

# **Regional Resilience and Place-based Development Policy: Implications for Canada**

**David A. Wolfe**

Royal Bank Chair in Public and Economic Policy and  
Director, Program on Globalization and Regional Innovation Systems  
Munk School of Global Affairs  
University of Toronto  
[www.utoronto.ca/progris](http://www.utoronto.ca/progris)

Paper presented to the Annual Meeting of the  
Canadian Political Science Association  
Wilfred Laurier University, Waterloo, Ontario

May 16-18, 2011

## Introduction

The impact of the economic recession over the past two years has dramatically altered the industrial landscape of the national economy, but particularly its industrial heartland. Manufacturing sectors that have been the mainstay of the economy for much of the postwar period, particularly the automotive and related industries, have suffered significant plant closures and job losses. The recovery that has occurred has been concentrated in the service sectors of the economy, including the public sector. Yet, if Canada is to maintain the standard of living and quality of public services that most of its inhabitants have come to take for granted, we cannot rely on the booming demand for resources in the western and eastern parts of the country, while abandoning the future of our industrial economy. No doubt the industries that will predominate in a post-recession economy will be different from those of the past; nonetheless, manufacturing must remain an important part of the overall economic mix. Although the fiscal pressures exerted on governments at all levels of the federation make it difficult to think about investing in the industries of the future, many observers in the U.S., Europe and elsewhere maintain it is more important to do so now than ever, in order to lay a strong foundation for post-recovery growth and expansion. However, the impossibility of funding all the competing demands makes it incumbent on governments to think strategically about investing in new areas of growth and to ensure that investments in economic development are targeted to ensure the maximum contribution to the future development of the national economy.

Canada is not alone in the need to rethink its overall approach to regional economic development. Not surprisingly, the renewed interest in regional development policy departs from older approaches in fundamental ways. Central to this rethinking is a new focus on innovation as the centre piece of a 'place based' approach to development policy. Territorially grounded policies that are multi-level in their governance structure and tailored to the reality of individual regions are now seen as the foundation for regional economic competitiveness and social well-being in an increasingly turbulent global environment. Parallel to this emphasis on innovation and a place-based approach is a solid appreciation of the need to be strategic in the allocation of scarce public funds. Most jurisdictions face the same fiscal limits as Canada and its provinces; yet this constraint has prompted a rethinking how economic development policy is focused more strategically on a clear set of priorities. In the European Union, this approach has recently been labelled 'smart specialization' (Foray, David and Hall 2009).

The goals of such an approach include building institutional capacity, improving accessibility to goods, services and information in the region, and promoting innovation and entrepreneurship. Policy interventions must be tailored to the prevailing reality of regional contexts and based on the input, experience and local knowledge of key regional actors. The focus on innovation as the centre piece of such a 'place-based' approach to regional development policy arises from a growing body of research which demonstrates that competitiveness in the knowledge-based economy rests on networked relationships and organizational synergies that flow through face to face interaction and ongoing dialogue among geographically proximate actors (Barca 2009). Such an approach also requires that policy development and implementation at this scale take account of the perspectives of a significant array of other actors at the local level who have significant local interests and are concerned about the economic prospects of the communities where they live and work (Feldman and Martin 2005).

This paper explores the way in which other jurisdictions, particularly in the European Union and the U.S., are moving towards the implementation of 'place-based' economic development strategies with an emphasis on smart specialization and what this means for Canada

and Ontario. Efforts to sustain the economic performance of regions through periods of disruptive change such as we have experienced in the past three years prompt a radical rethinking of our approaches to economic development policy. The move towards a 'place-based' approach at the regional level requires not just a new category of policy approach, but a new style of policy development. Resilient regions are those best able to focus their investments in research and innovation in areas where those investments are likely to have the greatest impact. However, the determination of these sectors cannot be undertaken by governments alone. Rather, it requires a new approach to the governance mechanisms for policy development that incorporate regional exercises to identify and cultivate their assets, undertake collaborative processes to plan and implement change, and encourage a regional mindset that fosters growth (Wolfe 2010b).

A recent OECD report notes that successful regional development policy needs to include four elements: a strategic framework to encourage regional innovation; a smart policy mix that builds on relevant assets located in the region; a multi-level and open governance structure to implement the framework; and a process to foster policy learning by enhancing policy evaluation and building up the regional policy capacity (OECD 2011). Among the important factors to take into account in designing these policies are: the ability of regional and local governments to build on specialized regional assets, including public and private research infrastructure, areas of sectoral strength, as well as unique concentrations of occupational and labour market skills; and the ability of regional networks to work within and across associational boundaries to support the formulation and refinement of strategic management policies in response to external shocks. The following discussion analyzes how this approach is being adopted in some competitive jurisdictions and its relevance for Canada.

