nature, because they arise through economic market interactions and can be accounted for and modeled through economic constructs such as returns to scale, market power and factor mobility (Koo 2005:109). Knowledge spillovers, however, are non-pecuniary externalities that arise through localized spillovers through formal and informal networks not captured in the market and, as a result, are less well understood and difficult to model and measure (Koo 2005:111).

Recent theories suggest that it is the cooperation, trust, coordination and close working relationships within concentrated groups that facilitate knowledge transfers and the generation of new ideas within economic regions, encouraging innovative activities and enhancing economic performance (Koo 2004:107). **Social capital** theory, in particular, suggests that knowledge spillovers occur largely through formal and informal networks of interaction that exist in agglomeration economies. Savitch and Kantor (2003:1010) frame social capital as “the supporting human relationships that enable people to work together for common purposes”, which are built on trust developed through “common patterns of socialization and an acceptance of institutions, rules, norms, identities, and beliefs.” Trust “entails the recognition of a common future, a willingness to engage in reciprocal endeavours and invest in one another’s enterprise – psychologically and materially” and is at the essence of community relationships (Savitch and Kantor, 2003:1011). Hirsch (2006) recognizes the importance of social capital in noting that the economy in itself is a social manifestation based on “a set of agreements and customs among its agents,” suggesting that social capital forms the essence of a market economy.

In rationalizing the role of social capital in economic performance Casey (2004:98) notes that “networks of association developed in civic organizations instil diffuse bonds of

trust, cooperation and solidarity, facilitating collective action. Like human and physical capital, social capital increases productivity by reducing transaction costs and disseminating technical and organizational knowledge.” Social capital provides greater certainty/ less risk for entrepreneurs in making investment decisions, and contributes to economic growth through information transfer among informal networks (Casey 2004:99).

Common measures of social capital include voluntary organizations, chambers of commerce, community groups, social clubs, churches, and civic engagement. In modelling the relationship between social capital and economic prosperity in Britain, Casey (2004:104,110) finds that more prosperous regions exhibit greater rates of participation in civic organizations and higher levels of trust, but that engagement in public affairs and economic associations are not positively correlated with economic prosperity. Indeed, it is thought that not all social capital is productive. Casey distinguishes between bridging (inclusive) and bonding (exclusive) social capital. Ethnic enclaves may be deemed examples of exclusive social capital because they are internally focused and often extend only to a limited group of individuals. Chambers of commerce and voluntary organizations, however, may be viewed as inclusive, because they seek to encourage participation, information sharing and networking. The underlying idea behind productive social capital is to establish connections among different groups across the social hierarchy to build trust, enhance social cohesion and facilitate knowledge transfer (Casey 2004:99).

Economic regions displaying elements of economies of agglomeration are known as “**economic clusters**.” Koo (2005:107) defines a cluster as “a geographically concentrated and interdependent network of firms linked through buyer supplier chains or shared factors.” Successful clusters are those that attract firms with similar products, production processes and organizational structures. They provide for labour pooling, industry specialization and knowledge spillover opportunities that enhance regional productivity and competitiveness (Almazan 2003:39, Dissart 2003:439). However,

successful clusters are also a source of stability, in that they attract firms that are sensitive to different economic shocks, but able to share resources through inter-firm relations.

It is these inter-firm relations that facilitate the knowledge transfer and innovative activity that lead to improved economic performance (Koo 2005:107), as the co-location of firms in and of itself does not lead to a successful cluster. Indeed, when a cluster is dominated by externally owned branches and entities, local linkages are absent and firms are less likely to share information (Koo 2005:107), and when firms in a region outsource, they lose familiarity with production processes and develop fewer linkages with the regional network (Feldman and Martin 2004:21), severing community ties and eroding social capital.

4. STRATEGIES FOR ENHANCING REGIONAL ECONOMIC PERFORMANCE

Given the complex interface of factors, activities and interactions that influence the formation and performance of regional economies, it can be challenging to develop strategies to enhance regional economic performance. In confronting these challenges jurisdictions need to adopt a multi-faceted approach involving complimentary strategies and multiple stakeholders. These include: developing a unique activity system to promote jurisdictional advantage through differentiation; encouraging stability and economic diversification to avoid path dependence and mitigate the impacts of cyclical downturns; facilitating human capital formation to attract firms and increase productivity; undertaking research and development through academic-private sector partnerships to encourage knowledge generation; facilitating entrepreneurial activity to encourage innovation; and nurturing social capital at the community level to develop community ties and facilitate community involvement in economic development issues. These strategies are further discussed below.

4.1. A Unique Activity System

In developing economic performance enhancing strategies, it is important to build on the natural endowments, expertise and comparative advantages of the economic region, as

the historical patterns of development and economic makeup of the region will influence the nature of future economic innovations and activities.

Feldman and Martin (2004:14) distinguish the location decisions of firms in terms of production and innovation. Production is based largely on resource endowments and/or transportation costs, and production oriented firms will remain in a particular location until physical investments are no longer viable due to resource depletions or market shifts. Innovation oriented firms tend to locate where knowledge externalities reduce the costs of discovery and innovation through the presence of existing resources and/or evidence of past success. The challenge lies in nurturing innovative activities that compliment existing production and resource endowments.

Developing research, knowledge and innovation that lead to technological breakthroughs requires a “sophisticated understanding of consumer needs, existing markets for product innovation and factor inputs and prevailing production technology” (Feldman and Martin 2004:4). While economic clusters may encourage innovative activity through economies of agglomeration, it is difficult, if not impossible, for governments to identify specific industries, sectors and areas to target economic development initiatives. This is because technological advancements are often characterized by first-mover advantages (i.e. the initial innovator is able to capture significant market share), and once an industry has been identified as a candidate for economic development strategies, it is likely that majority of the benefits will have already been captured by other jurisdictions (Feldman and Martin 2004:4). This is evidenced through the vast number of jurisdictions that have sought but failed to replicate the successes of economic regions such as Silicon Valley in California, which is a highly technologically specialized region.

Feldman and Martin (2004:21) recommend that regions pursue a jurisdictional advantage strategy known as a *unique activity system* consisting of “those activities and capabilities which, in combination, create a uniquely favourable jurisdiction for some set of industries.” The unique activity system would build on existing resources in collaboration with the private sector to provide some level of product differentiation or

low cost benefit, creating a competitive advantage over other jurisdictions (Feldman and Martin 2004:5). The involvement of the private sector is critical to the process, as firms have a vested interest in securing the economic success of a region, and possess specialized knowledge of the unique challenges that shape their industries.

4.2. Stability and Economic Diversity

Diversity of activities and competition among relating and supporting industries strengthens regional economies and enhances innovation, particularly when compared to local monopolies (Feldman and Martin 2004:17). While it is important that firms in similar industries locate in proximity to each other to realize the benefits of agglomeration economies, it is also important to encourage healthy competition and create incentives to develop product differentiation and new production technologies.

Diversification also ensures regions are not overly dependent upon cyclical variations, because regions that specialize in cyclically sensitive activities are vulnerable to cyclical swings. In a review of economic diversification literature, Dissart (2003:425) finds that economic diversity is positively linked to economic stability, and that more economic diversity is correlated with less growth in unemployment and more stable income. Moreover, the author suggests that in seeking to improve economic performance, governments need to adopt a diversified specialization approach to economic development, in which firms with differentiated products that rely on similar knowledge bases and production processes co-locate to access economies of agglomeration, mitigating the risks associated with cyclical downturns (Dissart 2003:438).

One of the challenges in seeking to diversify regional economies and/or create a unique activity system is the “path dependence” of industrial based regions. Path dependencies result from “political lock-ins”, in which institutional tissues (such as political administrations, trade unions, businesses and lobby groups) seek to preserve existing industrial structures by lobbying for sectoral interventions and/or subsidies rather than attracting inward investment and encouraging innovation and creativity (Hassink 2005:522). Path dependence prevents regions from responding to and capitalizing on

economic trends in a timely manner, leading to economic stagnation and ultimately industry closure (Feldman and Martin 2004:3, Hassink 2005).

Hassink (2005:525) identifies the concept of a “learning region” as a mechanism to alleviate political lock-ins and avoid path dependencies. A learning region is a “regional innovation strategy in which a broad set of innovation-related regional actors (politicians, policy-makers, chambers of commerce, trade unions, higher education institutes, public research establishments and companies) are strongly, but flexibly connected with each other, and who stick to a certain set of policy principles”. A learning region allows for governments to develop regional economic strategies in collaboration with the private sector and other regional stakeholders through ongoing working relationships to avoid path-dependence and situations where jurisdiction-firm interaction begins only when firms threaten to leave (Feldman and Martin 2004:24). Hassink (2005:532) suggests that the concept of a learning region could be combined with the regional cluster concept to form a “learning cluster”, in which a region is able to benefit from economies of agglomeration and develop strategies to avoid path dependencies in collaboration with regional stakeholders.

4.3. Knowledge Generation, Transfer and Innovation

Human capital, research and development (R&D) and entrepreneurial activity enhance economic performance by attracting firms, facilitating knowledge spillovers and encouraging innovation (Koo 2005:112, Feldman and Martin 2004:16).

Human capital is defined as the education, training and skills that individuals bring to the labour force. It is positively linked to wages (Glaeser 1994), employment growth and productivity, particularly in urban areas where skill matching, skill development and knowledge transfer enhance human capital productivity (Shapiro 2005:2). Human capital is also less mobile than physical capital, because as individuals develop knowledge and experience, they also develop relationships and economic/ social ties to their communities (Feldman and Martin 2004:16). Firms in knowledge based and labour intensive industries will follow highly skilled individuals to high amenity regions or

compensate employees for dis-amenities (Kohler 1997). Human capital adds depth to labour pools and facilitates knowledge generation, retention and diffusion, attracting firms and stimulating innovation within agglomeration economies, ultimately enhancing economic performance (Koo 2005:112). Governments would be well-advised to ensure economic regions possess sufficient levels of human capital to facilitate knowledge transfer, foster innovation, and stimulate economic development.

Research & Development

The non-rival and non-excludable characteristics of knowledge as a commodity facilitate its diffusion across firms within agglomeration economies. However, these spillover effects prevent firms from fully capitalizing on the returns to their R&D investments, creating a disincentive to invest in R&D activities (despite patent protections) leading to its under-provision in the economy (Koo 2005:111). There is, therefore, a role for the public sector in funding R&D activities to facilitate knowledge generation, innovation and knowledge transfer, ultimately enhancing economic performance. Research suggests that this may be best achieved at the university level, as the co-location of university research and industrial R&D firms has been demonstrated to create a vertically integrated “local innovation system” that facilitates knowledge spillovers through the absorption of academic research in the market (Agrawal and Cockburn 2002). The challenge lies in ensuring the academic research produced can be absorbed and utilized by firms within local economies, suggesting the need for university-private sector partnership approach to developing and implementing an academic-private sector R&D agenda.

Entrepreneurialism

Entrepreneurial activity fuels innovation and enhances economic performance. New firms exploit new opportunities, using unique skills and knowledge to bring new technology to the market, and rely on local contacts and familiarity with the local business environment (Feldman and Martin 2004:12, Casey 2004:99). Policy-makers need to ensure that the business environment is conducive to encouraging entrepreneurial activity, by ensuring that new businesses are not unnecessarily burdened by onerous regulatory frameworks and that potential entrepreneurs (including graduates of applied

studies and apprenticeship programs) are equipped with the education, training and skills necessary for starting and operating a business. As Hirsch (2006) notes, “even the most level playing field in the world will lie empty if we don’t equip our labour force with the creativity and innovation they need to play the game.”

To this end, policy-makers should develop strategies to nurture a business friendly environment in the province. In a recently released report, the British Columbia Task Force on Community Opportunities recommends that a multi-stakeholder standing committee be established to develop and promote business-friendly practice guidelines in the province, and that local governments maximize the use of a single access service window to enhance their ability to deliver services to businesses in the province (Task Force on Community Opportunities (TFOCO) 2006:24).

4.5. Community Social Capital

Strong community social capital positively influences regional economic activity. Savitch and Kantor (2003:15), in a study of the economic performance of 10 European and North American cities, identify that the primary difference between healthy and destitute communities lies in the ability of a jurisdiction to “create, circulate and retain wealth.” Moreover, the authors observe that jurisdictions exhibiting strong community ties and local business ownership demonstrate the greatest economic performance (Savitch and Kantor 2003:1012).

To encourage economic development through greater community ties and wealth retention at the local level, the authors suggest that cities be rescaled downward to the community organization level, but that the influence of community organizations be rescaled upward to broader levels of government (Savitch and Kantor 2003:1012). This is because community involvement in local development initiatives is often achieved through local community associations/ economic development organizations, which provide opportunities for residents and community members to meaningfully influence how their neighbourhoods grow and develop. However, these types of organizations tend to be inward focused, pursuing objectives that are of greatest benefit to the community

(e.g. NIMBY orientations), rather than to the entire jurisdiction (Savitch and Kantor 2003:1013).

That said, it is difficult for local community organizations to influence major economic development decisions on their own, as the nature of democratic institutions is such that local initiatives succeed at higher governance levels only when they become part of a larger base of issues (Savitch and Kantor 2003:1013). This creates challenges for local communities and individuals to meaningfully participate in economic development decisions affecting their communities, potentially creating an environment in which citizens are less engaged and less likely to develop local community ties.

To correct this, Savitch and Kantor (2003:1014) suggest that community development activities be “linked to organizations capable of aggregating these interests to build civic cooperation around broad issues.” From a governance perspective, community development activities could potentially be linked to economic development decisions through some form of economic development corporation that represents the collective interests of community organizations at a functional regional governance level. Such an organization would represent the interests of communities affected by economic development strategies, and provide opportunities for local input at a regional economic level. This arrangement could have the effect of meaningfully involving communities in major economic development decisions, encouraging civic participation and forging community ties, while balancing local interests with those of the broader region.

5. REGIONAL ECONOMIC GOVERNANCE IN BRITISH COLUMBIA

Coordinating, implementing and operationalizing strategies for enhancing regional economic performance requires participation from a broad range of stakeholders across the province, including local governments, the private sector, academic institutions, economic development agencies, and local community organizations. Of these stakeholder groups, local governments have the greatest ability to influence economic development within their jurisdictions, as they possess the legislative authority to zone, regulate and tax businesses within their communities. As such, any regional economic development strategy must contemplate the governing structures and functions of the local government system.

Savitch and Kantor (2003:1018) differentiate between government and governance oriented approaches to improving economic performance. Government approaches involve the creation of an umbrella institution or multi-tiered vehicle with region-wide functions, which tend to be hierarchical, inflexible, bureaucratic and layered. Governance refers to the notion that existing institutions and administrative units can be harnessed in new ways on a fluid, voluntary basis. Examples of governance arrangements include the *linked functions approach* (in which higher and lower levels of government reach an agreement over a specified set of objectives), and the *complex networks approach* (in which existing, independent administrative regions “make decisions through multiple, overlapping webs of interlocal agreements”) (Savitch and Kantor 2003:1018).

The authors suggest a governance approach is most appropriate for enhancing economic development, because it allows local governments to combine resources and coordinate their bargaining position by capitalizing on their respective strengths, while maintaining flexibility to respond and adapt to shifts in the global market (Savitch and Kantor 2003:1019). Governance approaches allow administrative regions to harmonize regulatory, taxation, zoning and infrastructure placement policies to manage public capital for private purposes, reducing zero-sum competition and broadening the local tax

base through increased private investment. Governance approaches provide individual administrative regions with flexibility in pursuing innovation strategies and/or capitalizing on unique individual strengths, and allow for local government to coordinate and undertake research and policy analysis to understand the trends and factors shaping economic regions (Savitch and Kantor 2003:1019).

Bish (2001:1), in a study of local government institutional structures, argues that centralized governance structures are unlikely to meet the need for institutional adaptability, and that large and centralized governance structures have less familiarity with local conditions and are less capable of responding to local needs. Decentralization among local governments, on the other hand, provides for flexibility in choosing the scope and degree of services delivered to residents, allowing local governments to partner with neighbouring jurisdictions or deliver services directly, as situations warrant.

Multiple administrative regions working together to form a complex governance network across a functional economic region through interlocal agreements essentially form a **functional administrative layer** extending across a functional economic region. The key to forming a successful functional administrative layer lies in ensuring local governments are both willing and able to work together to develop strategies for enhancing regional economic performance.

The local government landscape in British Columbia is somewhat conducive to developing functional governance arrangements. British Columbia consists of 157 municipalities, each belonging to one of 27 regional districts that encompass the vast majority of the province (TFOCO 2006:3). Through the provincial legislative framework, local municipal and regional governments in British Columbia are able to work together to coordinate their service delivery activities. At the municipal level, municipalities may provide services outside their municipal boundaries, adopt inter-municipal regulatory/ service delivery schemes, enter into partnering agreements for the delivery of services, and enter into service delivery and regulatory agreements with other public authorities (Statutes of British Columbia, 2003).

At the regional level, regional districts provide regional services and activities to member municipalities and rural electoral areas generally on an as needed basis. Regional district boards are comprised of elected municipal counsellors appointed by their councils and directly elected members from electoral areas. All new activities undertaken by the regional district must be approved by the board members representing the area in which the activity is to be undertaken. However, regional district activities do not need to be undertaken across the entire region. Rather, “any combination of municipalities and electoral areas, or only part of an electoral area, can join together to provide an activity through the regional district structure,” providing for flexibility in the design of service areas, based on the choices of the local electorate, who finance regional services provided their areas (Bish 2002:8,17).

Another important feature of regional districts is that “the same elected officials are responsible for the functions regardless of the level at which the activities are provided or produced.” As a result, regional districts do not necessarily create competition and rivalry among elected officials for the delivery of services, rather, cooperation is encouraged where regional benefits can be achieved (Bish 2002:17).

While the BC local government system encourages flexibility and cooperation in delivering services to citizens, from an economic development perspective, local governments are often inward focused and tend to be “challenged to place regional well-being ahead of community self-interest” (TFOCO 2006:13). Efforts to encourage local governments to work together to enhance regional economic performance have proven to be difficult to develop and sustain in the past, due to a number of a number of factors including: regional economic development not being regarded as a function of local government institutions and structures; difficulties in identifying functional economic regions and in developing lasting partnerships at the appropriate scale; short-sighted local governments pursuing individual economic development policies at the expense of regional cooperation; and a lack of direct, tangible financial benefits accruing to local governments as a result of participation in coordinated economic development strategies (TFOCO 2006:26).

As such, local governments may require additional incentives and/or modified governance arrangements in order to facilitate cooperation and coordination in developing regional economic development policies. The issue of local government incentives in regional economic development is particularly important, especially since the empowering legislative framework under which local governments operate has not yet led to any significant sustained efforts by local governments to work together to enhance regional economic performance. The British Columbia Task Force on Community Opportunities (2006:17) suggests that this phenomenon is largely the result of regions being unable to capture the economic rewards associated with their efforts. Broadbent (2006) further analyzes the role incentives in encouraging cooperation among local governments in a complimentary report entitled: *Cooperation and Competition in Region Building: the Role of Incentives*.

In terms of developing a governance arrangement to mobilize local governments to work together to improve regional economic performance, the regional district model appears to be an appropriate vehicle for bringing local governments together – as both municipal and electoral district members are represented on regional district boards, and the regional district model encourages local governments to cooperate rather than compete in delivering services within their boundaries. However, while regional districts can provide services outside their boundaries via a contract or extending a service into neighbouring regional districts, “the current legislative framework is not designed to enable multi-regional service delivery and partnerships without one of these regions acting as the dominant partner” (TFOCO 2006:11). As such, regional districts are constrained in their ability to provide services outside their boundaries, and will need to work together to coordinate their efforts to improve regional economic performance when economic regions span multiple regional districts.

Ideally, an economic development governance arrangement could be structured to include all regional districts within functional economic regions. However, given the permissive nature of the local government system in the province, regional district participation in a regional economic governance arrangement would likely occur on a

voluntary basis. Additionally, given the need to adopt a multi-faceted approach to economic development involving a number of complimentary strategies and multiple stakeholders (as discussed in the previous section), such a governance arrangement would require representation from the local business and academic sectors, and would need to encourage social capital development through some form of meaningful community participation. Economic development policies undertaken in other jurisdictions could potentially add insight as to how to structure an effective regional governance arrangement in British Columbia. This issue is further explored by Coe (2006) who, in a complimentary research report entitled *Regional Economic Development: Collaboration and Functional Government*, undertakes a review of regional economic development policies in comparative jurisdictions.

6. CONCLUSION

The complexity and multiplicity of elements and activities influencing economic development creates challenges for governments in selecting and designing successful approaches to enhancing regional economic performance. Economic regions are fluid and flexible entities capable of adapting and responding to market forces, while local governments are geographically constrained entities, established to represent and deliver public services to their constituents. Economic regions often transcend administrative regional boundaries and, as such, economic development policies need to be coordinated across local administrative regions spanning economic regions.

While historical patterns of regional economic development influence the nature of economic activity, it is in realizing economies of agglomeration that economic performance can be enhanced. Agglomeration economies arise from three factors: deep labour pools, integrated local supply chain linkages and localized knowledge spillovers. Of these, knowledge spillovers are the most difficult to develop, and arise when cost-saving information is diffused among firms through local innovation networks. Social capital theory suggests that knowledge spillovers occur largely through formal and informal networks of interaction that exist in agglomeration economies.