### **Changing Approaches to Regional Economic Development**

The role of regional economic development policy has undergone a dramatic change in the past few years across many OECD countries. Despite the vast amounts expended on regional development in these countries since the initial burst of enthusiasm in the 1960s, the return on this investment has been open to question as evidence mounted that the programs have failed to reduce inter-regional disparities. The response to this perceived lack of success has promoted a serious rethinking of best practices in regional development policy with the result that new approaches have begun to diverge in significant ways from the historical approach. A hallmark of the new thinking is the emphasis put on the adoption of a 'placed based' approach to regional development policy. An underlying feature of this policy is the focus on innovation that mobilizes the local assets embedded in a region and taps the economic potential of all places and sectors to attain world class performance (Wolfe 2010a).

Regional development policies designed in the postwar period emphasized top-down redistributive schemes that provided funds for building infrastructure in, or attracting investments to, particular sectors or places in lagging regions. The most traditional approach, which corresponds historically to the Keynesian era from the 1950s to the 1970s, focused on strategies to attract individual firms to a region or locality, frequently by emphasizing the economic value of cheap factor inputs and by affording the target firms direct subsidies or tax reductions of an increasingly generous nature. The practice originated in the southern U.S. states that offered low wage, non-union labour, inexpensive land prices and reduced taxes to attract plants from the industrial North. By the 1970s, most U.S. states and some Canadian provinces, caught in the triple bind of competition from low cost jurisdictions, declining productivity levels,

and increased international competition, responded with a host of similar policies – including expensive tax abatements, job tax credits, training programs, low interest loans and other government subsidies to lower the cost of business. In Europe, this approach took the form of building infrastructure and upgrading the public infrastructure in order to bring the standards in lagging regions up to those found in more developed regions of the Community.

As globalization took hold in the late 1970s and the industrial heartlands of Europe and North America experienced their first wave of deindustrialization, this traditional approach was recognized as inadequate to meeting the challenges of the emerging knowledge-intensive economy. In the 1980s, a second phase of economic development strategies took hold which focused on building the educational and technological infrastructure to provide the knowledge base for indigenous firms and investment attraction. Numerous policies were introduced by various levels of government, including efforts to fill gaps in the capital markets, modernize small and medium-sized enterprises, accelerate the development and transfer of technology from universities to industry, enhance workers' skills, and provide entrepreneurs with a higher level of management information. These included initiatives like the Edison Centres in Ohio, the Centres of Excellence in NY State and Ontario's own Premier's Council Fund and Centres of Excellence (Wolfe 1994).

By the 1990s, a growing number of provincial and state governments began to perceive the limits to both the first and second 'waves' of regional development policy. While the policy target shifted from chasing smoke stacks to building research infrastructure and filling market gaps, both approaches relied on the same top-down organizational structures, creating a plethora of new programs administered by discrete branches of individual line departments with little integration of instruments or coordination across programs. Recognition of their institutional and structural limits led to the gradual emergence of a third approach to regional development policy, which has evolved over the 1990s and 2000s. This third approach recognized that regions need to maximize their investments in local assets that cannot be easily replicated or moved to other parts of the globe. Rather than playing in a zero-sum competition for inward investment, the most successful places generate economic knowledge that drives innovation and export success. This new approach acknowledges that regional governments and national agencies can't continue to layer new programs on existing ones in a disjointed fashion. Instead, regional development strategies must engage in a process of collaboration across different levels of government, and between public and private actors at the local scale to identify and cultivate assets which are unique to the region and constitute its enduring source of jurisdictional advantage. The resulting emphasis on flexible, associative, and bottom-up participatory approaches to economic development are now understood to be crucial for regional innovation based on economic clustering and industrial agglomeration (Wolfe and Creutzberg 2003).

Despite the challenges faced in implementing these economic development strategies, there is clear evidence that a number of regions are evolving in this direction. As Feldman and Martin perceptively note, most jurisdictions pursue an economic development strategy which is defined by the collective decisions that actors within that jurisdiction make over time, whether in coordination or not and whether articulated or not. Successful jurisdictional strategies are those that contribute to high and rising wages for their workers over time and city-regions are the relevant scale to focus on because the benefits of clustering and agglomeration highlights that compact geographic units are a critical element for industrial performance. They maintain that jurisdictions can benefit from creating an economic base with unique and valuable assets that provides a differentiated advantage over other jurisdictions. But they emphasize that

“constructing jurisdictional advantage takes the will of all the actors—a consensus vision and vision of uniqueness” (2005, 1245).