In developing strategies to enhance regional economic performance, this paper finds that jurisdictions should adopt a multi-faceted approach involving complimentary strategies and multiple stakeholders, including: developing a unique activity system to promote jurisdictional advantage through differentiation; encouraging stability and economic diversification to avoid path dependence and mitigate the impacts of cyclical downturns; facilitating human capital formation to attract firms and increase productivity; undertaking research and development through academic-private sector partnerships to encourage knowledge generation; facilitating entrepreneurial activity to encourage innovation; and nurturing social capital at the community level to develop community ties and facilitate local involvement in economic development issues. The success of any

such approach hinges on how well local linkages among local governments, firms, academic institutions, and local communities can be developed.

In British Columbia, the regional district model appears to be an appropriate vehicle for bringing local governments together to develop and implement strategies for enhancing regional economic performance. Ideally, an economic development governance arrangement could be structured to include all regional districts within functional economic regions. Given the permissive nature of the local government system in the province, regional district participation in a regional economic governance arrangement would likely occur on a voluntary basis.

However, efforts to enhance regional economic performance have proven to be difficult to develop and sustain in the past, and additional incentives may be required to encourage local governments to form and maintain a regional governance approach to enhancing economic performance. Complimentary research on regional governance incentives and policies conducted by Broadbent (2006) and Coe (2006) may further assist governments in understanding and forming regional economic development arrangements and strategies. Further research on functional economic regions, regional stakeholder organizations and governance arrangements in British Columbia should be conducted in order to further apply and implement the strategies and governance approaches discussed in this report in the context of British Columbia.

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Regions and Economic Development Policies:
A Comparative Perspective
The Role of Collaboration and Functional Governance

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Abstract: Regions are becoming increasingly important entities for facilitating economic growth and driving national and international prosperity. For governments, finding opportunities to improve the performance of regional economies is becoming a critical issue. However, forms of governance based on static territorial boundaries increasingly fail to address issues that can affect the economic performance of regions. Furthermore, even where established regional governance frameworks exist, they may not be integrated enough to foster the trust and collaboration among regional actors to implement sustained region-wide policies or programs. Regional economic development is increasingly viewed as a functional governance issue, where collaboration and partnerships with a variety of stakeholders across boundaries is critical to enhancing regional economic performance.

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EXECUTIVE SUMMARY

Regions are becoming increasingly important entities for facilitating economic growth and driving national and international prosperity. For governments, finding opportunities to improve the performance of regional economies is becoming a critical issue. However increasingly forms of governance based on static territorial boundaries do not address issues that can affect the economic performance of regions. Furthermore, even were established regional governance frameworks exist they may not be integrated enough to foster the trust and collaboration among regional actors to implement sustained region-wide policies or programs.

Regional economic development is increasingly viewed as a functional governance issue, where collaboration and partnership with a variety of stakeholders, across boundaries is critical to enhancing regional economic performance. Collaborative functional governance networks can lead to improved economic performance by reframing issues and creating opportunities that are not otherwise addressed by traditional forms of governance. There are inherent benefits to collaboration which can involve a number of different actors and leverage investment from the private and not-for-profit sectors. However, collaboration and functional governance networks can have broad undefined goals, lack accountability and do little more than continually reframe and redefine existing challenges.

The local governance system in British Columbia facilitates collaborative regional partnerships. Existing regional economic development programs are somewhat focused on building stronger regional economies, however, there is an emerging dialogue that suggests more can be done to facilitate economic development at the regional level and actions are needed that foster the necessary trust and collaboration among regional actors to implement sustained region-wide policies or programs.

This paper provides an analysis of three case studies to determine what lessons could be applied to British Columbia. The first case provides an analysis of the cross-border governance networks that developed in Cascadia. The research suggests that the economic performance of regions is potentially enhanced by cross-boundary governance networks. These collaborative

governance networks can lead to improved economic performance by reframing issues and generating opportunities not initiated by traditional forms of governance.

The second case examines New Zealand's Regional Partnership Program which was an incentive program developed by the national government to encourage regional economic development strategies and initiatives. Evaluations of the program determined it was successful at generating more regional economic development direction and focus, built cooperation and trust among actors, and extended economic development networks creating more collaborative approaches. The evaluation also noted capacity building grants were successful at building long-term collaboration and important for achieving results on projects that would not otherwise be initiated.

The final case examined Canada's Technology Triangle which was an initiative led by several municipalities to develop greater regional economic development coordination. The initiative reshaped how national and international players viewed the Region of Waterloo but did not have the effect of building greater regional economic development cooperation. The case demonstrated that without proper capacity building incentives the process of regional institutionalization can be overwhelmed by competing interests.

The case studies demonstrate that collaborative governance networks can form in the absence of policy and legislative frameworks, they can be driven by top-down government investment or they can be driven by local bottom-up initiatives. However, without incentives to develop accountability, trust and increased collaboration these governance arrangements may lack the longevity to generate sustained economic performance.

1. INTRODUCTION

Regions are becoming increasingly important entities for facilitating economic growth. The Conference Board of Canada notes that “In the 21st century’s knowledge-based economy, cities and city regions are increasingly recognized as drivers of national and international prosperity” (CBC (1) 2006:1). For governments, finding opportunities to improve the performance of regional economies is becoming a critical issue. However, new technologies, transportation networks and methods of communication are increasingly rendering traditional jurisdictional borders obsolete. Increasingly forms of governance based on static territorial boundaries do not address issues such as cross-boundary transportation, security or environmental issues. Furthermore, even where established regional governance frameworks exist they may not be integrated enough to foster the trust and collaboration among regional actors to implement sustained region-wide policies or programs.

Increasingly to address these challenges functional governance networks are developing. Functional, is a term that is used to describe new forms of governance which are more narrowly focused on a specific issue, than traditional forms of territorial governance. Functional networks are also more fluid, adaptable and integrated than traditional forms of governance and in some cases are led by private sector and not-for-profit organizations. Regional economic development is increasingly being framed as a functional governance issue, where collaboration, and partnership with a variety of stakeholders and in some cases across territorial boundaries, is critical to enhancing regional economic performance.

Collaborative governance networks can lead to improved economic performance by finding opportunities and reframing issues which are too complex to be addressed by traditional forms of governance. Collaborative networks can include a range of organizations including governments, private sector firms, supporting research institutions and not-for profit agencies. Leadership can be provided by any of these actors and all can contribute expertise and resources. However, these collaborative, functional networks can involve considerable resources and the continual process of reframing and redefining issues can lead to few tangible results. The risk with these networks is that they develop and are maintained simply for the sake increased collaboration without clear goals or objectives.

The purpose of this paper is to provide examples of regional economic networks comparable to British Columbia, and, in particular, look at patterns of cooperation. Section 2 provides an overview of functional governance and a discussion of how collaborative networks can impact economic performance. The third section provides a description of the local governance framework and the existing regional economic development initiatives in British Columbia. Section 4 provides a description of three comparable networks of cooperation which includes cross-border initiatives in the Cascadia region which in part includes British Columbia, New Zealand's Regional Partnership Program and Canada's Technology Triangle which encompasses Waterloo Region in Ontario. Section 5 highlights the lessons learned from these cases and Section 6 provides a conclusion and discusses several considerations that may be applicable to British Columbia.

2. REGIONAL GOVERNANCE AND ECONOMIC DEVELOPMENT

2.1. Governance

Regional issues are no longer limited to territorial boundaries or administrative responsibilities. Globalization and the increased emphasis on negotiating joint products are creating new functional governance networks. These networks focus more narrowly on specific policy issues or challenges but have greater integration of the public, private and not-for-profit sector actors than traditional territorial governance networks.

Territorial Governance

Territorial governance is the traditional jurisdictional division where there is minimal overlap of policy responsibilities. Territorial governance encompasses specialized jurisdictions that have responsibility for particular services or regulatory functions. They are generally stable, rigid institutions structured in hierarchies and while there is coordination with non-governmental actors there is a clear division between the governance network and private and not-for-profit sectors.

Functional Governance

Increasingly functional governance is a term used to describe narrowly focused governance arrangements which can overlap multiple territorial jurisdictions. This form of governance is characterized by interactions between actors and can include overlapping or competing jurisdictions. Functional regional governance is particularly important for understanding regional economic development networks, whereby various private sector and not-for-profit actors can be directly involved in the governance framework. The key characteristics of traditional territorial governance and functional governance are described in the Table 1.

Table 1 - Functional vs. Territorial Governance

Territorial	Functional
• Functional scope is broad	• Narrow functional scope
• Stable rigid institutions	• Fluid flexible institutions
• Focus on coordination vs. collaboration	• Focus on collaboration
• Structured in a hierarchy	• Congruent boundaries and geography
• Separation of public sector from private and not-for-profit sectors	• Integration of public, private and not for profit sectors

Functional governance is becoming an increasingly important part of the overall governance system. Globalization and an increased emphasis on negotiation to produce joint products are primarily driving this trend. Globalization is characterized by new forms of communication and transportation which changes the way goods and services are moved and distributed. There is also more emphasis on human capital and technology allowing for information to be more easily disseminated (LeSage & Stefanick 2004:1). The second factor contributing to functional governance networks is the increasing practice of negotiation to produce joint products such as city plans or strategic actions. This negotiation between persons and smaller groups in turn facilitates organizational negotiation and inter-organizational communication, which leads to the development of broader governance systems and networks (Jessop 1998: 33). In a globalized world interactions are less limited by geographic location and boundaries and there is increased emphasis on joint products. Functional governance networks develop around issues and challenges that are not addressed by a traditional territorial structure or broad hierarchical governance arrangements.

2.2. Functional Networks and Contemporary Policy Challenges

Both functional and territorial governance are concerned with the delivery of services, policy management and economic competitiveness (LeSage and Stefanick 2004:4). However, increasingly policy challenges, including economic competitiveness, go beyond the scope of traditional territorial and jurisdictional divisions. The BC Competition Council's 2006 report noted that the efficiency of the industrial transportation system is one of the key factors influencing British Columbia's economic competitiveness. The Council recommends the establishment of an agency to work with all players in the transportation system with the goal of improving the efficiency of the entire transportation system including port facilities, rail and road networks (2006:13). This policy challenge of increasing the efficiency of the industrial transportation system is framed by federal ports and railways, provincial; regional and local roads networks, and local land use decisions across a number of municipalities.

Solving these challenges involves joint strategies, coordination and processes that require institutional frameworks to facilitate participation and interaction between a wide range of actors. Knapp and Schmitt describe several elements of governance initiatives which aim to create new connections, reconfigure policy communities and generate new relationships between the state, the locality, the economic sphere and civil society. The elements they discuss include the structure of institutional frameworks, strategic networks, and the role between various public and private sector actors, as a means to cope with specific problems of functional regions (2002:26). The relationship between actors in a functional governance network is crucial because these networks can lack a legislative framework, hierarchical decision making process or have jurisdictional scope.

2.3. Regional Economic Performance

Regions are increasingly becoming focal points of global economic activity. Globalization has made it more difficult for national governments to influence economic activities within their own borders (Jessop 1998:33). It is increasingly the regional economic system that provides for the supporting infrastructure, knowledge networks and concentrations of firms and activities necessary for economic growth. Institutional and functional networks, at the proper scale, play an important part in enhancing regional development.

Regional economic development is based on a number of different and complex economic theories. Underlying many of these theories is the premise that there is a competitive advantage for businesses to cluster together and take advantage of reduced transportation costs, knowledge sharing and common labour pools (Dawkins 2003:136-137). A common measure of regional economic performance is Gross Domestic Product (GDP) which is based on the overall economic activity in an area. From a public policy perspective economic performance can also account for the well-being of individuals which is measured through the accumulation and distribution of wealth.¹ The focus of regional economic development programs is to maximize economic growth or reduce the disparities in the distribution of wealth (Dawkins 2003:149). Section 3 of this paper looks at regional economic development programs in British Columbia.

2.4. Cooperation and Regional Economic Performance

The focus of this paper is on regional economic networks of cooperation and how networks can be structured to enhance regional performance. There is disagreement in the literature on how effective cooperation and the functional governance can be at increasing regional economic performance. However, there does seem to be evidence that there is value in collaboration and partnerships.

Advantages of Partnering and Collaboration

While it may be difficult to measure the effects of increased cooperation, the literature highlights the importance of regional economic development relationships. In their discussion of the New Zealand Regional Economic Development Partnerships Program, Nischalke and Scollmann note that the international literature indicates “that better linkages between economic development institutions and firms and improved trust can lead to more jointly funded development projects and better understanding of, and synergies from, previously disjointed economic development initiatives and processes.”(2005:568). Leibovitz notes that “collaborative economic governance is an important institutional vehicle for the promotion of progressive competitiveness”

¹ As part of the University of Victoria’s Local Government Knowledge Partnership project, a paper provides a common definition for regional economic performance and details factors that influence regional economic performance. For a more thorough discussion of the economic performance see Knowledge Partnership Paper #1 “Economic Performance and Economic Regions in the New Economy: Foundations, Strategies and Governance” by Benjamin Brunnen.

(2003:2614). The literature suggests that collaboration can build linkages and networks which in turn can lead to synergies increasing competitiveness and economic performance.

There is not necessarily a direct link between collaboration and enhanced economic competitiveness but networks developed through partnerships and cooperation can facilitate broader governance systems which undertake and frame specific functional challenges. Where public agencies do not have the jurisdictional authority or capacity to address certain challenges governance networks are the vehicles to frame specific issues and find new opportunities to address them (Innes & Rongerude 2005:iv). As an example of this Susan Clarke notes that in the Cascadia Region, which will be discussed in the case study section, there is an emerging regional governance capacity on transportation issues where a bi-national policy community is framing transportation issues as cross-national issues (2000:1). Clarke also notes that in the absence of formal plans or political unions governance strategies can extend beyond territorial regional governments.

There other examples of this problem definition framing in the Cascadia region. The Pacific North West Economic Region (PNWER), an initiative led by the private sector, addresses a range of cross-border issues including agriculture, the environment, energy, transportation and infrastructure. Specific cross-order initiatives included a bi-national Energy Planning Task Force which was established to address future energy demand and transmission congestion in the region and a partnership for cross-border tourism based on the 2010 Olympics. Collaborative networks and governance arrangements have the ability to address problems and find opportunities in the absence of existing policies or initiatives. Regional economic performance can be improved by this process of reframing problem definitions and finding opportunities not addressed by traditional governance arrangements.

In addition to dealing with problems that spill across boundaries and borders, collaborative partnerships have the advantage of including a wide range of actors and leveraging funding from non-governmental organizations. The Pacific North West Economic Region has a budget of \$825,000 the majority of which is derived from non-governmental sources (Morrison 2006). The Ministry of Community Services has a Smart Development Partnership Program, indented

to increase the effectiveness of BC's land use planning system, which successfully leverages investment and participation from the Urban Development Institute and Canadian Homebuilders Association and Real Estate Foundation (MCS 2006:1). Other collaborative networks involve actors from the private sector, research institutes, universities and academics, all of which can bring resources and expertise to a particular policy challenge.

Challenges of Partnering and Collaboration

While there are advantages to collaboration and partnerships there is also a great deal of uncertainty regarding what is accomplished through collaboration and more broadly through governance networks. One theoretical challenge with governance networks noted by Jessop is that it is difficult to measure that the criteria for success or failure (1998:38). For example state failure results in an inability to achieve certain political objectives and market failure is observed through economic inefficiencies, however, there is no agreement on what constitutes the failure of a functional governance network.

The nature of functional governance networks is that they constantly modify goals through negotiation and reflection and as a result continuously redefine their purpose without the same level of accountability as a traditional government with elected officials. The literature frequently sites the United Kingdom as an example of where there is an over proliferation of partnerships at the local level. These partnerships have spawned networks of quasi-governmental bodies that do not have the same level of accountability as those led by elected officials (CBC(1) 2006:14). Furthermore, municipal leaders are engaged in extensive consultation processes that consume tremendous amounts of energy while the return on investment can take years (CBC(1) 2006:8). There is a risk with governance networks and partnerships that they will be undertaken simply for the sake of increased collaboration, without clear objectives they can become a significant waste of resources.

One final challenge to note with regional governance networks and partnership programs is they are relatively recent phenomena and the outcomes of these initiatives are not necessarily known. The evaluation of the Regional Development Partnerships Program in New Zealand specifically notes that "there are very few evaluative studies that can be drawn upon to provide clear

empirical evidence of the economic impact of partnerships for regional economic development (Dalziel & Saunders 2003:16). This is supported by a 2001 OCED study that notes the mechanisms through which partnerships contribute to economic development and other policy objectives are not fully clear (2001:18).

Functional governance networks develop around issues and challenges that are not addressed by a traditional governance structures. There appears to be evidence that these collaborative governance networks can lead to improved economic performance by reframing and finding opportunities to address issues such as cross-border transportation. Furthermore, there are inherent benefits to collaboration which can involve a number of different actors and leverage investment from the private and non-profit sectors. However, it can be difficult to determine accountability in collaborative governance networks because of ambiguous and constantly redefined goals. Functional governance networks risk collaborating simply for the sake collaboration and because of the number of actors involved in these networks can represent a significant waste of resources.

3. REGIONAL GOVERNANCE AND ECONOMIC DEVELOPMENT IN BC

3.1. Regional Governance in British Columbia

The local government system in British Columbia is a dual system made up of 157 municipalities and 27 regional districts. The regional district system encompasses every municipality in the Province including the City of Vancouver. Vancouver and Montreal are the only large Canadian cities in a federated region (MCS, 2006:6). The BC local governance system is based on the principles of being flexible, collaborative and local government is accountable for its own sphere of influence. The most unique part of the BC local government system is the focus on intergovernmental collaboration. Regional districts can provide almost any service that at least some member municipalities agree should be provided at the regional level. There are approximately 2,100 of these service partnerships administered by Regional Districts (Task Force on Community Opportunities [TFOCO] 2006:3).

The local government system is supported by a broader range of local government organizations that work collaboratively to support the overall system. The Union of BC Municipalities

represents local governments and works collaboratively with the Province to resolve issues and enact policy/legislation. The Fraser Basin Council Partnership is a unique partnership between levels of government, First Nations, business and environmental interests with the mandate to maintain the social, environmental and economic vitality of the Fraser Watershed. The Municipal Finance Authority, the Local Government Management Association and Civic Info BC support the financial, administrative and knowledge capacity of local government.

3.2. Economic Development Programs in British Columbia

The following is a discussion of the existing federal, provincial, regional and local government programs targeting economic development. This paper does not discuss the full range of incentives directed broadly at economic development or based on sectors; rather it is intended to frame the case studies described in Section 4 of this paper.

3.2.1. Federal Programs

Federal economic development programs in BC are largely delivered by Western Economic Diversification Canada which is an agency of the federal government. Western Diversification supports a wide range of programs that target innovation, entrepreneurial activity and Community Economic Development (WD Canada, *Programs*). Community Economic Development programs include funding for urban development agreements, aboriginal housing and infrastructure investment programs.

Urban development agreements are partnerships between the federal, provincial and municipal governments working in collaboration on inner city revitalization, strengthened innovation and sustainable economic development (WD Canada, *Urban Development Agreements*). The Vancouver agreement is the first agreement signed in BC while another agreement is being developed for the City of Victoria. While the agreement focuses on economic development, it is largely limited to revitalizing the downtown area and does not focus on broader regional issues.

3.2.2. Provincial Programs

The Province of British Columbia partners with the federal government in a number of programs discussed in the previous section including the Municipal Rural Infrastructure Fund and the BC

Urban Development Agreements. The Province also has a venture capital program and the First Citizens Fund for aboriginal business loans. The BC Government also provides grants for drinking water infrastructure and general grants for small communities.

There are a number of regionally focused economic development programs in British Columbia. The BC Ministry of Economic Development's 'On-the-Ground Regional Economic Services' program places economic development staff in several BC communities to act as contacts for investors, local governments, and to assist in the identification of business opportunities and project development (Ministry of Economic Development (MED), *Programs and Services*). There is also a provincially supported Regional Economic Alliance pilot program between local governments and the private sector to develop economic development "tools that could be available to support growth and diversification" (MED, *Programs and Services*). Finally, the Province provides funding to a number of Trusts for northern and rural regions which focus investment on specific regional economies.

3.2.3 Local Government Policies and Programs

Municipal governments in BC have a broad range of discretion in terms of the types of services they deliver. Economic development is one of the voluntary services that can be delivered by a municipality. Some local governments have staff and departments designated to provide information, analysis or other services to promote economic development. Municipal Official Community Plans can also contain policies regarding economic development considerations for the community.

Regional Districts are involved in economic development through the development of Regional Growth Strategies and may provide economic development services through a partnership agreement. Regional Growth Strategies are a type of plan intended to manage growth issues within a Regional District. In addition to land use considerations, they contain a broad spectrum of issues including social, economic, transportation and environmental (Bish & Clemens 1999:128). Regional Growth strategies are developed in partnership with member municipalities.

As discussed in the BC Governance section of this paper, regional districts can deliver almost any service that at least two municipalities can agree should be shared. A number of regional districts across the province have entered into service agreements for economic development services.

3.3. Analysis of Governance and Economic Development in BC

The local government system in British Columbia is flexible and collaborative with shared regional services being delivered when there is agreement from two or more municipalities or electoral areas. The local government system is also supported by a network of actors including the Union of BC Municipalities and the Fraser Basin Council that contribute to the overall governance framework. The economic development programs target business development, innovation, infrastructure and community development. There is some focus on regional economic development assistance through the BC Ministry of Economic Development's On the Ground and Regional Economic Alliance programs. However, these programs are limited to certain geographic regions and provide minimal resources for building the systems of collaboration necessary for strong regional economies.

The Greater Vancouver Economic Council and the Task Force on Community Opportunities recommend that more should be done in British Columbia to build stronger regional economies. The Task Force on Community Opportunities recommended that an approach to regional economic development be adopted that focuses on 'natural regional economy' or the functional networks discussed previously in this paper (TFOCO 2006:18). The task force noted several strategic activities that could support these regional economies, including analytical and research activities, investing in strategic infrastructure and various marketing activities (TFCO 2006:18). Collaboration amongst the private sector, local governments, academic, health and social services sectors would be critical to supporting regional economies.

The Greater Vancouver Economic Council is a private sector driven initiative providing leadership to develop the Greater Vancouver Regional District's (GVRD) economy. The Council notes the GVRD is one of the few North American regions without a coordinating economic development organization and "there are no monies expended on economic

development at a regional level in Greater Vancouver” (2005:1). The need for coordinated regional economic development initiatives may be particularly crucial in BC’s leading Central Metropolitan Area (CMA) - Vancouver. Vancouver’s CMA accounts for nearly 53.2% of the Provincial GDP making its economic performance vital to the overall economic performance of the Province. The Conference Board of Canada argues in its 2006 report, “Canada’s Hub Cities A Driving Force of the National Economy”, that in most provinces the leading CMA’s growth drives an even faster rate of growth in smaller communities through economic ‘convergence’, making strategic investment in leading regions a priority (CBC(2) 2006).

The local governance system in British Columbia facilitates collaborative regional partnerships. Existing regional economic development programs provide some focus on building stronger regional economies. However, there is an emerging dialogue that suggests more can be done to facilitate economic development at the regional level in British Columbia. Actions are needed that foster the necessary trust and collaboration among regional actors to implement sustained region-wide policies or programs. The selection of case studies in the next section is intended to provide lessons learned and policy implications for greater regional economic development collaboration in British Columbia.

4. COMPARATIVE ANALYSIS

The case studies in this paper are intended to provide some examples of regional economic development networks and patterns of cooperation that would be comparable to British Columbia. The case studies were chosen based on five criteria including: the collaborative framework, collaboration among actors, scale of territorial governance, implementation and flexibility and enhanced regional economic performance. Case studies include the cross-border governance networks developing in the Cascadia Region, New Zealand’s Regional Partnership Program and Waterloo Region’s Technology Triangle.

4.1. Methodology

The purpose of this research paper is exploratory; it is intended to provide a focus for future research and is by no means a comprehensive evaluation of best practices. The scope was

limited by time and resources and the focus was on existing research accessible through academic journals, government studies or other available sources.

The case studies are intended to provide an overview of regional economic development networks and patterns of cooperation. The case studies were selected based on the analysis of the local governance system in BC including that it is flexible and based on cooperation. The case studies are also based on analysis of existing regional economic development programs, including the need to generate more economic development collaboration at the regional level. Five criteria were used to select the case studies; Table 2 summarizes how the criteria relate to each selected case.

Table 2 - Case Study Section Criteria

Selection Criteria	Case Study		
	Cascadia	New Zealand Regional Partnership Program (RPP)	Canada's Technology Triangle (CTT)
Collaborative Governance Framework	Multiple organizations exist in Cascadia including: <ul style="list-style-type: none"> • Pacific North West Economic Region • International Mobility and Trade Corridor • Cascadia Centre • Various environmental organizations • Governments of Canada and the United States • Provincial/state governments • Local governments • Private sector • Not-for-profit 	Partnerships include participation from: <ul style="list-style-type: none"> • Regional Councils or authorities • Local councils • Government of New Zealand • Local businesses • Trade unions • Tertiary institutions • Local authority officers • Non-governmental organizations 	Canada's Technology Triangle is run by a Board of Directors from both private and public sectors, and participation from academic institutions CTT includes participation from: <ul style="list-style-type: none"> • Region of Waterloo and the • City of Cambridge • City of Kitchener • City of Waterloo
Collaboration Among Actors	Collaboration was framed by each separate governance network in the Cascadia region. No single "problem definition" (Clarke 2002:7) or strategy for region	RPP successful at building greater collaboration at regional level among various levels of government, and private and not-for-profit sectors	Little regional collaboration developed through CTT
Territorial Governance	Cross national and territorial boundaries	Each region in New Zealand developed separate initiatives	CTT operates across a single territorial region

<p>Implementation and Flexibility</p>	<p>Governance networks developed to address cross border issues in the absence of supranational policies (Clarke 2002) or legislative frameworks</p>	<p>Incentive program initiated by national government to encourage economic development - ‘Top-down approach’</p> <p>Flexibility in who is responsible for implementation of each strategy:</p> <ul style="list-style-type: none"> • Regional or local Council • Economic development agency(s) 	<p>Locally led economic development partnership - ‘bottom-up’</p>
<p>Enhanced Regional Economic Performance</p>	<p>PNWER addresses numerous cross-boundary issues including:</p> <ul style="list-style-type: none"> • Bi-national Energy Planning • 2010 Olympic Border Tourism Initiative • Partnership on Regional Infrastructure Security 	<ul style="list-style-type: none"> • Regional economic strategies • Greater regional integration and focus on economic development • Agreement on what agency(s) should be responsible for service provision and implementation of economic strategies 	<p>Linked local groups to national and international organizations and framed how these organizations view the Region of Waterloo.</p>

4.2. Cascadia

The Pacific Northwest region has developed a unique system of overlapping governance organizations. This region is referred to as “Cascadia” which is a distinct North American region with various levels of shared values and common interests. Geographically, Cascadia can be described in terms of the narrow corridor which is called “Main Street Cascadia” extending from Vancouver, British Columbia, through Seattle Washington, to Portland Oregon. A broader definition is the “Pacific Northwest Economic Region” that includes Alaska, Idaho, Montana, Washington, Oregon, the Yukon, British Columbia and Alberta (2001: 222). It can also be described in terms of a number of ecological conditions such as the coastal temperate rainforest region or the Georgia Basin-Puget Sound Watershed.



Figure 1 - Main Street Cascadia

In the Cascadia region, a number of cross-jurisdictional organizations have developed despite institutional

barriers including constitutional and fiscal structures (Clarke 2002). One of the earliest cross-border initiatives undertaken in the Cascadia region was the 1961 Columbia River Treaty. The Treaty was an agreement between the Province of British Columbia and the State of Washington on the development and operation of the Upper Columbia River basin. More recently, overlapping organizations and cooperative networks started developing in Cascadia with the signing of NAFTA. These organizations link a complex network of actors that includes federal governments, provinces and states, local governments, business and other non-governmental organizations. These networks provide a cross-jurisdictional focus to policy challenges including economic development, transportation and the environment. The following section discusses several organizations with overlapping interests and goals that operate at a number of different scales in this region.

Pacific North-West Economic Region

The first major governance initiative was the Pacific NorthWest Economic Region (PNWER). Starting in 1991, the region now includes British Columbia, Washington, Oregon, Idaho, Montana, Alaska, Alberta and the Yukon. This partnership addresses a range of issues through working groups that include agriculture, the environment, energy, transportation, infrastructure, sustainable development and, recently, border security (PNWER, *Working Groups*). The PNWER also has a joint legislative committee including politicians from Washington and BC (Morrison 2006). The PNWER is run by an executive committee of state legislators, provincial MLAs and members from the private sector. The PNWER encompasses a region with a population of 20 million, gross regional product of \$840 billion and has an operating budget of \$825,000 – the majority of which is derived from non-governmental sources (Morrison 2006).

The Pacific NorthWest Region is currently leading a number of major initiatives. Firstly, there is the Bi-national Energy Planning Task Force which was established to address future energy demand and transmission congestion in the region. There is also a partnership for cross-border tourism based on the 2010 Olympics which includes regional training venues, regional visitor centres and sustainability best practices (Morrison 2006). The Pacific NorthWest Economic Region provides a forum to pre-emptively address more costly and slower international processes. A special session of the PNWER avoided a NAFTA challenge on a tire recycling

issue. The PNWER partnership for Regional Infrastructure Security was identified as a model for bi-national critical infrastructure after 9-11. The Bi-national Energy Planning Council has the potential to address a number of issues including streamlining regulations and energy corridor development.

These initiatives, combined with working groups and other discussion forums, provide a focal point to address regional economic issues. The meetings and contacts between different partners promote trust and long-term relationships.

Transportation

There are two organizations dealing with transportation issues in the Cascadia Region. The first organization is the International Mobility and Trade Corridor (IMTC) Project which is a coalition of government, business and other non-governmental organizations that identifies and promotes improvements to mobility and security for the four border crossings between BC and Washington State. The goals of the Project are (IMTC, *About IMTC*):

- Facilitate a forum for ongoing communication
- Coordinate planning of the Cascade Gateway as a system rather than as individual border crossings.
- Improve traffic data and information.
- Identify and pursue improvements to infrastructure, operations, and information technology.

Each day over \$31 million (USD) in trade crosses the Cascade Gateway which amounts to approximately \$11 billion a year (IMTC, *About IMTC*). Border congestion costs trucking companies an estimated \$22 million (USD) every year at the largest of the four crossings. IMTC pursues projects that improve planning and data collection efforts in the region, promote infrastructure and operational improvements including policy, and staffing. IMTC initiatives include truck pre-clearance system deployments, an Advanced Traveler Information System and a number of studies regarding cross border transportation issues (IMTC, *IMTC Projects*). IMTC

is an example of a cross-border initiative of local, state business and non-governmental actors that use a governance rather than governmental network to address cross-border issues.

The second organization that addresses transportation issues in the Cascadia region is the Cascadia Centre. The Centre was established to coordinate and support the development of a balanced, integrated and expanded transportation network coordinating growth and strategic planning in Cascadia (Cascadia Centre, *About Cascadia*). The centre addresses sustainable development within the transportation context and has a number of major projects including:

- Integrating the regional network of interstates, arterials, and bridges
- Integrating the various transit modes in a series of downtown multi-modal stations or hubs
- Conferences for over 60 federal programs that support transportation for people with special needs
- Cascadia Mayors Council addresses a wide range of issues that impact cities and small towns up and down the Cascadia corridor and throughout the region. The mission and goal of the Council is to expand cooperation on issues of common interest that confront the cities and towns.
- Funding the enablement of the Portland-Vancouver metro area to plan solutions for the “Cascadia main-street” corridor as both a commuter crossing and a trade hub.

Environmental Cooperation Agreement

In 1992, Washington State created an Environmental Cooperation Agreement which established a structure of cooperation on environmental issues. This led to the establishment of a marine science panel which has developed a number of memorandums of understanding ensuring that there is cross-border information sharing and participation on permit processes (Blatter 2000). The Pudget Sound/Georgia Basin International Task Force was also established which helped direct the development of working groups and conservation activities for habitat and species protection. There are also numerous environmental working groups established to deal with a range of issues including water quality and sustainable development.

There are numerous other examples of trans-boundary environmental groups and initiatives, however, there is considerably less network capacity and decision making ability compared with

the other organizations discussed in this section. Susan Clarke, who has written extensively on the Cascadia region, notes that some environmental trans-boundary initiatives have been characterized as legitimatizing stakeholder representation but do not necessarily represent a model for collaborative decision making (2000).

The Cascadia region example demonstrates that cross-border collaboration can lead to functional governance networks in the absence of legislative or jurisdictional authority. The Pacific Northwest Economic Region has provided a forum to pre-emptively address more costly and slower international processes. The result of this collaboration is a system of networks and relationships between actors that can resolve a number of complex issues that could potentially limit the region's economic performance.

4.3. New Zealand's Regional Partnerships Program

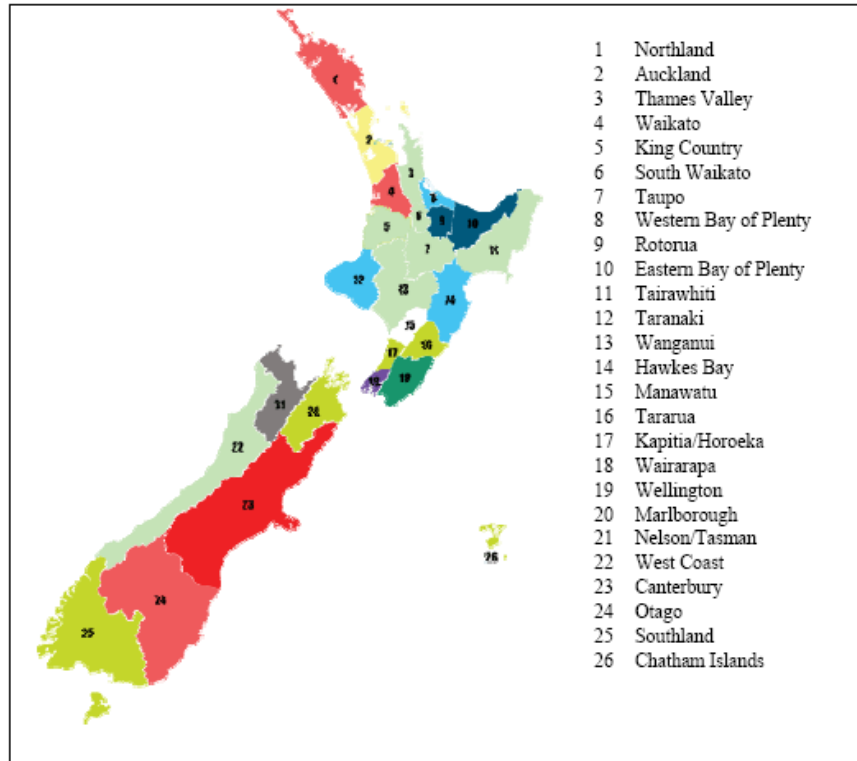
The New Zealand Regional Partnership Program (RPP) provides guidance and funding to improve regional governance, collaboration and strategic focus. Regions can receive funding of up to \$100,000 for a strategic plan to build economic capability and \$100,000 for capacity building to implement the plan (NZTEC, *Regional Partnership Program*). There is also up to \$100,000 available for inter-regional capacity building and up to \$2 million for major regional initiatives.

The underlying assumption of the RPP program is that an institutional environment that is more conducive to cooperation will foster innovation in areas where regions have a competitive advantage (Nischalke & Schollmann 2005:566). The government undertook a review of the program after four years of operation focusing on economic development partnership behaviours (Nischalke & Schollmann 2005:568). The evaluation found that the program led to more strategic focus and strengthened networks and partnerships. Other findings included:

- More strategic regional focus and agreed economic development direction
- Improved knowledge of a region's strengths and advantages and more projects aligned with this

- Strengthened and extended economic development networks and more collaborative approaches
- Improved cooperation and trust between groups and better understanding of other stakeholders' goals and processes
- Better coordination and alignment between central and local government resources

Figure 2 –RPP Regional Economic Development Strategies



Nischalke & Schollmann note based on their review of the RPP program and the international research, a key contributing factor to the success of long-term partnership development includes capacity building grants which are important for achieving early results on projects that no partner would otherwise initiate (2005:568). However, in the case of the partnership program there was slow uptake in several urban regions which the authors note might be attributable to the fact that in larger centres the number and size of stakeholders could mean the programs scale was too small (Nischalke & Schollmann 2005:569). The RPP evaluation demonstrates that funding for capacity building is an important part of building successful long-term collaboration but needs to be scaled to the number of actors being brought together.

Another important aspect of the RPP program was that the process and implementation of the regional economic strategies were determined by the regions' various local councils. This led to several very different processes for developing the strategies and the subsequent delivery of the economic development services. The following is a brief description of three different cases (Dalziel, & Saunders 2003):

Canterbury Regional Partnership

- The Canterbury Development Corporation (CDC), an independent arm of a single local government, lead the regional economic development planning process. Other local governments agreed to the process through resolutions.
- Workshops were hosted by the CDC and formed basis for development strategy
- The CDC provided economic development and employment services to the remaining 10 local governments

East Bay of Plenty Regional Partnership

- Established a Governance Group including several mayors, business persons and several local Maoris to coordinate the new regional partnership
- Consultants prepared the strategy using a public meeting and a stakeholder consultation process
- Created a new Regional Economic Development Agency which implemented the regional strategy and contracted out services to participating districts

Marlborough Regional Partnership

- Built on existing regional partnership program initiated at the local level
- Local government did not establish an economic development organization but built on an existing independent economic development trust

The New Zealand regional partnership program is an example of a 'top-down' approach to regional economic development. The state determined it had role facilitating and promoting regional economic development and provided a number of financial incentives for regions to foster greater collaboration and build institutional linkages (Nischalke & Schollmann 2005:565). This case provides a number of practical considerations for the development and delivery of

regional economic development program including emphasis on building institutional capacity and providing flexibility for implementation.

4.4. Waterloo Region - Canada's Technology Triangle

Canada's Technology Triangle (CTT) was formed, in part, as a response to globalization and a reduction in trade-barriers with the inception of NAFTA. In 1987 the economic development agencies in Cambridge, Guelph, Kitchener and Waterloo formed CTT to increase the international profile and competitiveness of their respective jurisdictions. The CTT initiative is an example of a 'bottom-up' regional economic development policy which was initiated and led by local government.

Promoting high-tech industry is a common strategy for many communities seeking to improve their position in the global economy (Parker 2001:149). Cooperation and technology was seen as the cornerstone of economic growth and that new investment in any one City would have a positive effect on the entire region (Parker 2001:154). Canada's Technology Triangle is presently little more than a joint marketing initiative for the Region of Waterloo. However, this case provides a number of important findings regarding economic development collaboration.

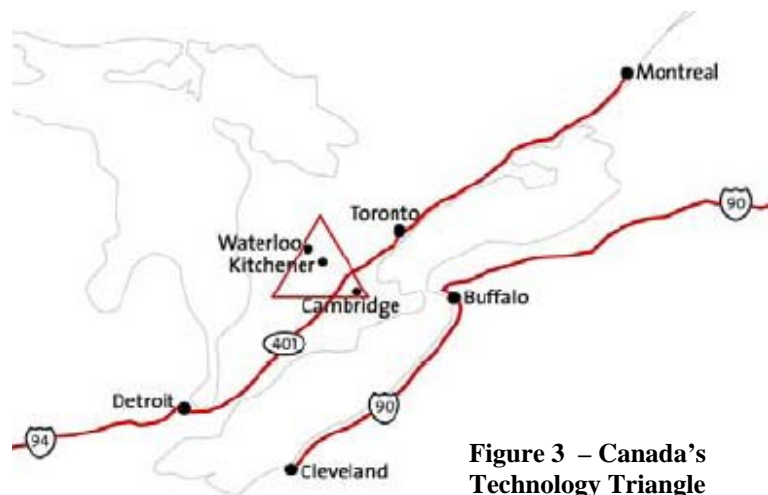


Figure 3 – Canada's Technology Triangle

Waterloo Region is located in Southern Ontario in the centre of the triangle formed by three Great Lakes: Ontario, Erie and Huron. The Region is made up of three urban municipalities – Cambridge, Kitchener and Waterloo, and four rural townships – North Dumfries, Wellesley, Wilmot and Woolwich. With a combined population of over 450,000. Waterloo Region is one of the fastest growing regions in Ontario and the economy is focused on manufacturing and technical innovation and includes the University of Waterloo, Wilfrid Laurier University and Conestoga College (Region of Waterloo, *About the Region*).

The Region of Waterloo has had strong economic performance over the past 20 years. Between 1987 and 1996, the regional economy grew by 28%; whereas the Ontario economy grew by 18%. Over the same period, employment grew in the region by 17%; whereas employment grew in Ontario by 7% (Parker 2001:155). From 1997 to 2004 the GDP increased by 30.4% which was the 5th fastest rate in the Province (CTT 2005:15).

Paul Parker noted that during nineties there was significant growth in the Region's technology industry including considerable collaboration among university researchers and industry partners (2001, 163). However, Parker notes that the CTT did not necessarily contribute to increased cooperation among network actors but rather was the link "to national and international interests" (2001, 164). The literature on the technology triangle does not attribute Waterloo Region's economic performance to the CTT initiative. Analysis of the initiative instead draws on the institutional associations in the technology triangle, focusing on the challenges of regional governance.

Between 1997 and 2000 an evaluation was conducted for CTT which included 54 semi-structured interviews with local, regional and provincial agencies and businesses in different industrial associations and community organizations. The analysis revealed that Canada's Technology Triangle (CTT) was a success in two particular areas. It provided an institutional structure for collaboration prior to other similar attempts and it had the effect of changing the image of Waterloo Region (Leibovitz 2003:2622). Interviewees noted that prior to the Technology Triangle 'brand', Waterloo Region was considered to be a very conservative, middle

class community based on manufacturing. In this regard the partnership was a success capturing the spirit of new innovative regional economies.

The main challenge to the creation of the new governance institution was integration – that is creating meaningful networks and relationships. In Waterloo Region, economic development was seen as a predominantly a local function that was highly political (Leibovitz 2003:2624). Furthermore, the structural differences between Cambridge's manufacturing economy and Waterloo and Kitchener's technology and service economies created significant disagreement over the direction of regional economic initiatives.

Another aspect of the CTT initiative was to re-configure public-private relations in the Region to provide more strategic institutional capacity and focus (Leibovitz 2006:2627). One of the key challenges to create greater linkages between the business community and local government was the lack organizational capacity and agreement among the business community. The Cambridge Chamber of Commerce thought that greater institutional cooperation would lead to the Kitchener/Waterloo Chamber of Commerce absorbing the smaller Cambridge Chamber of Commerce. Furthermore, there were divisions in the business community between recently developed high-tech industry and the more established businesses represented by the Chamber of Commerce. These territorial and sectoral cleavages were not overcome by the CTT initiative and as a result another network representing Waterloo Region's technology firms called 'Communitech' developed.