### **Path Dependence and Regional Resilience**

The process of constructing jurisdictional advantage needs to commence with a realistic appreciation of the institutional capacity of those regions to manage their transition. The context in which such strategies are formed is strongly conditioned by a region’s industrial structure and institutional underpinnings. The path dependent nature of development in regional economies, involves the process by which new paths are created and existing institutional ensembles begin to break down and reconfigure. New pathways for economic growth can emerge through the indigenous creation of new products or processes, through the development of new areas of competence or specialization in the context of a regional economy, through the progression along a value chain to higher value added activities for existing industries and through the re-location of existing firms and industries into an existing urban economy. However, these emerging pathways are strongly influenced by the existing mix of knowledge assets and labour force skills within the local economy. The key issue is how firms, industries and institutions in a particular city-region recombine their existing knowledge base and localized capabilities to generate new commercially valuable sources of knowledge in this process of innovation and creativity.

A critical issue for the growth of regions is the relative impact of path dependence on their pattern of development. Within evolutionary economics, the concept has been used to explain why certain technologies prevail in the competitive setting of the marketplace, although they may not always be technologically superior. The evolutionary approach argues that economic systems change over time, but in ways that are shaped and constrained by past decisions, random events and accidents of history. As a result of past choices and events, certain possibilities are easier to pursue in the present and others less so. The concept is somewhat counter-intuitive in that it purports to explain how structured patterns of development—across time and space—can result from seemingly random or chance occurrences. When applied to regional and urban phenomena, it suggests that the developmental trajectory of a specific city or region is rooted in a series of economic, social and cultural factors that lie in their past. The challenge is to reconcile the significance of random or chance events in endowing a region with its specific industrial structure and institutional capabilities, while allowing for the role of individual and collective agency in fashioning subsequent changes in its broader institutional structures and development strategies.

The complementary concepts of path dependence, increasing returns, and lock-in have obvious applications to interpreting the historical paths taken by production regions. In effect, the literature is much more illuminating on the question of how a new form of economic development, structure or technology generates self-reinforcing processes once it is selected, rather than how they get selected in the first place. Once a region has established itself as an early success in a particular set of production activities, its chances for continued growth are strongly reinforced by the impact of increasing returns to the technological and institutional advantages it has built up. While this may be partly attributable to the success of dominant ‘lead’ firms in the region, the beneficial aspects of the process also derive from the collective forces at work, including local social and economic institutions and political alliances that support these structures. By the same token, ailing places may also face great challenges in improving their fortunes once the industries and technologies upon their economies are based begin to decline. Once a path-dependent trajectory of decline sets in, the critical issue that determines the

resilience of local firms is their capacity to shift to a new or emerging set of production activities and the extent to which the region's institutional structures support this shift.

Maskell and Malmberg extend this point by arguing that the competitive success of firms depends on distinctive, *localized capabilities*. These capabilities tend to arise from regional assets that are non-ubiquitous, or unique to the region. They can be based on the infrastructure and built environment of the region, its endowment of natural resources, the regionally-specific institutions and the available set of knowledge and skills. A region's institutional architecture accumulates and changes incrementally, and represents the interaction between various elements that have been built up or accumulated gradually over time. Because of these properties, this institutional endowment can become a key part of a region's non-replicable asset base, thereby reinforcing durable local competitive advantages that are difficult for competitor regions to emulate,

. . . it is *the region's distinct institutional endowment* that embeds knowledge and allows for knowledge creation which . . . *constitutes its capabilities and enhances or abates the competitiveness of firms in the region*. The path-dependent nature of such localised capabilities makes them difficult to imitate and they thereby establish the basis of sustainable competitive advantage (Maskell and Malmberg 1999, 181).

This point is picked up in Martin and Sunley's review of the literature on path dependence and regional economic development. They suggest that much of the work has been devoted to explaining the emergence and growth of dynamic regions based on new technologies, as well as the challenge for older, industrial regions to break free of their locked-in paths of development to capitalize on new technological and industrial trajectories. They view the extent and nature of this interlocked effect between underlying technologies, economic structures and institutional supports as a key issue, as well the way in which complex and overlapping sets of interrelated industries co-evolve within a regional or urban economy. The aggregate path dependence of whole systems that characterize regional and urban economies involves the co-evolution of different subsystems, such as the economic, technological, institutional and socio-cultural (Martin and Sunley 2006, 413).