A key challenge for the CTT initiative was the limited financial resources available for the partnerships and networking needed to build increased collaboration. These challenges resulted in the failure of the Region to behave like a region with respect to economic development and likely failed to capitalize on numerous opportunities (Leibovitz 2003:2624). Leibovitz notes the failure of regional cooperation likely impacted on the ability of the Region of Waterloo to receive funding for other regional development initiatives as Ontario grants go to regions that can demonstrate community wide-support (2003:2637). The CTT case demonstrates the challenges involved in developing the collaborative governance framework necessary to foster increased regional economic performance.

5. KEY FINDINGS

This section is intended to describe the key findings of the three case studies and demonstrate how they might be applicable to the Province of British Columbia. It can be difficult to assess the transferability of regional economic development policies, networks and practices as lessons learned from certain regions do not necessarily apply to other territories, economies or political circumstances (Leibovitz 2003:2614). However, there are a number of broad lessons which may be applicable to British Columbia.

5.1. Cascadia

The Cascadia case study provides an example of how organizations and overlapping governance networks can develop to address issues not resolved by traditional territorial governance. In the absence of a legislative, policy or jurisdictional framework these networks, focused on specific functional issues, have successfully been able to reframe policy challenges and find efficiencies that potentially contribute to the economic performance of the region.

The Pacific NorthWest Economic Region has provided a forum to pre-emptively address more costly and slower international processes. A special session of the PNWER avoided a NAFTA challenge on a tire recycling issue. The PNWER partnership for Regional Infrastructure Security was identified as a model for bi-national critical infrastructure after 9-11. The Bi-national Energy Planning Council has the potential to address a number of issues including streamlining regulations and energy corridor development. Another important point is that the private sector's role in the PNWER helps drive major issues while providing the majority of the organization's funding.

These organizations will likely proliferate in cross-border regions and continue to re-frame how cross-boundary issues are addressed (Susan Clarke 2002). Cascadia provides an example of how cross-boundary functional governance networks can facilitate economic performance. For British Columbia this could impact how policies and programs are developed to facilitate regional economic performance. Developing agencies that look beyond municipal and regional boundaries may play a strong role in facilitating increased economic performance.

5.2. Regional Partnerships Program

The New Zealand case study provides an example of how state funding for partnerships can successfully build regional economic development networks in the absence of local initiatives. The New Zealand Regional Partnership Program is an example of a ‘top-down’ approach to regional economic development. The state determined it had role to play facilitating and promoting regional economic development and provided a number of financial incentives to build institutional linkages. The program was successful at providing focus and direction on regional economic development, it built cooperation and trust between actors which extended economic development networks and created more collaborative approaches.

The program was flexible in that the strategies were locally initiated and implementation was determined by local government partners. In some cases a single local government economic development agency held the primary responsibility for developing the strategy while in other cases a new regional organization was created for implementation of the economic development strategy and services. This would be a key consideration for British Columbia where the local government system is based on flexibility. New Zealand’s Regional Partnership Program is an example of a program that addresses the lack of economic development coordination at the regional level.

5.3. Canada’s Technology Triangle

The Region of Waterloo’s ‘Canada’s Technology Triangle’ initiative was an early attempt at regional economic coordination. One of the actors involved in the CTT initiative noted CTT was an attempt to get a region to “think like a region and behave like a region” (Leibovitz, 2003:2637). However, the initiative failed to provide greater strategic focus or regional economic development coordination. The initiative was successful at providing a minimal level of marketing coordination which changed the way some national and international actors viewed the Region.

Locally driven ‘bottom-up’ regional economic development initiatives can be overwhelmed by differences between local governments, the business community and existing intuitional networks such as a Chambers of Commerce. The key lesson of the CTT initiative is that the

process of regional institutional change requires incentives for capacity building to foster trust, collaboration and other associative behaviors (Leibovitz, 2003:2638).

6. CONCLUSION

There is significant and growing interest in collaboration and functional governance networks in the economic development field. The 2006 Federal Advisory Committee on Cities and Communities calls on all levels of government to “review existing government and governance arrangements to find ways to serve the needs of communities and the nation better, through effective partnerships” (2006:20). British Columbia’s Task force on Community Opportunities and the Greater Vancouver Economic Council both call for more regional economic development collaboration.

The purpose of this paper was to provide several examples of regional economic development networks that focus on collaboration and increased economic performance. The research accounted for the existing local governance system in British Columbia and economic development programs. This paper analyzed the emerging trend of functional governance and how collaboration impacts regional economic performance. The analysis found the local government system in British Columbia is collaborative and flexible but more can be done to encourage and coordinate economic development at the regional level. Collaborative governance networks can lead to improved economic performance by reframing issues and generating opportunities not initiated by traditional government networks. However, collaboration and functional governance networks involve considerable resources and can have broad undefined goals creating a lack accountability.

This paper provided an analysis of three case studies to determine what lessons could be applied to British Columbia. Based on the analysis of the cross-border governance networks that developed in Cascadia it was found the economic performance of regions is potentially enhanced by cross-boundary governance networks. These Collaborative governance networks can lead to improved economic performance by reframing issues and generating opportunities not initiated by traditional government networks.

The second case looked at New Zealand's Regional Partnership Program which was an incentive program developed by the national government to encourage regional economic development strategies and initiatives. Evaluations of the program determined it was successful at generating more regional economic development direction and focus, built cooperation and trust between actors, and extended economic development networks creating more collaborative approaches. The evaluation also noted capacity building grants were successful at building long-term collaboration and important for achieving results on projects that would not otherwise be initiated.

The final case examined Canada's Technology Triangle which was an initiative led by local governments to build greater regional economic development coordination. The initiative had the effect of reshaping how national and international players viewed the region but was a failure in terms of building greater regional economic development cooperation. The case demonstrated that without proper capacity building incentives the process of regional institutionalization can be overwhelmed by competing interests involved in the process.

A key implication of the research and analysis provided in this paper is that regional economic performance can be facilitated by increased regional and inter-regional collaboration. British Columbia's local governance system allows for municipalities to collaborate and develop shared regional economic development strategies and services. The case studies demonstrate that collaborative governance networks can form in the absence of policy and legislative frameworks, they can be driven by top-down government investment or they can be driven by local bottom-up initiatives. However, without incentives to develop accountability, trust and collaboration these governance arrangements may lack the longevity to generate sustained economic performance.

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Figure 1 - Main Street Cascadia: Wikipedia (2006). *Cascadia*. Retrieved November 4, 2006 from <http://en.wikipedia.org/wiki/Cascadia>

Figure 2 – RPP Regional Economic Development Strategies: New Zealand Trade and Enterprise Corporation (2006). *Regional Economic Development Strategies*. Retrieved November 4, 2006 from <http://www.nzte.govt.nz/section/11766.aspx>

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Cooperation and Competition in Region-Building:
The Role of Incentives

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Abstract Economic performance for British Columbia involves complex interaction between regional networks and all levels of government. Accordingly, regional networks and local governments have an important effect on economic performance. The provincial government has a range of tools it can use to foster and guide regional networks and local governments. Chief among these tools are incentives, which can foster regional networks and capitalize on economic development opportunities. An incentive allows the provincial government to induce or motivate behaviour among local governments, regions, businesses and other relevant groups for the purposes of improving regional economic performance.

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EXECUTIVE SUMMARY

Economic performance for British Columbia involves complex interaction between regional networks and all levels of government. There are a range of tools that can be used to enhance regional economic performance. Chief among these tools are incentives, which can be used to foster regional networks and capitalize on economic opportunities. An incentive allows the provincial government to induce or motivate behaviour among regions, local governments, private sector organizations and other relevant groups for the purposes of enhancing regional economic performance.

By working together regions can achieve many outcomes that would not have been possible working independently. Although it is difficult to measure the effects of increased cooperation, evidence shows that cooperation in regional economic development is beneficial. Among other benefits, regional cooperation can result in cost savings through the creation of economies of scale, increased regional governance and problem solving capacity, and leveraging of different resources and opportunities that may not have been possible without collective action. Effectively, cooperation can enhance the overall economic performance of British Columbia's regions.

Leveraging the opportunities brought forward by regional cooperation is facilitated by the use of incentives. Incentives assist in reinforcing regional economic strengths and comparative advantages inherent to a region. They can also be used to address areas of economic weakness. Ultimately, incentives can be used to foster cooperation between regions, local governments, the private sector and other relevant groups, thereby creating an environment conducive to increased economic performance.

At a general level, incentives can be levered in two major areas:

1. Functional economic regions (regions); and
2. Economic sectors (sectors).

There are certain natural factors that attract economic development and growth, including natural resource availability, transportation costs, economies of scale, population and

proximity/size of the market. As such, economic sectors within regions differ depending on the natural factors that contribute to economic development. However, increased performance in economic sectors can often create a benefit for the economic regions in which those sectors operate.

There are a number of incentives that can be used to foster cooperation and enhance regional and sectoral economic performance. When applying incentives it is important to ensure that there is a targeted outcome or output for the incentive to achieve. Equally important is ensuring that the incentive is chosen as a best fit to meet the targeted outcome or output. The following are some key incentives at the disposal of the provincial government in facilitating relationships that can drive the performance of the British Columbia economy over the coming years:

1. Tax Incentives
2. Infrastructure Incentives (Including Infrastructure Grants)
3. Sectoral Grants
4. Marketing and Communication
5. In-Kind Assistance
6. Revenue Sharing
7. Regulation and Deregulation
8. Permits, Licenses and Approvals
9. Trade Incentives
10. Trust Incentives

In conclusion, this paper provides a discussion of incentives and their impact on regional economic performance within British Columbia. Cooperation is introduced as a means of enabling regions to lever opportunities to enhance their economic performance. Ultimately, this paper finds that incentives can be used to create conditions that foster cooperative relationships between regions and ultimately enhance the overall economic performance for British Columbia.

1. INTRODUCTION

1.1 Levering Opportunities: Using Incentives to Address Cooperation

Economic performance for British Columbia involves complex interaction between regional networks and all levels of government. There are a range of tools that can be used to enhance regional economic performance. Chief among these tools are incentives, which can be used to foster regional networks and capitalize on economic opportunities. An incentive allows the provincial government to induce or motivate behaviour among regions, local governments, private sector organizations and other relevant groups for the purposes of improving regional economic performance. As there are numerous opportunities for enhancing economic performance across the regions of British Columbia, understanding the effects of the range of incentive tools is paramount.

This paper examines the extent to which regional cooperation can improve the overall level of economic performance in British Columbia. Closely linked is a discussion of how incentives can be used to foster regional cooperation for the purposes of enhancing economic performance. Ultimately, this paper will outline a range of incentives and identify how they can be levered to capitalize on economic opportunities, improve cooperation in regionalized economic networks and contribute to forward momentum for British Columbia.

1.2 The Two Levers of Incentives

An incentive is designed to induce or motivate behaviour that leads to desired outcomes. The impact of incentives can span from individual well-being to province-wide economic performance. Accordingly, incentives can have a range of purposes, from water conservation to increasing business investment. At a general level, incentives can be levered in two areas:

1. Functional economic regions (regional); and
2. Economic sectors (sectoral).

These categories are not necessarily exclusive, as an incentive can benefit a sector of the economy and in turn benefit the region where that economic sector is most prevalent.

1.3 Outline

Following this introductory section, which has provided the purpose and direction of the paper, a second section will outline some key aspects of regional economic performance within British Columbia. The third section looks at the advantages of cooperation for regional networks and local governments. The section will highlight where cooperation is most effective and identify some principles of cooperation. The fourth section will classify, define and analyze a range of incentive tools, showcasing their advantages and disadvantages. The fifth and final section will provide some lessons learned for leveraging incentives to increase regional cooperation in order to improve regional performance.

2. REGIONS IN THE BRITISH COLUMBIA ECONOMY

This section will set the context through which cooperation, competition and incentives are applied in British Columbia. It will be shown that regional economic performance is defined along two lines, economic production and economic well-being. There is a distinction between economic regions and economic sectors; although it will be shown that the two concepts are closely related, particularly when addressing regional economic development. It will be shown that the regional economies in British Columbia are distinguished by their natural endowments and are accordingly focused on specific sectors of the economy.

2.1 Defining Regional Economic Performance

Regional economic performance is a measure of the elements that contribute to the overall economic situation of a geographic region. Administrative regions, such as local governments, have an interest in enhancing their overall level of economic performance (TFOCO, 2006: iii). However, the benefits of increased economic performance extend beyond the borders of administrative regions and into functional regions. As such, Brunnen defines economic performance along two lines (Brunnen 2006):

1. The overall economic production in an area
 - a. The value of goods and services produced in a geographic area (region)
2. The overall economic well-being in an area
 - a. The overall economic welfare in a geographic area (region)

Incentives are tools that assist in creating conditions that maximize economic production and well-being. The focus of incentives in this context is not to differentiate between economic production and economic being. Rather, incentives can play an important role in establishing conditions where the two measures of economic performance can flourish.

2.2 Differentiating Regions and Economic Sectors

In the context of regional economic development, the economic profile of British Columbia involves interplay between two major factors:

- Regions; and
- Economic sectors.

Although Regions are the focus of this research, the two concepts are closely linked. Regions have natural endowments, such as resources or population. These natural endowments provide a region with a comparative advantage in one or more sectors of industry. Accordingly, certain regions are more appealing to certain economic sectors and vice-versa. For example, the rocky mountain foothills in the northeastern region of the province are attractive to energy industry due to the vast coal reserves in the region (BC Stats). However, this region would hold little interest to the fishery industry, for instance.

Economic Sectors

The BC Stats profile of the British Columbia economy outlines the following economic sectors as substantial drivers of the British Columbia economy (BC Stats):

1. Services
2. Natural Resources
 - a. Forestry
 - b. Mining
 - c. Energy
3. Manufacturing
 - a. Predominantly paper and wood
4. Agriculture
5. Fishing

6. Tourism
7. Other
 - a. E.g. Construction, Film etc.

Economic Regions

There are certain natural factors that attract economic development and growth. Sridhar identifies these facts as natural resource availability, transportation costs, population and proximity/size of the market will all contribute to regional development (Sridhar 2005: 6-7). Sridhar's findings are consistent with the work of Hoover and Giarratani who identify natural resource endowment; transportation and communication costs; and potential to experience economies of scale as the driving factors for the location of economic activity (Hoover et al 1985: 1.2). As such, the economic activity differs by region depending on the level of each of the driving factors for development. Particularly, the economic activity of large urban regions will be distinct from the economic activity in smaller urban and rural regions. An economic region is tied to Brunnen's work on functional regions and governance networks.

Brunnen identified some of the distinctions between administrative and functional regions (Brunnen 2006: 9-10). Administrative regions are predominantly defined by their established geographic boundaries. These boundaries represent the service provision area of an administrative region. Functional regions are defined by their degree of internal integration, such as commodity, money and commuter flows (Brunnen 2006: 9). The inconsistencies between the boundaries of an administrative region and a functional region present a challenge in developing strategies that enhance regional economic performance. The concept of administrative and functional regions is particularly important to the discussion of regional cooperation in Section 3.

Within British Columbia, approximately 80% of the more than 4 million population inhabits urban areas, predominantly in the lower mainland. Much of the population is concentrated in the lower mainland, as is much of the economic activity. However, it is forecast that economic growth will continue throughout the province over the coming

years (Hirsch 2006). Although there are countless ways to breakdown of British Columbia's many economic regions, this paper will draw two major distinctions for the purposes of differentiating the types of economic activity within the province:

- Large urban regions
- Smaller urban regions and rural areas

Large Urban Regions

The large urban regions in British Columbia are the Greater Vancouver and surrounding area, Victoria and to a lesser extent, Kelowna, Nanaimo and Prince George. These areas are small in area, but vast in population. The economic focus in these regions is the service industry, manufacturing, trade, tourism and to a lesser extent, agriculture (BC Stats).

Smaller Urban Regions and Rural Regions

Much of the provincial geography falls into these regions, but less than half of the population. The focus in these areas is predominantly based on natural resources, including, mining, agriculture, forestry and energy (Hirsch 2006).

2.3 Section Summary

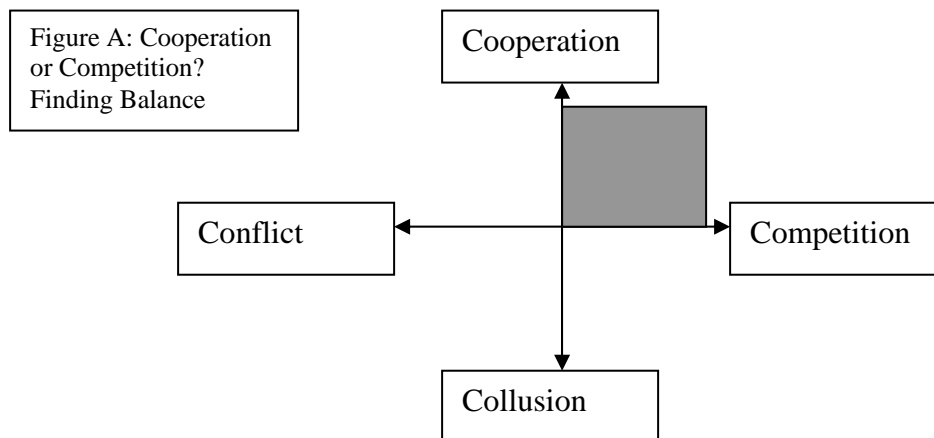
Regional economic performance is defined by the overall economic production and overall economic well-being in an area. In the context of regional economic development, the economic profile of British Columbia involves interplay between economic sectors and economic regions. As well, the contrast between a functional/economic region and an administrative region frames some of the discussion on regional cooperation. The regional economies within British Columbia are distinct based on the natural endowments of an area. A sharp contrast is drawn between large urban areas and smaller urban/rural areas.

3. THE PRINCIPLES OF COOPERATION

This section will show that the economy in British Columbia is based upon competition. However, mitigating competition through regional cooperation is important in enhancing the overall economic performance and well-being of British Columbia and its regions. Following an outline of the benefits of cooperation, some lessons learned from the recent integration of the European Union identify some of the challenges for regional cooperation. The European experience also identifies some of the economic sectors where cooperation is most easily facilitated. Finally, this section provides an overview of the conditions under which cooperation is most likely.

3.1 The Relationship Between Cooperation and Competition

Cooperation and competition may be seen along the same line, with cooperation on one side and competition on the other. One tries to find a mid-point in the line between cooperation and competition that is most desirable for the given situation. Although this perspective is useful in showing the balance between cooperation and competition, it does not adequately frame cooperation and competition within a broader context. Another perspective, illustrated in Diagram A, may offer better insight into the interplay between cooperation and competition.



In figure A, the relationship between competition and cooperation is highlighted by the shaded square in the upper right quadrant. There is a dynamic relationship between

cooperation and competition, as well as their negative counterparts, conflict and collusion (Patchell 1996: 484). This diagram indicates there should be elements of both cooperation and competition to find the best balance. Of key importance is that too little competition or cooperation can create collusion or conflict. Because the economy in BC is based on competition, it is important to ensure there is adequate cooperation to balance the regional effects of competition.

3.2 Competition at a Glance

Competition is a major foundation of the global and the British Columbia economy. The globalization of the economy means that many communities must compete on an international scale (TFOCO 2006: 3). Increased globalization has led to an increase in the competition for BC regions. Despite the challenge that competition poses to regional economies, it has some positive aspects. According to basic economic theory, competition is in the best interests of society (Davies et al 2004: 1-2). An economy founded on competition creates many benefits, including reduced prices, increased innovation and better consumer service. Adam Smith supports competition when he states, “where competition is free, the rivalry of competitors obliges every man to endeavor to execute his work to a certain degree of exactness (Davies et al 2004: 1).”

Generally competition can be positive; however the British Columbia economy is founded on competition. Ensuring that the effects of competition do not overwhelm the benefits felt from cooperation is a worthwhile endeavor for the provincial government. Therefore, the negative effects of advanced competition between regions should be noted and avoided where possible. Competition between regions can occur in the provision of tax, infrastructure and sectoral specific incentives. If regions tax at different rates or provide differing levels of infrastructure, this may encourage businesses and other sources of capital investment to migrate to lower taxing and infrastructure intense regions. Regions will use incentives to attract economic investment, potentially at the detriment of both the region itself and the overall regional economy within British Columbia. Two examples follow that demonstrate some of the drawbacks of a business environment lacking in cooperation and founded primarily on competition.

The Race to the Bottom

The race to the bottom is a theoretical situation in which competing jurisdictions lower regulations and taxes in an attempt to attract investment (Chan 2003: 40-44). Through the continual competition for the lowest tax and regulatory burden, the competing jurisdictions receive lower tax revenues. As such, the ability of government to provide fundamental services and citizen protection is eroded. Despite being firmly grounded in theory, the evidence of a race to the bottom is mixed. However, the current evidence and the potential impact of a race to the bottom are substantial enough for policy makers to consider the potential repercussions of a race to the bottom when making policy choices (Brueckner 2000: 505).

Here the importance of non-benefit taxation should be mentioned. Non-benefit taxation refers to taxes that relate to a direct benefit that is received by the one incurring the tax (Oates 1999: 1125). For example, a tax for the receipt of a water service would be considered a benefit tax, because the payer of the tax receives water. On the other hand, a tax in order to provide a general income redistribution program, such as a welfare service would be a non-benefit tax, because those in receipt of the tax are not typically those receiving the benefit of welfare. It is important to draw the distinction between non-benefit and benefit taxation, because a tax that is offset by a benefit may be more agreeable for a business taxpayer. The importance of providing non-benefit taxes should not be lost in an attempt to provide benefit taxes in order to attract business, however. A situation where regions cooperate in order to provide broad and consistent levels of tax for business and other economic drivers is desirable from both a local government perspective, regional development perspective and a business planning perspective.

A Noteworthy Trend: Economic Zones (EZ)

Economic zones emerged from the United Kingdom and have since found significant roots in the United States. An economic zone is a tax haven where a region has been designated to provide an environment conducive to business, through lowered taxes, decreased regulation or other incentives. An economic zone is a regional means of attracting business. Effectively, an economic zone is a combination of a number of

different incentives. Although economic zones may attract business, they do not necessarily benefit the regions in which they are located. In fact, a study of the 13 American states which had substantial enterprise zones prior to 1990 raised doubts about the benefit of those zones to the regions, businesses and workers which were involved (Fisher and Peter 2000).

3.3 Cooperation at a Glance

Cooperation is a voluntary agreement entered into for mutual benefit (Patchell 1996: 481). Cooperation is not a static relationship, as Ring and Van de Ven define cooperative relationships as “mechanisms for collective action, which are continually shaped and restructured by actions of the parties involved (Ashford et al. 1995: 10).” This implies that cooperation is consistently evolving and is very much a creature of interaction between individuals and groups. As cooperation is a fluid process, it is important to recognize that there is any number of different cooperative relationships. In a competitive environment, cooperation is the process of mediating competition, to create desirable effects for the parties involved.

By working together regions can achieve many outcomes that would not have been possible working independently. Although it is difficult to measure the effects of increased cooperation, there is evidence that regional economic development relationships are beneficial (Coe 2006: 9). Regional cooperation can result in cost savings through the creation of economies of scale, increased regional governance and problem solving capacity, and leveraging of different resources that may not have been possible without collective action. At the very root of this notion is that cooperation can enhance the overall economic performance of British Columbia’s regions (Coe 2006: 9). As well, cooperation has long been seen as crucial to success for enterprise (Ashford et al. 1995: 7-9). Here a basic notion of trade economics should be introduced; rationale individuals or organizations will not enter into an agreement unless they determine that such an agreement is beneficial for them. As cooperation involves an agreement between two or more parties, it is reasonable to expect that all parties should perceive benefit.

The challenge of transcending administrative regions into functional regions is important for cooperation in British Columbia. The inconsistencies in boundaries between functional and administrative regions can blur the nature of cooperative relationships (Brunnen 2006: 9-10). It is important to foster regional interaction that is both functional and beneficial. Some of the boundary-based challenges for differentiating between functional and administrative regions are also relevant to economic sectors and economic regions.

Despite the linkages between economic sectors and economic regions, there are some distinctions in the prevalence for cooperation. Economic sectors may span multiple regions. As will be seen in Section 3.4, fostering cooperation between regions engaged in the same sectoral activities is one of the biggest challenges to enhancing regional performance. In this context, cooperation between regions is much more important than cooperation between sectors. If regions cooperate, it will enhance the overall desirability of British Columbia as a destination for firms engaged in economic activity and accordingly increase the collective welfare in British Columbia (TFOCO 2006: 5). Simply put, enhanced regional cooperation will distinguish British Columbia as a choice destination for specific economic sectors, particularly if regional cooperation creates an environment optimal for business activity.

3.4 Sectors Conducive to Cooperation: The European Experience

With the 1992 signing of the Maastricht Treaty the European Union moved towards a much higher level of integration. According to Wessels, the European Union is “to be shaped in the direction of a confederation designed to tackle a limited number of common problems by extending procedures of intergovernmental cooperation to all major policy areas (Wessels: 1994: 451).” Increasing the level of integration within Europe bridges the gap between administrative regions and functional regions. There are a number of important benefits that have been gained through cooperation among European regions (Uvalic 2002: 321). According to Uvalic, cooperative initiatives have facilitated dialogue, promoted the resolution of political and economic differences and allowed regions to develop trust and confidence with each other.

While studying the European Union and its enlargement, Milica Uvalic found that some sectors of the economy are more conducive to cooperation than others. There are some sectors in which cooperation works best (Uvalic 2002: 320-324) (Benyon 1994: 499):

- Transportation and Communication
- Infrastructure
- Energy
- The Environment
- Certain services, such as policing and water delivery

There are some sectors in which competition works best:

- Commercial Business attraction
- Inter-regional trade growth

Although certain sectors are more conducive to cooperation than others, the nature of this cooperative relationship may vary. Cooperation is less likely when the principles have a horizontal relationship, such as cooperation among local governments. Cooperation is more likely when the relationship is vertical, such as cooperation between the provincial and local governments (Ashford et al. 1995: 10). Because vertical cooperation is easier to achieve than horizontal cooperation, it is clear that the British Columbia provincial government can have a role in facilitating cooperation. The provincial government can provide incentives that facilitate both horizontal and vertical cooperation among local governments and the provincial government throughout British Columbia.

There is a good deal of research on the effects of regional integration, particularly across national borders. A 1998 World Bank Conference on regional integration agreements concluded that there are two major benefits to regional integration for south-eastern European nations, both of which apply in the case of British Columbia (World Bank 2000). The World Bank found that increased cooperation and integration impacts regional economic growth and regional political credibility (World Bank 2000). Of import for British Columbia is that regional economies which are open tend to grow at a faster rate than those that are closed. Accordingly, integration and cooperation foster

economic growth. This is further evidence of the import of the provincial government's role in providing incentives for cooperation, both horizontally and vertically.

The European integration experience provides some very pertinent lessons learned that can be applied to British Columbia. Beyond the information on sectors conducive to economic development and the distinctions between vertical and horizontal integration, the following three key questions emerged from the recent integration of the European Union and may impact the policy choices for regional integration in British Columbia (Uvalic 2002: 331-332)

- Is economic diversity a stimulus or barrier to regional cooperation? A certain degree of similarity is desirable to create shared interests, however if the regional economic profiles are too similar, there may be some drawbacks, particularly surrounding intra-regional trade.
- How are economic regions shaped? Uvalic hypothesizes that geography is the driving force behind economic regions, but acknowledges the possibility of many other factors (Uvalic 2002: 331).
- Are there economic motives at the base of regional cooperation, or is the process primarily politically motivated? This beckons back to Brunnen's analysis of administrative versus functional regions. Effectively, politically motivated cooperation indicates the importance of administrative regionalism, whereas economically motivated cooperation indicates the importance of functional regionalism. More than likely, there will be interplay between functional and administrative regionalism.

The European experience shows that regional cooperation is more likely when the focus is on transportation, communication, energy, the environment and service delivery. These are all sectors that cut across multiple regions, creating a multi-regional interest in sectoral economic outcomes and performance. The sectors that are most conducive to cooperation can inform the choices made by the British Columbia provincial government in targeting their incentives. Determining how best to foster sectoral cooperation can in turn guide the decisions and nature of the regional cooperation in British Columbia.

Above all, the European experience shows that cooperation is beneficial both economically and politically.

3.5 The Principles of Cooperation

Cooperation is not a prescribed process. Studies of organizational cooperation indicate that organizations do not merely cooperate, but cooperate for a reason (Schermerhorn Jr. 1975: 852). Applying this finding to local governments, it can be assumed that they consciously decide whether or not to enter into cooperative agreements. However, there are certain conditions under which cooperation is fostered. The general premise regarding cooperation is much the same as the adoption of incentives; organizations/governments will choose to cooperate when there is a net-benefit to cooperation.

The following principles create an environment conducive to net-benefits in cooperation (Schermerhorn Jr. 1975: 848-855):

1. Organizations have a shared goal, need or purpose
2. Sufficient interaction between actors, allowing for the communication of shared opportunities in the future
3. Cooperation is perceived as positive
4. A third party provides sufficient motivation to engage in cooperation
5. Costs to cooperation are minimal
 - a. Relative loss of autonomy is acceptable
 - b. Resources dedicated to coordination are not a significant deterrent
 - c. The image of an organization is not negatively affected
6. Resource scarcity (organizational or otherwise) forces organizations into cooperative agreements
7. Physical realities, such as geographic proximity, are conducive to cooperation
8. The more permeable the boundaries of an organization, the more likely they are towards cooperation

Certain principles apply more aptly to regional economic development for British Columbia. Despite the ease and merits of vertical cooperation, the province can have a substantial impact in creating an environment conducive to horizontal cooperation between British Columbia local governments. According to the principles of cooperation, identifying and communicating the linkages between regions and the advantages of cooperation is important. Equally important is creating the necessary incentives to encourage regions to engage in cooperative behaviour. The importance of all eight principles should not be understated in fostering cooperation.

3.6 Section Summary

Despite the merits of competition and its prominence in the global and British Columbia economies, it has some key drawbacks towards regional economic development. Chiefly, competition can create a race to the bottom, where regions compete to provide incentives that attract business, thereby decreasing the regional well-being through an overabundance of business friendly incentives.

A sustained level of regional cooperation is important to balance the effects of competition. Cooperation between regions is a fluid relationship that creates mutual benefit. European integration has shown that the transportation, communication, infrastructure, energy and the environment sectors are most conducive to cooperation. The province can have a role in fostering regional cooperation, through identifying and providing opportunities for cooperation as well as providing the necessary incentives to induce cooperation between regions.

4. INCENTIVES: A TOOL FOR GROWTH AND COOPERATION

The focus of this section is on identifying, categorizing and describing a range of incentives. Incentives are vital in fostering cooperation among regions, both administrative and functional, and they can be applied to both economic sectors and geographic regions. Above all, incentives are most effective when they are properly targeted to the meet prescribed outcomes.

4.1 Defining Incentives

An incentive is designed to induce or motivate behaviour that leads to desired outcomes. In this context, incentives are a wide range of tools through which governments can foster regional cooperation and economic development. Effectively, the provincial government can use incentives to create conditions that are conducive for cooperation between administrative regions and increasing the functionality of economic networks.

4.2 Targeting Incentives to Outcomes and/or Outputs

A single incentive does not provide a catch-all means to improving regional productivity. In fact, incentives are a very specific tool that may have an impact over a specific geographic area, or a specific sector of the economy. In order for incentives to be effective, they must be targeted to achieve specific outcomes or outputs. The effects of an incentive do not need to be singular, as a single incentive can be used to target multiple outcomes. As well, incentives can be particularly effective when used in conjunction with one another. They can be used to reinforce regional economic strengths and the comparative advantages inherent to a region. This is particularly important in smaller regions, where economic activity is less diverse; further reinforcing the reliance on regional comparative advantages. Incentives can also be used to address areas of economic weakness within provincial regions. The importance of addressing economic weakness should not be understated, as Dissart identifies economic diversity as a key driver for enhanced economic performance (Dissart 2003: 425). Essentially, incentives can be used as a tool to foster the relative strengths within an area and/or buoy relative weaknesses. Incentives may apply differently, depending on the area of the province in which they are operating. However, the goal of the incentives in this context remains the

same; to foster cooperation between regional networks in order to improve economic performance.

Effective use of incentives can have a positive impact on regional economic development and well-being (Sridhar 2005: 5-6). Tying incentives to target and achieve desired outcomes is a key aspect of effective incentive usage. The potential areas for enhancing regional economic performance are varied, thereby varying the application of incentives. The provincial government may target incentives to (TFOCO 2006: 16-17);

- Enable multi-sector alliances;
- provide direct economic benefits to regions that sustain increased economic production; and
- foster lasting alliances that target regional development initiatives.

Targeting incentives to any of these, or other outcomes, may require distinguishing regional and sectoral incentives.

Regional Vs. Sectoral Incentives

Incentives can foster regional economic performance; sectoral economic performance; or both regional *and* sectoral economic performance. Increased performance for economic sectors often impacts the economic performance of regions, as economic sectors are often located with a certain region. For example, if a sector specific incentive is introduced for the fishery industry, the majority of benefits will be felt in the western regions of the province, as this is where the fishing industry tends to be located (BC Stats). However, certain industries span multiple regions within the province. For example, the forestry is a multi-billion dollar annual industry that spans nearly the entire province, as forests land covers more than 50% of the area in British Columbia (BC Stats). As such, increased performance in the forestry industry is not tied to a specific region. The presence of multi-regional economic sectors presents an opportunity for inter-regional collaboration. Simply put, regional cooperation benefits both regional and sectoral economic performance.

4.3 Creating a Net-Benefit through Incentives

At the heart of an incentive based approach to regional economic development is the concept of net benefit. When making decisions about the extent to which an incentive should be used to target a specific outcome, it is vital to consider if the benefits created by the incentive will outweigh the costs of implementing and operationalizing it (Sridhar 2005: 170). The methodology for tabulating costs and benefits is at the discretion of the individual or organization making the decision to implement or provide the incentive. Of importance is facilitating a situation where the benefits from an incentive outweigh the costs, thereby creating a net benefit. The need for an incentive in this context can be ascertained by asking the following question:

- Will the gains in economic productivity and well-being be larger than the costs of the incentive(s)?

A Noted Exception: Achieving Results without Incentives

There may be cases where the desired goals can be achieved without using incentives, thus it is important to ask the questions: Would the workers/industry/investment come to area in the absence of an incentive? Creating incentives is a form of government intervention and may serve as a distortion on market activities (Clement 1992). The impact of government incentives may be minimal, as the largest impact may be from other factors, such as available markets, characteristics of the labour force and other factors that impact production (Feiock 1991: 643-655). Therefore, it may be possible to achieve targeted results without the use of incentive tools.

4.4 The Various Incentive Programs: Finding the Right Tool for the Job

Sridhar focuses on the distinctions between tax and infrastructure incentives and effectively categorizes incentives along these two lines (Sridhar 2005: 1-7). However, Sridhar acknowledges there is a range of other incentives, outside the scope of his analysis. Evidently, there are many different types of incentives, designed to accomplish many different functions and outcomes. This section highlights incentive tools that are particularly important for fostering regional economic performance and cooperation for

British Columbia. Ten incentives and some of their iterations will be examined in the pages that follow. For each type of incentive the following information will be outlined:

- Description of how the incentive functions
- Highlight the how the incentive might typically enhance economic well-being, productivity and regional cooperation

Prior to introducing the range of incentives available, a couple points should be made. First, incentives may be used to enhance regional and/or sectoral economic performance. They can foster cooperation and/or competition, both between functional and administrative regions. Second, each different incentive may create a variety of outcomes, some similar, some dissimilar. As such, incentives are not mutually exclusive and it may be most effective to use incentives in concert, thereby capturing the strengths inherent in each.

4.4.1 Tax Incentives

Tax incentives have been a staple of regional development policies, due to their ease of administration (Rowlands 1996: 341). A tax incentive typically takes the form of a tax credit, which reduces the total tax liability, or a tax deduction, which reduces the income level used to determine taxes owing. The third major tax incentive is a tax exemption, typically used to exclude certain items from sales tax. Tax incentives have been shown to substantially reduce the level of unemployment in an area, by attracting business to a region (Sridhar 2005: 169-170). A tax incentive usually has a well-defined useful life, as the benefits are optimized over a three to five year period after the introduction of the incentive (Sridhar 2005:170).

Tax Incentives and Employment

Generally, tax incentives are highly effective at increasing employment levels (Sridhar 2005: 169-170). Holding the level of infrastructure constant, a region with greater tax incentives will be more attractive to business activity and economic development. Using tax incentives to lower unemployment can have a substantial net-benefit on economic well-being, meaning the benefits from lower unemployment are greater than the costs of

the tax incentives. This is particularly salient assuming three conditions are met (Sridhar 2005: 169-170):

1. The jobs are created in high unemployment areas
2. The jobs are skill based, thereby paying relatively well
3. Costs are minimized by targeting incentives towards labour intensive firms, without offering too large a tax incentive

Tax incentives are most effective when there is a substantial need to generate meaningful and well-paying job growth in a region and the net benefit from tax incentives is lowered when the costs of providing the incentive are high. Simply put, there reaches a point where the tax incentive is too great to generate meaningful net benefits.

Targeting Tax Incentives

A major issue surrounding tax incentives is their questionable ability to be targeted towards achieving certain outcomes. Local Governments in BC tax primarily on a property tax basis, which has limited flexibility in addressing sectoral development. Property taxes are also slow to respond economic growth, as the adjustment of property values lags behind economic growth (TFOCO 2006:1-3). On the other hand, the provincial government tends to tax on the basis of income and sales, which are more responsive to economic growth.

There are numerous examples of tax credits or tax deductions that are targeted to specific sectors of the British Columbia economy. These types of tax credits do not tend to directly foster functional regional networks, however may do so indirectly. Included among provincial and federal tax incentives in use in BC are (Invest British Columbia 2006):

- R & D tax credits and deductions
- Selected sales tax exemptions
- Mining exploration tax credit
- Film production tax credit
- International financial business tax refund

There are few regional tax incentives, as the provincial focus appears to be centred on sectoral tax benefits. Accordingly, local governments have few tax incentive options. However, Section 224 of the *Community Charter* grants the Municipal Council the authority to grant permissive tax exemptions under prescribed circumstance. These exemptions include the permissive property tax exemption for non-profit organizations and the heritage tax exemption (City of Victoria 2006). Because the authority to grant these exemptions is given by the *Community Charter*, it spans across British Columbia municipalities.

Tax incentives may be too blunt to target outcomes related to regional economic performance. It seems that tax incentives have historically been a tool that functions on a sectoral basis. As outlined in Section 3.3 and 3.4, sectoral incentives may address regional economic performance, but do not necessarily do so, particularly when an economic sector spans multiple regions. Should purely regional tax incentives be sought, there may be an opportunity to expand the authority of local governments to create tax incentives, particularly if local governments cooperate to do so. This would allow for regional flexibility in providing tax incentives. As well, increasing the tax room for local governments is a tax related strategy that has been identified as a potential tool for enhancing regional economic performance (TFOCO 2006: 1-3). As property tax is slow to respond to growth, providing local governments with another means of taxation may enhance the capacity and local interest in regional cooperation. However, a range of regionalized tax incentive programs may create a race to the bottom. This alone may provide rationale to continue a sectoral based approach to tax incentives.

4.4.2 Infrastructure Incentives: Grants and Loans

Infrastructure incentives involve the creation and maintenance of physical infrastructure. A strong infrastructure base benefits firms, taxpayers and local governments (Sridhar 2005: 170). The presence of infrastructure can attract business to a region, particularly if that infrastructure meets the needs of the business. For example, a forestry company is more likely to operate a mill in a region if there is relevant physical infrastructure in place, such as a transportation network or even an existing mill facility. The presence of

business activity, which may have been absent without infrastructure incentives, will typically have a positive impact on regional productivity.

A key point in the creation of infrastructure is to recognize that industries tend to cluster across many local governments within a region (TFOCO 2006: 29). Coe outlines how the cluster effect tends to concentrate industry within certain geographic areas (Coe 2006). For example, the natural resource sector in British Columbia is predominantly concentrated outside of major urban areas (BC STATS). Infrastructure improvements in a region with a comparative advantage in an industrial sector will further attract that type of industry. The following section lists some incentives that address infrastructure, although they may not be exclusive to physical infrastructure.

Grant Programs

Grant programs are a tool through which the federal and provincial government can shape infrastructure development, by earmarking funds to certain projects. Accordingly, grant programs are highly targeted, as they can be tied to specific geographic area, economic sector or outcome. As well, grants can be a one-off occurrence and may not be a continuous or stable source of funding for a region. However, there are high administrative costs for grant programs, due to the need to carefully monitor government funds (Rowlands 1996:341).

Despite the administrative costs of grants, they can be an equitable form of incentive. Grants give local governments' access to provincial and federal streams of revenue, typically derived from income taxes. Income taxes are an equitable basis for taxation, as they are considered a progressive tax. On the other hand, property tax, the primary stream of revenue for local governments is often seen as regressive because it taxes on the basis of fixed assets rather than income. There are two major forms of grants:

Conditional Grants

- Conditional grants place restrictions on how grant money can be spent (Oates 1999: 1126). These types of grant programs allow upper levels of government to

target specific outcomes at a local level and provide funding accordingly. They are particularly useful in addressing specific provincial interests at the local level.

Unconditional Grants

- Unconditional grants are lump-sum transfers from other levels of government that may be spent however the recipient desires (Oates 1999: 1126). The purpose of unconditional grants is typically equalization—the channeling of funds from an affluent region to a less-affluent region (Oates 1999: 1126).

In other regions of Canada, the focus for regional economic development has traditionally been on reducing unemployment by attracting new manufacturing investment, partially through infrastructure development (McNiven and Plumstead 1998). However, the British Columbia economy has its basis outside of manufacturing, thereby creating a need to target grants to other areas of the economy. This can be straightforward, as grants offer a great deal of flexibility in their application. Another key feature of grant incentives is their wide range of applicability. Grants can be given to any number of recipients for any number of purposes. More specifically, they can be used for any economic sector or region. As such, they do not fit exclusively in a discussion of physical infrastructure. A brief overview of grants has been provided, now the focus turns exclusively to grants for the basis of creating infrastructure.

Infrastructure Grants

Infrastructure grants are targeted towards upgrading local infrastructure. Infrastructure grants tend to directly benefit local governments, as they are geared towards physical upgrades. Access to infrastructure, particularly transportation, education, communication and energy related infrastructure are important in attracting skilled workers, investment and key industries to a region (TFOCO 2006: 29). Infrastructure has a direct impact on well-being and economic productivity as infrastructure often serves as an attraction for business (Sridhar 2005: 169-170).