Central to the question of regional resilience is how adaptable these institutional ensembles are to changes in the principal industries and technologies at the core of the region's industrial structure. In particular, the key issue concerns the ability of firms, industries and institutions in a specific city or region to adapt their existing knowledge base and localized capabilities to the generation and exploitation of new commercially valuable sources of knowledge. "New paths do not emerge in a vacuum, but always in the contexts of existing structures and paths of technology, industry and institutional arrangements" (Martin and Simmie 2008, 186). Resilient regions tend to be those in which existing clusters of firms prove to be adept at transitioning out of declining industries, while simultaneously effective at exploiting the local knowledge infrastructure to cultivate new, potential growth fields. In both instances, the support of local and regional institutions is critical for those capabilities.

### **The Evolution towards Place-Based Policy Making**

The evolutionary perspective on regional economic development change is central to the emergence of the new place-based approach to regional development policy in the E.U. and elsewhere. The focus on 'place-based' policy has emerged as the guiding principle of the ongoing review of the E.U.'s thinking with respect to regional development and cohesion policy. The practice of regional development policy has undergone a continuous process of change and

evolution since it was first introduced in 1975. In the process, it has become one of the cornerstones of the European Union's programming efforts and the focus on improving cohesion among the member states has taken on even greater significance in the past decade with the accession of ten new members from the less prosperous regions of Europe. During this period, the size and scale of cohesion policy (including regional development) has increased significantly. In some of the regions which have benefited the most, especially the some of the Mediterranean countries such as Spain and even more specific regions in Spain, European Union contributions have represented a substantial part of the total national and regional budgets.

Over the course of the past three and a half decades, both the overall objectives and the operational design of E.U. regional development policy have changed as well. The focus has shifted from an interlinked set of programs and funding mechanisms with a primarily redistributive mechanism tied to national objectives of the individual member states to a more coordinated geared to community-wide goals and objectives. While the most recent review of the state of cohesion policy and the role of the structural funds has identified a number of limitations and shortcoming, there is widespread recognition of the extent to which the goals of regional development and cohesion have been embedded within the framework of the broader social and economic objectives of the Union, particularly, the goals and objectives set out in the Lisbon Agenda. In the process, the role of Cohesion Policy has shifted away from an exercise primarily devoted to redistributing funds from richer member states to poorer ones, in favour of channelling resources across the continent towards a common set of economic development objectives and to improving regional planning and administrative practices in all parts of the Union (Manzella and Mendez 2009, 22).

This redirect of both the overall objectives and program spending of the structural funds has involved its own challenges. There continues to be an underlying tension between the Union's goal of promoting the international competitiveness and innovative capabilities of the continent as a whole and that of facilitating the convergence of individual member states and lagging regions within those states in terms of levels of income and employment opportunities. In starkest terms, this conflict has been portrayed as a choice between concentrating greater resources, particularly under the Framework programs devoted to research, development and innovation, in those regions which already enjoy the greatest concentration of research capabilities—sometimes referred to as 'islands of innovation' (Hingel 1992) or redistributing funds on a more equitable basis to the lagging regions, at the possible cost of undermining the competitiveness of the most advanced regions.

This trade-off received considerable attention in the recent report on The Future of Cohesion Policy in the European Union prepared as part of the planning process for the design of regional development policy in the post-2013 period. According to the Barca Report, the rationale for Cohesion Policy in the European Union should not be that of financial redistribution from richer regions to lagging ones, or so-called 'convergence regions', as in the past. Rather the rationale should be to foster economic development in all places where economic efficiency exists through the provision of public goods and services. The Report labels this alternative notion, a 'place-based' development policy. The strategies adopted under a place-based development policy are territorially grounded, multi-level in their governance structure, innovative and tailored to the specific reality of different regions. The goals of such an approach include building institutional capacity, improving accessibility to goods, services and information in the region, and promoting innovation and entrepreneurship. Policy interventions must be tailored to the prevailing reality of specific regional contexts and based on the input,

experience and ‘local knowledge’ of key regional actors. The report defines place-based development policy in the following terms:

- a long-term development strategy whose objective is to reduce persistent *inefficiency* (underutilization of the full potential) and *inequality* (share of people below a given standard of well-being and/or extent of interpersonal disparities) in specific places,
- through the production of bundles of *integrated*, place-tailored *public goods and services*, designed and implemented by aggregating *local preferences and knowledge* through *participatory political institutions*, and by establishing linkages with other places; and
- promoted from outside the place by a system of *multilevel governance* where grants subject to *conditionalities* on both objectives and institutions are transferred from higher to lower levels of government (Barca 2009, 4–5).