Not only can infrastructure grants attract and retain business, they can also increase the tax base for local governments. This increases the capacity of local governments to address issues relating to the general well-being of citizens. As well, infrastructure grants can help enhance local capacity to deal with growth, both in terms of population and the regional economy. However, the focus of grant programs can be competitive, as regions issue competing proposals for grant dollars.

Subsidies

For all intents and purposes, subsidies provide the same incentive as a grant and are, for all intents and purposes, identical. They are monetary assistance by the government to a person or group. Like grants, subsidies are typically provided in accordance with the public interest.

Loan Incentives

Loans provide business and local governments with a funding source that helps address infrastructure needs. They provide valuable capital at the outset of a project, allowing for infrastructure to be created. Loans can impact economic prosperity, by allowing infrastructure to be created in order to attract business. This can also impact economic well-being, by enhancing the local government tax base. Although loans are typically granted to a single local government, there is the potential for creativity in loan structures that might increase regional linkages.

4.4.3 Non-Infrastructure Grants

Sectoral Grants

Administered in the same manner as infrastructure grants, non-infrastructure grants are geared towards a certain sector of the economy. Due to the diversity in available sectoral grants, they may target research and development, exporting, agriculture and any number of other sectors. So long as the benefits outweigh the costs, these grants will impact overall prosperity through fostering business development. Sectoral grants do not directly enhance cooperation between regions, as they are targeted to economic sectors, however they may do so indirectly.

Venture Capital/Small Business Grants

Grant programs that target small business and innovative thinking fall into this category. In this regard, grants are allocated to businesses that meet certain criteria, not necessarily relating to business location. This type of grant has the largest impact in areas where there are a number of small businesses. The size of the market in large urban areas is most conducive to small business development, thereby attracting small business towards this area of the province.

Labour, Training and Apprenticeship Grants

Typically delivered through a grant program, labour and training programs help address the needs for increased employee capacity. When geared towards students or recent graduates, the incentive typically takes the form of an apprenticeship program. These incentives are a means of upgrading the quality of labour within British Columbia and can be targeted towards any region or sector. Typically labour pools tend to reside in urban areas, therefore labour and training programs may inadvertently target these regions. Sufficient levels of human capital is important to facilitate knowledge transfer, foster innovation and stimulate economic development (Brunnen 2006: 20-22).

Business Development Planning Grants

Over the past 10 years there has been a shift away from direct grants to industry, towards pro-entrepreneurial activities (Rowlands 1996:341). According to Rowlands, subsidies continue to play an important role in regional economic development, however the importance of business planning and marketing are increasingly recognized as important undertakings (Rowlands 1996: 341). Funding for business planning can assist not only businesses, but local governments as well. Business planning support can aid the provincial government in fostering bottom-up development of economic networks.

4.4.4 Marketing/Communication Opportunities

Not only does regional development involve creating an environment conducive to economic performance, it must also ensure that the desirable economic conditions of a region are made aware to potential investment, business and skilled workers.

Communication and marketing highlights the inherent benefits of a region to a certain economic sector. The importance of accessing marketing opportunities is significant for both urban and rural areas. This type of incentive is an area where the possibility for cooperation is very high. The potential exists for a number of local governments, comprising a larger region could work together to develop a business marketing strategy that would benefit on a region-wide basis. The key point surrounding marketing activities is that this area blurs the line between sectoral and regional activities. Regions are able to market and communicate their value for a specific industry. Marketing and communication allows regions to work together to convey both the comparative advantages and the incentives (infrastructure, tax or otherwise) inherent to locating in their region.

4.4.5 In-Kind Incentives

In this context, an in-kind incentive involves non-financial provincial support in addressing regional issues. Effectively, it is the provision of provincial staff time towards meeting regional needs and supporting regional development. In-kind incentives are highly targeted as they are allocated to a specific region or to a specific issue. Regional staffing resources may lack a particular skill, making it difficult to pursue certain economic opportunities and as such regions may be unable to undertake activities beneficial to regional economic development. However provincial staff may have the expertise lacking regionally, providing valuable support. It is possible for support to extend beyond the province and emerge from regional development bodies or the private sector. A regional development body could be created to provide staffing support and advisory services for the purposes of fostering regional networks and collaboration. Access to such staffing and expertise would serve as an incentive to cooperative regional relationships.

4.4.6 Revenue Sharing

Traditionally, revenue sharing involves a government apportioning a part of its tax revenue to other levels of government (Encyclopedia Britannica Online 2006). Despite the similarities between revenue sharing and grant funding, the two stand in contrast. Whereas grant funding levels are often a one-off occurrence, revenue sharing amounts

are set in legislation or regulation and often span multiple years (Encyclopedia Britannica Online 2006). The major advantage for local governments is that revenue sharing agreements provide legislative certainty that a certain funding level will be maintained over a period of time (Indian and Northern Affairs 2003). In most cases, revenues are shared vertically between levels of government but there are instances when revenues are shared horizontally across local governments. Tax sharing agreements between local governments can be contentious and complicated. Accordingly, revenue sharing can be a bargained process between governments (Indian and Northern Affairs 2003).

Revenue sharing is particularly effective at targeting regional productivity as it can be based on regional economic indicators. Effectively, it may be desirable to implement a system where the more successful a region, administrative or functional, is at meeting provincial targets, the more benefit the region will receive from shared revenues. Provincial targets may centre on cooperation, increased economic performance or any number of other outcomes or outputs.

4.4.7 Regulation and Deregulation

The Economic Council of Canada defines regulations as “the imposition of constraints, backed by government authority that are intended specifically to modify the economic behaviour of individuals in the private sector (Premier’s Summit 1995: 166).” Effectively, regulation and legislation set the conditions within which much of the BC economy operates. During the 1994 Premier’s forum on investment, the regulatory working group found that the regulatory environment is equally as important as the tax environment in determining business investment (Premier’s Summit 1995: 166). Not only can regulation can be used to foster outcomes in the economy, it can target results in the environment, worker health and safety and the overall quality of life in British Columbia. Thus the potential impact of regulation is much more expansive than the economy. Without digging deeper into the power of the regulatory role of government, it is suffice to say that the importance of effective regulation cannot be understated.

It is difficult to create regulations that mandate cooperation. Cooperation is not a prescribed process, as seen in Section 3.3: The Principles of Cooperation. However, through the process of deregulation, the provincial government can downsize the prescriptive aspects of local government legislation, thereby increasing the autonomy of local governments. Through regulation or deregulation, the capacity for multi-regional agreements can be enhanced and a framework for regional cooperation can be sought. Greater autonomy and decreased provincial involvement creates a situation for greater interdependence between local governments. A regulatory framework may provide local governments with the necessary incentives to foster horizontal relationships between each other, thereby enhancing functional networks between them.

4.4.8 Permits, Licenses and Approvals

Municipalities have broad authority to regulate permits, licenses and certain approvals within their jurisdiction (TFOCO 2006: 33). These requirements can impose administrative costs associated with compliance. In some cases, the duplication of these costs occurs between neighbouring jurisdictions, as licenses, permits and approvals may differ between local governments. Coordinating an approach to licensing can serve as an incentive in increasing regional economic performance. There is already a substantial commitment to coordinating business licensing in British Columbia, as seen by (TFOCO 2006: 33-36):

- The BC-Alberta Trade, Investment and Labour Mobility Agreement
- Front-Counter BC
- The Capital Regional District inter-municipal business licensing scheme

4.4.9 Trade Incentives

Although trade incentives, such as tariffs and preferential trade agreements are classic examples of government incentives, they fall outside the control of British Columbia's regions. Accordingly, trade incentives tend to apply to international trade. There is sufficient prescriptive federal and provincial policy surrounding international and intra-national trade (Small Business BC). Coe provides a profile of the Cascadia region, which spans from Vancouver, British Columbia to Portland, Oregon and showcases some aspects of international trade (Coe 2006: 19-23). There are numerous participants in

international trade, including federal governments, provinces and states, local governments, businesses and non-governmental organizations (Coe 2006: 19). Canadian international trade is controlled in part by Foreign Affairs and International Trade Canada as they oversee the *Export and Imports Permit Act* where some key trade conditions can be found (Foreign Affairs 2006). Provincial influence over international tariffs and trade agreements involves complex interactions between countless stakeholders. As such, the provision of trade incentives may be outside the scope of the provincial government in providing sufficient incentive for regional cooperation.

4.4.10 Trust Funds

Trusts are separate budget accounts established to pre-commit resources for specific programs, activities and regions (Patashnik 1997: 432). Trusts are designed to give funding and ability to pursue new opportunities for sustained growth, often to a specific region (MED 2006). The initial funding for trusts is often established through a grant, which is earmarked for a specific purpose (MED 2006). Although the monetary impact of a trust is similar to a grant, its impact on a community can be very different. Trust funding implies a greater level of financial stability than grant funding. When funding is committed through a trust fund, there is often a community belief that the benefits stemming from trust funding commitments are earned rights and should be protected outside of normal budgetary pressures (Patashnik 1997: 432).

If the budget is a contract of how taxpayer money is to be spent, then it is a loose contract, particularly for an operating budget (Wildavsky 1964: 2) (Patashnik 1997: 437). Through the creation of a trust fund, the government is enhancing its budgetary commitment and providing a funding incentive for the activities earmarked by the trust. Accordingly, trust fund allocations in the United States accounted for nearly 40% of US federal receipts in 1997 (Patashnik 1997: 432). Of these more than 150 American federal trusts, the largest dozen account for 90% of trust income and spending (Patashnik 1997: 438). American trusts of this time included Social Security, Hospital Insurance and Federal Retirement Trusts.

The two aspects guiding the prevalence of trusts as a government incentive tool are; the current distribution of political support for government activities, which shifts in accordance with public opinion and the political climate; and the overall ground rules for government budgeting (Patashnik 1997: 449). Trusts can indicate a stable financial commitment to a region and assist in developing regional economic strategies. Effectively, trust funds can be levered to enhance regional cooperation with the hopes of fostering increased regional economic performance. Currently, there are some major funding commitments to trusts in British Columbia, including:

- The Northern Development Initiative Trust (\$185 million in committed funding)
- The Southern Interior Development Initiative Trust (\$50 million in committed funding)
- The North Island-Coast Development Initiative Trust (\$50 million in committed funding)

These three trusts have been established by enabling legislation. They are guided by their legislation and this dramatically reduces the level of provincial involvement in the trusts. Each trust is managed by an independent Board of Directors, tasked with sectoral development over a specific regional area (MED 2006).

4.5 Section Summary

There are a great number of incentives that facilitate regional and sectoral development. Incentives can be used in conjunction with one another and can provide sufficient motivation to induce or motivate certain behaviour. Ten incentives were presented that can be used to enhance cooperation as well as regional economic performance. The key aspect of applying incentives is ensuring that:

1. There is a targeted outcome or output
2. The choice of incentive is best suited to achieve the targeted outcome or output

Incentives should also create a net-benefit for an area. The bottom line is that the costs of developing and implementing an incentive should not outweigh the benefits.

5. INCENTIVES AND COOPERATION: LESSONS LEARNED

This section outlines some of lessons learned for applying incentives to foster economic performance.

5.1 Lessons Learned

Incentives can be levered to capitalize on economic opportunities, particularly through enhancing cooperation in fostering regional economic networks within British Columbia. In order to effectively lever incentives for this purpose, some key concepts were discussed throughout the paper. .

The British Columbia Economy Comprises Economic Regions and Economic Sectors

Economic sectors and economic regions both contribute to regional economic performance. An economic sector is an industrial component of the economy, such as the mining industry. An economic region is a geographic area whose boundaries can be defined by any number of measures. Because economic sectors tend to be based in specific regions, sectoral development can help strengthen regional economies. Linkages between regional and sectoral economic performance have been demonstrated, as an enhancement in one aspect of economic performance will likely enhance the other. However, incentives targeted to a specific economic sector do not necessarily foster regional development, particularly if the economic sector spans multiple regions.

Regional Cooperation Fosters Regional Economic Performance

Despite the merits of competition and its prominence within the global economy, regional cooperation is important in fostering an environment conducive to enhanced economic performance. The clear benefits of regional cooperation include the creation of economies of scales; increased regional problem solving capacity; and a wider range of available resources. Although cooperation may be desirable, it is a challenge ensuring cooperative relationships between regions, as cooperation is not a prescribed process. As well, cooperation can occur between both economic regions and administrative regions. Above all, cooperation can enhance the overall economic performance of British Columbia's regions.

Certain Economic Sectors are Most Viable for Cooperative Initiatives

As shown by the European integration experience, certain economic sectors are more conducive to cooperation. The transportation, communication, infrastructure, energy, environment and service delivery sectors are particularly suited to regional cooperative initiatives. According to the principles of cooperation, cooperation is further facilitated when the advantages to cooperative relationships are identified and communicated to stakeholders and necessary incentives are provided for engaging in cooperative behaviour.

Incentives Can Enhance Cooperative Behaviour and Improve Regional Economic Performance; Particularly when Targeted to Desired Outcomes and/or Outputs

There are a range of incentives that can induce or motivate certain behaviour. This paper identified, described and discussed ten different types of incentive, and their various iterations. In this context, incentives are a wide range of tools through which governments can foster regional cooperation and economic development. Effectively, incentives can be used to create a net-benefit through leveraging opportunities for enhancing regional economic performance.

Targeting incentives to achieve desired outcomes or outputs is a key aspect of effectively using incentives. Different incentives are more aptly suited to achieving certain outcomes and therefore should be levered accordingly. As the characteristics of incentives differ, some are narrowly focused, whereas others function much more broadly. Not only are the characteristics of each incentive tool distinct, the use of incentives may also differ by economic sector, economic region or even the current political climate. Combining incentives may lever the strengths inherent in each incentive. Understanding the differences in the incentive tools will enable the best fit to be found.

5.2 Summary

This paper provided a discussion of incentives and their impact on regional economic performance within British Columbia. Cooperation was introduced as a means of

enabling regions to lever opportunities to enhance their economic performance. Incentives were presented as a tool for enhancing cooperation between regions and as a means of developing regional and sectoral economic growth. Above all, it was found that incentives can be used to foster cooperative relationships between regions and ultimately enhance the overall economic performance for British Columbia.

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Water Management and Local Government Institutions: A Comparative Perspective

By: **Scott Mathers (P.Eng.), MPA Candidate, School of Public
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Abstract: In early 2006, the Local Government Institute (LGI) at the School of Public Administration, University of Victoria entered into a partnership with the Ministry of Community Services (MCS) to develop an agenda for research on emerging government priorities in the context of the Community Charter for local and community governance in British Columbia. The initial work plan for the steering committee focuses on improving regional performance in the Province of British Columbia. Several papers have been developed as part of this project to consider different aspects of regional performance. The purpose of the paper on Water Management and Local Government Institutions is to consider regional drinking water systems in British Columbia from a comparative perspective and attempt to make recommendations to improve regional performance.

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EXECUTIVE SUMMARY

In early 2006, the Local Government Institute (LGI) at the School of Public Administration, University of Victoria entered into a partnership with the Ministry of Community Services (MCS) to develop an agenda for research on emerging government priorities in the context of the Community Charter for local and community governance in British Columbia. The initial work plan for the steering committee focuses on improving regional performance in the Province of British Columbia. Several papers have been developed as part of this project to consider different aspects of regional performance. The purpose of the paper on Water Management and Local Government Institutions is to consider regional drinking water systems in British Columbia from a comparative perspective and attempt to make recommendations to improve regional performance.

Water distribution systems are an important component of all regional servicing strategies. It is a priority for every community to have a safe and reliable water supply to support residential, commercial, and industrial growth. Water is not only a commodity, but is a necessity required to sustain human life and should be respected as such. Improving water distribution systems can often result in improved overall regional performance. Water systems are often multi-million dollar utilities and reflect economies of scale. Studies have found that higher economies of scale exist in capital costs, outside costs, and material costs. Labor costs and energy costs exhibit lower but still positive economies of scale. These economies of scale suggest that larger systems are better than smaller systems and can obtain lower unit costs.

The Province of British Columbia is made up of a number of functional water regions with their own characteristic constraints. There are currently 4,797 licensed distribution systems supplying water directly to residences and buildings for human consumption in British Columbia. The province can be broken down into five functional regions that include: island areas, the urban west coast, northern BC, the BC interior and the Kootenays. Each of these areas has their own physical, economic, political and logistical idiosyncrasies. Problems in rural areas include limited financial resources and few skilled

drinking water professionals. Urban and built-up areas are more likely to have political problems and inter-municipal disagreements.

The Vancouver Island and New Zealand water management systems have taken different approaches to island wide drinking water servicing. It is recommended that, similar to New Zealand, funding be provided for island communities for studies that consider island-wide water servicing strategies. These studies should consider current drinking water systems, resources that may be exploited in the future, and a methodology for cataloguing current water quality monitoring information in a consolidated database.

The City of Seattle's water utility is operated quite differently than that of the Greater Vancouver Water District (GVWD). The GVWD is led by individuals that are leaders of the member municipalities. Seattle Water Utility's management is independent of its wholesale water customers and strongly motivated to represent the full cost of servicing in the water prices as well as be customer focused. The GVWD does not have the flexibility of being an independent organization and is often at odds with the smaller players within the municipality. A study to consider changing the current management structure of the GVWD and its customer service policies should be considered.

The Skeena Region and the Township of Black River–Matheson are examples of isolated populations with limited financial resources and few trained personnel. The Province of Ontario's Northern Prosperity Plan strategically focuses on these areas and attempts to provide them with the money they need to comply with new regulations. To help supply training to these regions, funding for an independent small water systems municipal association is recommended.

Aboriginal communities, similar to isolated communities, require proper monitoring equipment and certified operational personnel. It is suggested that funding be provided for an independent user association that specifically caters to aboriginal water system operators.

The joint boards of the Kelowna, BC and London, Ontario areas share several commonalities and differences. The London area joint boards are two separate units that share a common administration whereas Kelowna Area Boards are distinctly separate bodies that have done little to co-ordinate their activities. It is recommended that funding be provided to joint water committees for studies to consider merging and integrating their activities with those that share common water sources.

The goal of this paper is to provide practical and innovative recommendations that can be used by the Ministry of Community Services to foster regional cooperation for consideration as input for a workshop on regional economic performance planned for November 2006. As noted, water system management is one of many components critical to improving the regional performance in the Province of British Columbia. The goal of increasing regional performance is significant and through the diligent efforts of members of British Columbia's Ministry of Community Services this goal is in the process of becoming a reality.

1. INTRODUCTION

In early 2006, the Local Government Institute (LGI) at the School of Public Administration, University of Victoria, entered a partnership with the Ministry of Community Services (MCS) to develop an agenda for research on emerging government priorities in the context of the Community Charter for local and community governance in British Columbia. This agenda aims to support the ministry's professional development, strategic learning, and recruitment needs while fostering engagement with other ministries and external stakeholders. The initiative is being led by a steering committee of MSC officials and faculty members from the University of Victoria.

The initial work plan for the steering committee focuses on improving regional performance in the Province of British Columbia. Several papers have been developed as part of this project to consider different aspects of regional performance. The purpose of this paper is to consider a specific regional system and attempt to make recommendations to improve regional performance. The regional water systems of British Columbia have been selected for this analysis. The following paper takes a comparative approach to considering different regional water management initiatives in Canada and around the world. British Columbia will be divided into several functional water servicing regions based on economic, social, and geographic characteristics. The goal of this paper is to generate both innovative and practical recommendations that will allow the Ministry of Community Services to increase regional performance. For the purposes of this paper economic performance will be defined as follows:

“Economic performance is a measure of the combined effect of factors that contribute to the overall economic activity of an area. It contemplates the economic production of the area as well as economic well-being of entities within the area, both in terms of actual and potential performance.”

This definition will be used in order to develop effective recommendations for the province's functional water servicing regions. The issue of poor water quality on Native Reserves is a growing problem in British Columbia and all areas of Canada. A specific

case study of this issue has not been included in this paper; however, several comments have been made regarding the water servicing problems in aboriginal communities as they relate to the cases considered in the comparative analysis.

2. REGIONAL WATER SYSTEMS

The water requirements of a region are influenced by several factors which include:

- Location (climate),
- Size,
- Characteristics of the population,
- Presence of industry,
- Cost and development pressure,
- Quality of water, and
- Water supply metering.

Water distribution systems begin at a source that can be classified as either a groundwater or surface water resource. The location and quality of the source is of primary concern to those administering regional water systems. The water distribution system may convey the water tens of kilometres before it reaches its final destination, the user's tap. Distribution in a drinking water system tends to account for about 75% of the initial capital costs of a system, while the treatment plant accounts for the remaining 25%¹. The following section will briefly discuss the economic role of these systems and how they impact regional performance.

2.1. The Economic Role of Water Systems

It is a priority for every community to have a safe and reliable water supply. Regional economic performance can be adversely impacted if water is not provided in sufficient quality or quantity. Providing a high level of water quality at the demanded quantity is a

¹ Ministry of Public Infrastructure Renewal (2005). Water Tight: The Case for Change in Ontario's Water and Wastewater Sector. Province of Ontario: Toronto.

struggle for many communities. The demands for water come from the residential, commercial, institutional, and industrial sectors; however, additional capacity must be built into water systems to provide supplies in fire emergencies. Industrial demand varies substantially from community to community but often ranges from 15-65% (average 40%) of the total water demand². Commercial demand in cities with populations greater than 25,000 is often 20% of the total water demand³. Water servicing is often a primary consideration of many forms of industries and commercial operations, so that increasing water system capacity also helps to increase regional performance. Some municipalities like Milwaukee, Wisconsin, specifically target “Wet Industries”, such as food processing and pharmaceuticals by providing excess capacity at relatively low costs⁴. A supply of high quality and reliable water is a significant selling point for a municipality and an important component of any industrial or commercial growth initiative.

Water is not only a commodity, it is a necessity required to sustain human life. As detailed by a United Nations Subcommittee on Economic, Cultural and Social Rights, “The human right to water entitles everyone to sufficient, affordable, physically accessible, safe and acceptable water for personal and domestic uses.”⁵ One may ask the question: Why does government provide potable water servicing? Potable water as a service is both excludable and rival. However, due to the moderately inelastic demand⁶ for water and its requirement to support human life, most municipalities choose to provide it as a public service. For urban systems with a large number of users, the marginal cost of additional users is negligible. One could argue that if a competitive market was created for water in urban areas, market failure would occur because these

²Frenette, R. (2001). Hydraulics of Water Supply and Sewer Systems: Course Notes. University of Ottawa: Ottawa.

³ Frenette, R. (2001).

⁴ City of Milwaukee (2003). Milwaukee Water Works 2003 Annual Report. City of Milwaukee: Milwaukee.

⁵ World Health Organization (2002). Water for health enshrined as a human right. World Health Organization: Geneva.

⁶ Parkin, P. (2003). Economics and Canada in the Global Environment. Pearson: Toronto.

uncoordinated markets would be unable to provide water in the desired quantities. Unfortunately, in communities with small populations, the marginal costs of providing water servicing can be very significant. This often results in many small decentralized private systems.

In Canada, treated drinking water may be distributed from region to region and even between provinces; however, massive export of freshwater between Canada and the United States has been prohibited by the federal government. In 1999, the federal government launched a strategy to prohibit the bulk removal of water, including for export, from Canadian watersheds⁷. The federal government's current water export policies state that water shall not be sold on the international market. Large areas of Canada do make up the watersheds of several major rivers in the United States. These rivers provide drinking water to millions of Americans. This paper focuses on regional manmade water distribution systems and will not attempt to address the challenges of international natural water distribution systems.

In most industrial processes, the cost of producing an additional unit of output tends to start out high, when output is low, and then drop quickly⁸. Water systems are often multi-million dollar utilities and when compared with other industries do reflect economies of scale. These economies of scale are present when the average unit's cost of production decline as a water system's size increases. The economic literature on economies of scale in the water sector is limited, in part because prices do not reflect costs very well.⁹ Another complicating factor is the uniqueness of each system: even when (as is rarely the case), the same plant design is selected, such intervening variables as customer density, soils, climate, topography, and source water quality have an impact on costs.

⁷Commission for Environmental Cooperation (2001). North American Boundary and Transboundary Inland Water Management Report. Commission for Environmental Cooperation: Montreal.

⁸ Ministry of Public Infrastructure Renewal (2005).

⁹ Ministry of Public Infrastructure Renewal (2005).

One of the few studies undertaken on the subject of economies of scale in regional water systems was completed by an independent American research group “Resources for the Future”. They completed a study examining economies of scale in community water systems based on information from the U.S. Environmental Protection Agency’s Community Water System Survey that had a sample size of over 1,200 communities. They found that the total unit cost elasticity for a 1% increase in production reduces unit costs by a statistically significant 0.16%¹⁰. The study found that higher economies of scale exist in capital costs, outside costs, and material costs. Labor costs and energy costs exhibit lower but still positive economies of scale. These economies of scale suggest that larger systems are better than smaller systems at bargaining and can obtain inputs at a lower unit cost. Bargaining gains and some production economies do not necessarily depend on water systems becoming physically interconnected. The study also found that the cost per thousand gallons of a very small plant is 135% greater than that of a very large plant (\$2653/million gallons versus \$1128/million gallons)¹¹. This provides further evidence that larger systems generally provide a better economic value for municipalities. This study also considered, from a high level, the scenario of giving systems below the median supplied water level the scale economy gains associated with moving their output to the median level. The savings related to this scenario would provide systems below the median an average cost reduction of 14%. Under this scenario, more than 40 of the systems below the median would realize cost savings of more than 50%¹². Looking at operating costs alone, the scale economies are not as pronounced.¹³ This is important for the British Columbia situation, where geography often limits the ability to connect systems physically. Evidence from the United States on economies of scale point to large capital cost savings but modest savings for operations¹⁴.

¹⁰ RFF (2004). Economies of Scale and Technical Efficiency in Community Water Systems. Resources for the Future: Washington.

¹¹ RFF (2004).

¹² RFF (2004).

¹³ Ministry of Public Infrastructure Renewal (2005). Watertight: The case for change in Ontario's water and wastewater sector. Publications Ontario: Toronto.

¹⁴ Strategic Alternatives (2001). Commissioned by The Walkerton Inquiry: Financing Water Infrastructure.

Another U.S. based study, concentrating on smaller, partly rural systems in New York State serving between 2,100 and 57,000 people, focused directly on the joint minimization of treatment and distribution costs.¹⁵ The study indicated that “only in the most densely populated areas would any remaining economies of size in treatment outweigh the diseconomies in transmission and distribution.”¹⁶ This data highlights the importance for government to seriously consider the consolidation of small water systems that are adjacent to densely populated areas.

Consolidation of water systems is not always the best solution. Allowing fragmented water systems in isolated rural areas is often necessary from an economic standpoint. Drinking water systems are the most capital-intensive of all utilities¹⁷. As stated in an Infrastructure Canada water policy paper: “The ratio of infrastructure investment to revenues is almost 5:1 in water and wastewater, whereas it is only 3:1 in electricity and telephone and 2.5:1 in gas. This means that a significantly higher amount of investment is required to fund water infrastructure, yet it generates fewer revenues than other utilities.”¹⁸ Due to this low revenue to capital cost ratio, small utilities will struggle to subsidize an investment in consolidating adjacent water systems. This leads to the conclusion that a physical integration of rural systems is often not economically feasible. Other efficiencies, such as consolidating administration and staffing, should be considered in isolated rural areas.

Strategic Alternatives: Toronto.

¹⁵ R. Boisvert and T. Schmit (1997), Tradeoff Between Economies of Size in Treatment and Diseconomies of Distribution for Rural Water Systems. In *Agricultural and Resource Economics Review* 27, no. 2.

¹⁶ R. Boisvert and T. Schmit (1997), Tradeoff Between Economies of Size in Treatment and Diseconomies of Distribution for Rural Water Systems. In *Agricultural and Resource Economics Review* 27, no. 2.

¹⁷ Infrastructure Canada (2004). Water Infrastructure: Research for Policy & Program Development. Government of Canada: Ottawa.

¹⁸ Infrastructure Canada (2004).

2.2. Regional Constraints

Regional water systems are often defined by their constraints. The locations of settlements have historically been based on proximity to water sources; unfortunately over time these sources become contaminated by human impact or are unable to adequately service the size of expanding urban centers. Other less apparent constraints also affect the water supplies of certain regions having an adverse effect on regional performance. Often trained personnel can be difficult to attract to rural municipalities meaning that many of these areas have limited labour and human capital endowments. In addition, rural municipalities may be unable to subsidize the cost for equipment upgrades required to meet current provincial water quality standards. These two factors adversely affect the water servicing performance of rural regions.

Large urban centers have their own share of water servicing constraints. Often these centers have the capital required to undertake large infrastructure works; however, there is limited space available to undertake the work. Many urban areas have become significantly built up over time making large scale replacement solutions difficult if not impossible. In addition, these urban centers may be plagued with political problems related to adjacent municipalities. Municipalities are constantly competing for similar businesses and industries; therefore, helping an adjacent municipality to increase their water servicing capacity is analogous to helping a rival company increase its relative competitiveness. Every region has their own forms of physical, economic, and political constraints. The following section will describe the constraints currently faced by various regions in British Columbia that adversely impact regional performance.

3. REGIONAL WATER SYSTEMS OF BRITISH COLUMBIA

3.1. Regions in a Water Systems Context

Drinking water in British Columbia is managed locally by Drinking Water Officers, Public Health Engineers, and Medical Health Officers that work within the province's health authorities. All drinking water systems within the province require both construction permits and operating permits in order to ensure that they are constructed

and maintained in a safe and effective manner. The British Columbia Water Act includes provisions to license water users that wish to use or divert surface water. The act defines several types of individuals, groups, and agencies that can apply for a water license. The various forms of drinking water provider designations provided by the Ministry of Health and Ministry of Environment include:

Water Users Communities: These groups are administered through the Ministry of Environment under the Water Act and represent individual water licensees who have chosen to create a joint system to store or distribute their water. There are currently 107 active Water Users Communities in British Columbia.¹⁹

Community Watershed Designations: Community watersheds are designated in order to protect drinking water from the impacts of uses including logging, road building, recreation, and agriculture. There are currently 461 active Water Users Communities in British Columbia.²⁰

Certificates of Public Convenience and Necessity: Water utilities are defined as “Providers of water services who own or operate equipment or facilities for the delivery of domestic water service to five or more persons or to a corporation for compensation.”²¹ In order to operate, these utilities require a Certificates of Public Convenience and Necessity. There are currently 178 privately owned water utilities in the Utility Regulation Section of the Water Management Branch²².

¹⁹BC Ministry of Environment (2006). Water Stewardship Division: Water Users' Community Query. http://www.env.gov.bc.ca/wsd/data_searches/wuc/wuc_names.htm

²⁰BC Ministry of Environment (2006). Water Stewardship Division: Community Watersheds Database: http://www.env.gov.bc.ca/wsd/data_searches/comm_watersheds/index.html

²¹ Province of BC (2005). Water Utility Act [RSBC 1996] Chapter 485. Queen's Printer, Victoria, British Columbia, Canada

²² BC Ministry of Environment (2006). Water Stewardship Division: Water Utilities. http://www.env.gov.bc.ca/wsd/water_rights/water_utilities/index.html

Water Licenses: Individual water licenses are required by any individual or group seeking to divert or use surface water. There are currently 7,582 final licenses issued in the Province of BC of which 4,797 are for distribution systems supplying water directly to residences and buildings for human consumption.²³

The following sections will consider the functional water servicing regions of British Columbia. For the most part, water servicing administrative areas are coincident with functional servicing regions due to the interconnected nature of water distribution systems. The functional regions have been divided based on their geographic extent and share common distribution, economic, or logistical constraints.

3.1.1. Island Areas

The island areas are characterized by isolation and they often have limited surface and ground water resources. Examples of BC's island areas include Vancouver Island, the Gulf Islands, and the Queen Charlotte Islands. Island areas do not intrinsically have scarce water resources; however, as an island they are isolated and as they become further developed they often have limited options for further water servicing, necessitating a focus on water resource management.

3.1.2. Urban West Coast

The urban west coast of British Columbia is characterized by its dense population and proximity to the confluence of the ocean and major rivers. This area, including Greater Vancouver, is significantly built up and depends on water sources that are at least partially impacted by human activities. This area has access to large financial resources but it is also subject to large space and time constraints. These areas have substantial labour and human capital endowments.

²³ Number of licenses calculated based on the Ministry of Environment's Water Licences: Purpose Definitions and the Water Licences Web Database.

http://www.elp.gov.bc.ca:8000/pls/wtrwhse/water_licences.input

3.1.3. Northern BC

Northern BC is characterized by numerous unspoiled water sources and a large number of small isolated communities. These communities often have high quality water sources that need limited water treatment. Unfortunately, there are few skilled water treatment workers that live and work in these communities. Financial resources are also a constraint in these communities. Often simple chlorination equipment maintained by a competent professional are all that is needed to provide access to good quality water.

3.1.4. BC Interior

The BC interior is characterized by its agricultural resources as well as natural geographic water resource endowments. This region has a varied topography and several distinct micro-climates. Major cities in this area include Kelowna and Kamloops, as well as smaller centers like Vernon and Penticton. Cities in this area have moderate to high financial resources and have a diverse choice of water sources. These areas have a substantial number of qualified water professionals that are available to operate many of the regions water systems.

3.1.5. The Kootenay Region

The Kootenay Region is punctuated by expansive valley and mountain ranges and unspoiled yet isolated water resources. Transmission of water is often a problem through this rocky terrain. The problems in this area are similar to those experienced by Northern BC as they have limited numbers of skilled water treatment workers and financial resource constraints.

4. COMPARATIVE ANALYSIS

The following chapter presents a comparative analysis of specific area characteristic of the regions introduced in the previous sections. Case studies in BC will be discussed and compared with similar situations in Canada or around the world. The recommendations presented in this section relate both specifically to the location discussed and to its region as a whole, and have been developed with the goal of increasing regional performance.

4.1. Methodology

Each of the areas considered in the comparative analysis was strategically chosen based on specific criteria. Each set of comparators was selected based on its characteristics as it relates to the regions outlined in Section 3. The similarities between the locations selected for each regional comparison included geography and topography; availability of human technical resource capacity; local economic and social resources; and their status as a regional center. The following table includes the locations chosen for the comparative analysis and the criteria used to choose them. The primary differences are explored in the following sections. These differences are for the most part based on contrasting regional water system strategies or the use of different government incentive programs.

Region	Comparators	Similarity Criteria	Difference Criteria
Island Areas	Vancouver Island / New Zealand	<ul style="list-style-type: none"> • Island geography • Level of economic and social development 	<ul style="list-style-type: none"> • Contrasting Regional Planning Approach
Urban West Coast	Greater Vancouver Area /Seattle and King County	<ul style="list-style-type: none"> • Major urban center • Located adjacent to the Ocean 	<ul style="list-style-type: none"> • Different Regional Servicing Administration Models
BC Interior	Kelowna / London, Ontario	<ul style="list-style-type: none"> • Large urban center • Adjacent to many small communities 	<ul style="list-style-type: none"> • Dissimilar regional servicing bodies
Northern BC and the Kootenays	Skeena Region / Township of Black River - Matheson	<ul style="list-style-type: none"> • Isolated rural community • Minimal human and economic resources 	<ul style="list-style-type: none"> • Different provincial incentive programs.

Table 4-1: Comparative Analysis Methodology

4.2. The Islands: Vancouver Island and New Zealand

4.2.1. Vancouver Island

Vancouver Island has a population of approximately 723,000, includes several cities and regional municipalities, and is characterized by rugged mountains, coniferous and old-growth forest, and a variety of unique ecosystems. The island contains the regional districts of Cowichan Valley, Nanaimo, Alberni-Clayoquot, Capital, and portions of Mount Waddington. Most of these districts have their own independent water servicing operations. Each area has completed a water master plan to manage their own regional district; however, there has been little study undertaken considering the island's water servicing strategy as a whole.

An example of one of the regional districts with a comprehensive water management plan is the Capital Regional District. The Capital Regional District Water Services Department supplies water to 320,000 residents of Greater Victoria. CRD Water Services is responsible for the supply, treatment and delivery of bulk (wholesale) drinking water to its municipal customers and for the operation of the retail water distribution system in the Western Communities and Sooke. The services provided by the CRD include:

- strategic planning,
- watershed protection,
- construction and maintenance of water supply infrastructure;
- disinfection and delivery of bulk water to municipal boundaries,
- monitoring of water quality²⁴.

At this time little analysis has been completed by the CRD to consider the overall system needs for the bordering districts or the island as a whole.

²⁴ Capital Regional District (2005). <http://www.crd.bc.ca/water/factsfigures/overview.htm>

4.2.2. New Zealand

In New Zealand, the Ministry of Health ensures that appropriate infrastructure is present to support the provision of clean and safe drinking-water to communities. Three organizations, one at the local level, one regional and one with a national perspective, are concerned with providing safe drinking-water to the communities of New Zealand. At the local level, the typical supply is owned by a territorial local authority (TLA) such as a district or city council. The Ministry of Health does not monitor the local authorities directly but works at the regional level through the District Health Boards (DHBs). Each DHB is expected to oversee the TLAs in its area and ensure that they maintain appropriate water quality. The water suppliers are responsible for water quality monitoring, whereas the public health service providers carry out surveillance of the management of drinking-water quality in the health district.

In order to manage its water resources on a national scale, New Zealand's Ministry of Health has developed a comprehensive registration system. New Zealand's water supply registration system details over 2,000 community drinking-water supplies. Details are available on a weekly basis from the national "Water Information for New Zealand" database. The Water Information for New Zealand (WINZ) drinking-water information system was developed to be used by local bodies throughout New Zealand. New Zealand has medium and large modern cities; however, many small communities exist, often with limited knowledge and financial resources for improving their local drinking-water supply. The WINZ system provides technical means for identifying, evaluating and recording relevant information and also helps inter-relating parties to work effectively together. WINZ lists the information available to the Ministry of Health for all New Zealand water sources and community drinking-water suppliers. For each supply, the source of the water, the plants where water is treated and the distribution zones are listed, together with concentrations of contaminants. The aim of the registry is to provide easily accessible information about community water supplies to the regulator, the service provider, and the public. The Ministry of Health releases an annual document titled "Register of Community Drinking-Water Supplies in New Zealand" that provides information on community supplies in New Zealand, including their structure and water

quality grading. Entries in the registry include drinking-water supplies serving 25 people or more for at least sixty days a year.

4.2.3. The Islands: Comparative Analysis

New Zealand and Vancouver Island share many similarities; however, they choose to manage their regional water supplies quite differently. The country of New Zealand has taken the approach of an island-wide water management strategy. This has been done for many administrative and logistical reasons and has positively impacted the regional water servicing performance of the country. This strategy achieves increased performance by providing a holistic approach for managing the resources of a self contained and independent water system. The municipalities of Vancouver Island have not yet considered an island-wide approach for water management. Water resources are valuable and often limited in island areas. If the population of Vancouver Island continues to expand at the present rate, some form of an island-wide drinking water master plan should be developed similar to the systems already developed in New Zealand. This does not mean that the entire island will be serviced by a single system but rather a comprehensive plan is in place that best serves all the island's stakeholders. A system similar to New Zealand's Water Information for New Zealand (WINZ) system would aid Vancouver Island in developing a future strategy for smart growth and island-wide water systems management. Most of the information provided in the WINZ system is already available for the more populace regions like the Capital Regional District and from the British Columbia Ministry of Health; however, more work should be done to put this information in a common database in order to develop an island-wide water management program. A study to consider developing an island-wide information system and servicing plan for Vancouver Island will cost in the magnitude of \$150,000²⁵ if undertaken by an engineering consulting company. Smaller islands will require approximately \$50,000 for a similar study.

²⁵ Estimate based on current consulting rates in Canadian urban centers.

4.3. The Urban West Coast: Vancouver and Seattle

4.3.1. Servicing Vancouver: The Greater Vancouver Water District (GVWD)

The Greater Vancouver Regional District (GVRD) is a partnership of 21 municipalities and one electoral area that make up the metropolitan area of Greater Vancouver. The GVRD contains over two million residents, expecting to grow to 2.7 million by 2021. The GVRD's Board of Directors is comprised of mayors and councillors from the member municipalities, on a representation by population basis. Under the umbrella of the GVRD, there are four separate legal entities one of which includes the Greater Vancouver Water District (GVWD).

Through the GVWD, the GVRD performs its role of providing a reliable source of safe, high-quality drinking water to its member municipalities at a reasonable cost²⁶. The GVWD is responsible for acquiring and maintaining the water supply, treating it to ensure its quality, and delivering it to the municipalities. The member municipalities are responsible for conveying the water to residences and businesses in their jurisdiction. It is the GVRD's role to serve its member municipalities by providing bulk water to the municipal distribution systems.

The GVWD has outlined its strategy in their report titled "Drinking Water Management Plan for the GVWD and Member Municipalities"(DWMP).²⁷ This plan provides the direction and priority for drinking water initiatives to promote a "sustainable region" servicing strategy.²⁸ The GVWD has attempted to link the DWMP with other regional plans such as the Growth Management and Liquid Waste Plans. Based on the information provided in this report, the mandates of the partner municipalities have not been considered as part of the development of the Drinking Water Master Plan. One would characterize the affiliation between the GVWD and the member municipalities as a

²⁶ GVWD (2005). Drinking Water Management Plan for the Greater Vancouver Water District. GVWD: Vancouver.

²⁷ GVWD (2005).

²⁸ GVWD (2005).

partnership rather than a customer/service-provider relationship.

4.3.2. City of Seattle Regional Water Supply

The Seattle Public Utility (SPU) serves more than 628,000 people in the Greater Seattle Area with both retail and bulk water service. The SPU provides retail service to the citizens of Seattle and provides water to 21 wholesale customers, who together deliver water to an additional population of over 850,000. SPU's water line of business is divided into four business areas that are focused on key components of its water system. These business areas include major watersheds, water resources, water quality and treatment, and transmission and distribution.

The SPU provides wholesale water servicing to 70% of the population of King County plus a small population in Snohomish County. Between 2004 and 2006, SPU has entered into new contracts with most of its wholesale customers. These contacts created stronger partnerships between several of the wholesale customers and created more autonomy for others.

One of SPU's key business principles is to focus on the needs of its retail and wholesale customers. SPU has attempted to focus their efforts by fostering improved communication with customers while soliciting their input in order to provide better service. The following policy has been developed by SPU to articulate their drinking water service vision:

Provide retail and wholesale drinking water service that responds to changing customer expectations centered on providing reliable, high-quality water, and guided by asset management principles.

- 1. Use retail and wholesale customer-driven service levels to guide SPU's decisions regarding the drinking water services the department provides.*
 - a. Set service levels that are within SPU control based on high priorities to customers or regulatory requirements.*

- b. Collect and analyze retail and wholesale customer input through a variety of means, and modify SPU's service level targets as needed.*
- 2. Provide services with efficiency and fairness across customer classes (e.g., retail/wholesale, residential/commercial), and across all affected communities.*
- 3. Maintain appropriate tools and technology for enhancing customer relationships and responsiveness to customers*
- 4. Explore potential approaches to enhance retail water service beyond the customer's meter, recognizing that SPU's responsibility for water infrastructure ends at the meter*
- 5. Consider expanding fee-based services to wholesale customers and neighbouring utilities.²⁹*

This policy reflects SPU's goal to be a customer-centered organization. As an independent organization functioning as a wholesale water seller, SPU has been able to effectively serve its member organizations and maintain a high quality product at a low price.

4.3.3. The Urban West Coast: Comparative Analysis

Seattle and the GVRD have taken two different approaches to delivering water services. Seattle's Public Utility functions as a single utility wholesaling business servicing its surrounding areas with its extra capacity. SPU's approach has several advantages from a regional performance perspective. To begin, most of their business decisions can be based on economic incentives for producing and distributing more supply. In addition, the costs they charge for water are more likely to reflect the actual cost of production. Finally they are motivated to listen and act on the requests of their customers as their operations and capital investment depends on their business.

²⁹ Seattle Public Utilities (2006). Seattle Public Utilities 2007 Water System Plan. Seattle Public Utilities: Seattle.

GVRD has taken the approach of creating a water servicing partnerships to provide water to its member municipalities. Unlike a single utility provider independent from its customers, the GVRD does not necessarily make decision based on economic incentives. This type of arrangement leads to a price of water that does not accurately reflect its cost. In addition, member municipalities are in effect forced to take part in the partnership which, from time to time, creates an adversarial relationship between the GVWD and its member municipalities.³⁰ In addition, this approach does not motivate the regional body to generate a customer-centered attitude. In order to achieve this goal it is recommended that the GVRD develop a customer service policy similar to that of Seattle and build into their mandate the ideal of servicing their membership as if they were customers in order to help increase regional performance. Further analysis in the form of an independent study should be completed to consider changing the GVWD's management structure from a regional water partnership to a regionally owned and independently managed utility. The cost of a study to evaluate this option would be in the magnitude of \$150,000³¹.

4.4. Isolated populations: Skeena Region and the Township of Black River - Matheson

4.4.1. Skeena Region and the BC North

The Skeena Region covers an area of 266,441 km² in the northwest quadrant of British Columbia³². The region is relatively unpopulated; there are no large urban centers, and few communities are populated by more than 5,000 people. Most of the region's communities are located along the Highway 16 corridor. There are few large water suppliers in the region, and small water suppliers and private water systems serve most of the population. Water is abundant in the Skeena Region, and most drinking water systems use surface water sources. Surface water sources like those used in much of the Skeena

³⁰ Steblin, P. (2006). Interview with the former City Engineer of Richmond BC. August 30, 2006.

³¹ Estimate based on current consulting rates in Canadian urban centers.

³² British Columbia Ministry of Environment (2006). Drinking Water Source Quality Monitoring 2002-03 Bulkley Valley Surface Water Sources. Province of British Columbia: Victoria.

Region have a higher risk of contamination than groundwater sources. All surface water based drinking water systems should employ some form of basic disinfection treatment.

The Bulkley Valley is a representative portion of the Skeena Region that lies approximately 200 km inland from the Pacific coast. The Town of Smithers is located in the middle of the valley with a population of approximately 6,000. Agriculture occurs on the valley floor, and mineral exploration, timber harvesting, and outdoor recreation are the primary land use. Many residents live in rural parts of the Bulkley Valley, where infrastructure like sewage and water distribution systems are not available. These residents obtain their domestic water from small water systems which they may have built and maintained themselves. The abundance of surface water, combined with the cheap cost of installing a surface water intake, has resulted in a large number of people drinking water from surface sources. Surface water is commonly consumed in the Bulkley Valley with little or no treatment. Recent drinking water quality studies have noted source quality concerns at the Smithers Lakes and Bulkley River tributaries³³.

4.4.2. Township of Black River-Matheson and Ontario's Northern Prosperity Plan

The Township of Black River-Matheson is located in the District of Cochrane in the northeastern part of Ontario. The municipality contains four main town sites: Ramore, Holtyre, Val Gagne, and Matheson which is the largest. The municipality has a population of 2,925 and functions as a regional center for mineral exploration, forestry, and agriculture and is attempting to build on existing industry. The municipality has a series of small drinking water supplies that do not currently meet provincial drinking water standards.

In February 2006, Black River – Matheson was awarded funding by the Province's Northern Ontario Heritage Fund Corporation through their Drinking Water Protection Program. The funding, over \$100,000, was earmarked for five drinking water supply systems projects in the township. The upgrades will bring these systems into compliance

³³ British Columbia Ministry of Environment (2006).

with the provincial Drinking Water Systems Regulation and will benefit approximately 800 households within the municipality.

Ontario's Northern Prosperity Plan includes initiatives aimed at stimulating economic growth and job creation for individuals residing in northern Ontario. The plan has four goals:

- Increasing economic prosperity for Northern Communities,
- Improving government communications with northern communities,
- Focusing on economic initiatives that can help northern communities to compete globally, and
- Providing opportunities to a wide range of groups.

The Northern Ontario Heritage Fund Corporation (NOHFC) is a component of the Northern Prosperity Plan which aims to work with northern entrepreneurs and businesses to foster private sector job creation as well as support infrastructure and community development projects. The NOHFC offers seven programs to promote economic opportunities to northern communities. The Drinking Water Protection Program provides capital assistance to enhance drinking water protection in Northern Ontario. This program allows municipalities with drinking water infrastructure deficiencies to apply to receive provincial funding to cover up to 50% of project related capital costs.

4.4.3. Small Water Users Association of British Columbia

The Small Water Users Association of BC is a non-profit society committed to serving the interests of small water systems (1 to 300 connections) in British Columbia. The group was created out of concerns that existing water associations in BC were primarily serving the interests of larger water systems. The goal of this organization is to provide municipalities with small water systems access to information on the topics of emerging technology, regulatory requirements, government assistance programs, and operator training and certification. The association received limited financial assistance from the BC government to enable it to set up, establish a website, and undertake a membership

drive. The mission of the Small Water Users Association of BC is:

- To foster cooperation and information sharing amongst small water systems throughout BC in order to improve system operations and reduce costs; and
- To represent the concerns and interests of small water systems before all levels of government.³⁴

The Small Water User's Association is currently a small organization with a limited scope of services. Their current membership stands at 210 water systems ranging in size from 1 connection to 340 connections and include 39 Improvement or Irrigation Districts, 31 Water Users' Communities, 41 regulated utilities, 2 Regional District systems and 97 private systems. The association is currently developing a series of technical workshops; however, they are all located in southern BC. The association has also generated a guide to online resources for small water systems available on their website.

4.4.4. Isolated Populations: Comparative Analysis

The problems experienced by isolated populations are common among all of Canada's northern communities. These areas are generally sparsely populated and water systems are rarely monitored. In addition, there is a lack of certified operators to run these water systems. Due to the nature of this widespread problem it is often difficult to develop strategies to increase regional performance. Economic development requires safe water supplies in the quantity demanded by the areas residents and by industry. These areas often have limited economic and technical resources to deal with existing water quality problems. The funding provided to the Township of Black River-Matheson is an example of a strategic funding initiative that focuses on the problems of limited economic resources in northern communities. Developing a similar program in British Columbia would help those in isolated northern areas maintain safe water systems. If this strategy is to be successful in BC, it is recommended that a similar 50% allocation of funding be provided in the magnitude of \$10,000,000³⁵ to be reassessed in following years. This

³⁴ Small Water Users Association of British Columbia (2006). <http://www.smallwaterusers.com/index.html>

³⁵ Similar to the magnitude of funds provided by the Province of Ontario for a similar program.

money could be redirected from the Province's current Municipal Rural Infrastructure Fund, the B.C. Community Water Improvement Program or the Canada/B.C. Infrastructure Program, but be specifically earmarked for water systems in northern and isolated areas.

The Small Water Users Association of British Columbia is an example of a group that has helped to foster educational opportunities for operators of BC's small water systems. An organization like this one could provide a wide array of opportunities to small water systems in isolated areas. A Small Water Users Association that served members of Northern BC and the Kootenays would provide members with information on government programs as well as information regarding government application procedures. A funded organization such as this would collect and distribute information regarding local suppliers, new technology, and consulting engineering expertise. Another benefit of this type of organization is that it would provide advice to small utilities on how they can comply with the new Drinking Water Protection Act and its regulations. This form of organization would also create a forum for small municipalities that may not otherwise exist, and helps to build regional cohesiveness leading to improved regional performance. This type of forum allows custodians of isolated systems to exchange ideas and information about common issues and other matters related to the operation of their water systems. If this organization is to be effective at a provincial scale, it is recommended that its current funding be increased by \$225,000³⁶ per year to further subsidize their membership dues. If a new organization is established from scratch, the estimated start up costs would be approximately \$150,000³⁷ and would require a similar yearly investment of \$225,000.

Many aboriginal communities have similar problems managing water quality monitoring programs and employing properly trained water systems operators. Analogous to the

³⁶ Cost based on the association present membership fee (\$25 +\$1 per number of connections) for covering the cost of approximately 3000 small water users in the province for the first 50 connections.

³⁷ Includes startup costs related to setting up and equipping a small office, establishing a website and undertaking a membership drive.

isolated populations outlined above, aboriginal communities require modern monitoring equipment and trained operational personnel. In other provinces, organizations like the Aboriginal Water and Wastewater Association of Ontario foster technical self reliance of aboriginal peoples and promote the importance of proper certification and licensing of operators³⁸. Developing a users association that specifically caters to aboriginal water system operators in British Columbia may be prudent and should be explored in more detail.

4.5. The BC Interior: Kelowna and London

4.5.1. Kelowna Joint Water Committee and Westside Joint Water Committee

The City of Kelowna is serviced by the Kelowna Joint Water Committee which consists of the city's five major water suppliers. The Kelowna Joint Water Committee is a coordinating organization that develops a cooperative water management strategy to promote efficient water use within the region. The KJWC was formed to promote standardization of methods and materials, improve communications, and to provide an integrated approach to water supply within the city boundaries³⁹. In addition to the City of Kelowna, the water in the region is supplied by the Black Mountain Irrigation District, South East Kelowna Irrigation District, Glenmore Ellison Irrigation District and Rutland Water Works. The sources for these areas include the Valley Lakes (i.e. Okanagan Lake); Upstream Watersheds; and groundwater. The water distribution system services approximately 94,000 domestic customers and irrigates 6,170km² of agricultural land.

The Westside Joint Water Committee is made up of the Westbank Irrigation District, Lakeview Irrigation District, District of Peachland, Westbank First Nation and Regional District of Central Okanagan. The sources for these areas include the Valley Lakes (i.e. Okanagan Lake); Upstream Watersheds west of Okanagan Lake; and groundwater. These

³⁸ Aboriginal Water and Wastewater Association of Ontario(2006). [AWWAO Mission Statement](http://www.ofntsc.org/AWWAO-Mission.html)
<http://www.ofntsc.org/AWWAO-Mission.html>

³⁹ Kelowna Joint Water Committee (2006). [2005 Strategic Water Servicing Plan](#). Kelowna: Kelowna Joint Water Committee

groups have come together based on the recommendations of the Trepanier Landscape Unit Water Management Plan (TLUWMP). The Trepanier Landscape Unit includes approximately 100,000 hectares on the west side of Okanagan Lake directly across from the City of Kelowna. This area includes the watersheds of five major creeks that drain into Okanagan Lake. The goal of the committee is to champion improved water management and implement the recommendations of the TLUWMP. Currently the committee functions only as a public education partnership providing resources to the community to help citizens make informed decisions on water issues.

In 2005, the KJWC updated the long-range water-servicing plan for Kelowna. The report explored a number of water-related issues, including a review of source capacity; the major water supply components; plans for capital improvements for all five utilities; and a plan for future water service boundaries for all lands within city limits.⁴⁰ The KJWC report reflects the City of Kelowna's Official Community Plan, which was last updated in 2000, and is a comprehensive planning framework for providing water service to the city to the year 2020. One of the recommendations outlined in the report included:

The KJWC should continue to develop common policies for water supply in the Kelowna area. Meeting occasionally with the Westside Joint Water Committee should yield benefits including the creation of common objectives, shared contributions to public education on water, shared advertising, common policies for water management, and common standards and practises;⁴¹

To date little has been done to coordinate activities between the two joint boards.

⁴⁰ Kelowna Joint Water Committee (2006).

⁴¹ AQUA Consulting (2005). Kelowna Joint Water Committee Water Servicing Plan. AQUA Consulting: Kelowna.

4.5.2. Lake Huron and Elgin Area Primary Water System Joint Boards

Approximately 6000km² of the greater London area of southwestern Ontario is supplied by two water treatment systems. The Lake Huron Primary Water Supply System services the London area and municipalities west of London from a water treatment plant located approx. 60 kilometers away. The water treatment plant currently serves a population of approx. 325,000 people. The Elgin Area Primary Water Supply System services the communities of London and areas east of London including St. Thomas and Aylmer. The plant is located approximately 40 km from London and currently services a population of approx. 94,400 people. The City of London receives its treated water from both the Lake Huron Water Supply System (approx. 85% of daily consumption) and the Elgin Area Water Supply System (15% of daily consumption).

The respective Joint Board of Management for the Lake Huron and Elgin Area Primary Water Supply System owns and governs the area water systems using the City of London as the Administering Municipality. Accordingly, the City of London provides all associated administrative and management services on behalf of the Joint Boards. The area water systems are operated and maintained by American Water Services Canada Corporation under contract to the respective Joint Board of Management. The basic guiding principles for the administration and operation of the Boards' water systems are:

- **Quality of Service:** The Operator must meet or exceed the level of water quality currently delivered to our customers as stipulated in the Contract, which surpasses the Ontario Drinking Water Standards; and
- **Operating Flexibility/Innovation, Efficiency:** The Joint Boards wish to encourage performance improvement throughout the Joint Boards' System. Changes that have major implications on the Joint Boards' System will require the approval of the Joint Board. Where financial gains are made from improved efficiency, it is anticipated that such gains will be shared between the Joint Boards and the Operator.⁴²

⁴² LHPW and EAPW (2006).http://www.watersupply.london.ca/system_operation.html

4.5.3. BC Interior: Comparative Analysis

There are several similarities and differences between the joint water boards discussed in the previous sections. To begin, the Kelowna Joint Committee fulfills mainly the role of an administrative and master planning body. The Westside Joint committee has a minimal administrative role and serves its members by strictly providing public information by undertaken public awareness programs. The two Ontario Boards also function to provide system wide administrative and public awareness initiatives; however, they also manage the general operations of their system. As well, the two boards share the same administrative employees and are linked by a common administering municipality, the City of London, which provides the Board's administrative employees with facilities and human resources services. Unlike the Kelowna and Westside Boards, the Huron and Elgin Boards do not share similar water sources. The Kelowna and Westside Boards have the opportunity to develop a water source-centered partnership. This form of partnership would allow both boards to manage irrigation and drinking water resources within the Okanagan Lake Watershed more effectively. It is recommended that a study be undertaken to consider a master-servicing plan for municipalities using Okanagan Lake and its tributaries as a source. In addition, this study should consider developing a single joint committee that manages the drinking water infrastructure and uses the City of Kelowna as its administering municipality. An estimated order of magnitude cost for a study of this scope is \$250,000⁴³.

5. RECOMMENDATIONS

The following recommended initiatives summarize those provided throughout this report as applied to each functional region. The goal of these recommendations is to provide practical and innovative suggestions that can be used by the Ministry of Community Services to foster regional cooperation and increase regional performance:

- Provide funding for island communities for studies that consider island-wide water servicing strategies. These types of studies should consider current drinking

⁴³ This cost was estimated based on the cost of the City of London 2003 water master plan update.

water systems, future resources that may be exploited in the future, and a methodology for cataloguing current water quality monitoring information in a consolidated database. A study such as this will cost in the magnitude of \$150,000⁴⁴ for a large island, and \$50,000 for a small island if undertaken by an engineering consulting company.

- Provide provincial funding for regional water organizations, like the GVWD, to undertake studies to consider making regional management independent of its member municipalities. The study would consider modifying the management structure of regional water organizations to aid in increasing regional performance. The recommended management structure should be developed with a mandate to promote the ideals of increased regional effectiveness and efficiency and the vision of the organization as a catalyst for regional performance improvement. The cost of a study to evaluate this option is in the magnitude of \$100,000⁴⁵ per region.
- Develop a Northern Drinking Water Protection Program that strategically helps those in isolated northern areas maintain safe water systems. It is recommended that 50% funding be provided to selected projects and funding be provided in the magnitude of \$10,000,000⁴⁶ to be reassessed in following years. This funding could be redirected from the provinces current Municipal Rural Infrastructure Fund, B.C. Community Water Improvement Program or Canada/B.C. Infrastructure Program but be specifically earmarked for water systems in northern and isolated areas.
- The Province should consider providing funding to the Small Water Users Association of British Columbia or develop a similar group that will provide education and technical advice to small water systems and isolated populations. If

⁴⁴ Estimate based on current consulting rates in Canadian urban centers.

⁴⁵ Estimate based on current consulting rates in Canadian urban centers.

⁴⁶ Similar to the magnitude of funds provided by the Province of Ontario for a similar program.

this organization is to be effective at a provincial scale, it is recommended that its current funding be increased by \$225,000⁴⁷ per year. If a new organization is established from scratch, the estimated start up costs would be approximately \$150,000⁴⁸, and would require a similar yearly investment of \$225,000

- Provide funding for municipalities that share a common water source to form joint servicing boards. These studies should consider developing a single joint committee that manages the drinking water infrastructure of the region and uses a single urban municipality as an administrative center. An estimated cost for studies of this magnitude and scope would be \$200,000⁴⁹.

6. CONCLUSIONS

Water Distributions systems are an important component of all regional servicing strategies. As discussed above improving water distribution systems can often result in improved regional performance. Water distribution systems are complex pieces of infrastructure that are often subject to a number of constraints. These systems consist of a source (either ground or surface water), a treatment system, and a storage/distribution network.

It is a priority for every community to have a safe and reliable water supply to support residential, commercial, and industrial growth. Water is not only a commodity but is a necessity required to sustain human life and should be respected as such. Water systems are often multi-million dollar utilities and reflect economies of scale. Studies have found that higher economies of scale exist in capital costs, outside costs, and materials costs. Labor costs and energy costs exhibit lower but still positive economies of scale. These economies of scale suggest that larger systems are better than smaller systems and can

⁴⁷ Cost based on the association present membership fee (\$25 +\$1 per number of connections) for covering the cost of approximately 3000 small water users in the province for the first 50 connections.

⁴⁸ Includes startup costs related to setting up and equipping a small office, establishing a website and undertaking a membership drive.

⁴⁹ This cost was estimated based on the cost of the City of London 2003 water master plan update.

obtain lower unit costs.

The Province of British Columbia is made up of a number of functional water regions with their own characteristic constraints. There are currently 4,797 licensed distribution systems supplying water directly to residences and buildings for human consumption in British Columbia. For discussion purposes the province has been broken into five regions that include: island areas, the urban west coast, northern BC, the BC interior and the Kootenays. Each of these areas has their own physical, economic, political and logistical idiosyncrasies. Problems in rural areas include limited financial resources and few skilled drinking water professionals. Urban and built-up areas are more likely to have political problems and inter-municipal disagreements.

The Vancouver Island and New Zealand water management systems were discussed and their different approaches were explored. It was recommended that an island-wide assessment be undertaken on Vancouver Island similar to the one used in New Zealand.

The City of Seattle's water utility was contrasted with the Greater Vancouver Water District. The GVWD is led by individuals that are leaders of the member municipalities. Seattle Water Utility's management is independent of its wholesale water customers and is strongly motivated to represent the full cost of servicing in their water prices and is motivated to be customer focused. The GVWD does not have the flexibility of being an independent organization and is often at odds with the smaller players within the municipality. A study to consider changing the current management structure of the GVWD should be considered.

The Skeena Region and the Township of Black River–Matheson are examples of isolated populations with limited financial resources and few trained personnel. The Province of Ontario's Northern Prosperity Plan strategically focuses on these areas and attempts to provide them with the money they need to comply with new regulations. To help supply training to these regions, funding for an independent small water systems municipal association was recommended.

Aboriginal communities, similar to isolated communities, require proper monitoring equipment and certified operational personnel. There is currently an opportunity to provide funding to create an independent user association that specifically caters to aboriginal water system operators.

The Joint Boards of the Kelowna, BC and London, Ontario areas share several commonalities and differences. The London area Joint Boards are two separate units that share a common administration whereas Kelowna Area Boards are distinctly separate bodies that have done little to co-ordinate their activities. It has been recommended that funding be provided to joint water committees for studies to consider merging and integrating their activities with those that share common water sources.

The goal of this paper was to provide practical and innovative recommendations that can be used by the Ministry of Community Services to foster regional cooperation for consideration as input for a workshop on regional economic performance planned for 2006. As noted, water system management is one of many components critical to improving the regional performance in the Province of British Columbia. The goal of increasing regional performance is significant and through the diligent efforts of members of British Columbia's Ministry of Community Services this goal is in the process of becoming a reality.

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