As the European Union moves towards the implementation of a new cohesion policy for the period after 2013, the place-based approach described above has been recast within the broader framework of its research and innovation goals described as the Innovation Union. The idea of a place-based approach has been refined to focus on the notion of smart specialization described above. This shift reinforces the need to move away from a dichotomous framing of the debate between convergence and competitiveness goals towards a more holistic set of place-based development goals. It also confirms that this dichotomy in terms of policy objectives can be overcome by concentrating instead on the complementary potential for greater regional specialization and cooperation.

### **From Place-based Policy to Smart Specialization**

Building on the framework provided by the Barca Report, the E.U. is in the process of reframing its regional development policy to integrate it more effectively into the broader context of its goal to create an Innovation Union by 2020. It has adopted the concept of smart specialization to reflect the idea that regions must build upon their existing industrial base and institutional strengths by using both national and E.U. programs to create a distinctive jurisdictional advantage. This approach starts from the belief that regions need to apply strategic intelligence to identify and support the enhancement of those regional factors of production with the greatest potential for contributing to the region's overall growth and competitiveness. According to Foray et al.,

The question is whether there is a better alternative to a policy that spreads that investment thinly across several frontier technology research fields, . . . not making much of an impact in any one area. A more promising strategy appears to be to encourage investment in programs that will complement the [region's] other productive assets to create future domestic capability and interregional comparative advantage (Foray, et al. 2009, 1).

The proponents of this approach maintain that it can be pursued both by regions that are already working at the technological and scientific frontier, as well as those that are less advanced in their research and innovation capabilities. The key is to develop complementary research and innovation capabilities that can be linked more effectively across regions. The European Commission has interpreted the adoption of smart specialization strategies in the context its regional development and cohesion policies to target public support more closely to enhance distinctive regional capabilities. On a practical basis, it means using available government policies and economic development funding from an array of sources to help regions

identify and support those industrial sectors and research institutions as priority areas where the region may already have an established or emerging competitive advantage or recognized strength in research capabilities. The process of smart specialization involves business, research institutions and universities collaborating to pinpoint both the region's important areas of specialization as well as those shortcomings that are impeding its potential for innovation. The implementation of a smart specialization approach involves not only a new set of policy instruments, but a new approach to policy making that includes mechanisms for reflexive learning through coordinated policy reviews. The goal is to achieve the maximum economic impact from the expenditure of an existing pool of funds, rather than spread them liberally across a wide number of research areas and business sectors. This concentration of resources in recognized or emerging areas of expertise and capability can help differentiate the region's strengths from those of other regions (European Commission 2010b).

The shift in regional development thinking from a preoccupation with redistribution and convergence to a focus on the importance of enhancing unique regional assets through smart specialization and the strategic management of non-mobile factors of production has led, not surprisingly, to a renewed interest in the economic contribution of industrial clusters. There is a growing belief in the U.S., Europe and elsewhere that the goal of promoting economic development by means of smart specialization can best be accomplished at the level of the local and regional economy through the lens of strategic clusters (as was seen in the recent series of policy measures introduced in the President's budget to Congress in the U.S.). Clusters can consist of both high-technology concentrations of firms, which often centre on research-intensive universities or institutes, as in the case of Silicon Valley and its many emulators, as well as those based in more traditional industries, such as the furniture, beer or dairy industries in Denmark. While clusters have long been a source of fascination for economic policy-makers, their privileged position in the policy toolkit was more an article of faith than the product of solid economic evidence. However recent research provides strong support for the fact that the concentration of economic resources around clusters of strength generates considerable economic benefits for regions, provinces, and countries (Porter 2003; Spencer, Vinodrai, Gertler, et al. 2010; Delgado, Porter and Stern 2010).

Part of the reasoning behind the growing support for the potential benefits of channelling economic development policy through the instrument of clusters is the substantial contribution that U.S. federal government policies have made, often inadvertently, to the emergence and development of regional technology clusters, ranging from Silicon Valley to the Washington-Baltimore corridor (Wolfe and Gertler 2006). The underlying rationale for this emphasis is the distinct advantages that clusters afford to firms and the communities that house them. First, the cluster acts as a magnet drawing talent, and the location of specialized training and educational institutions can supply new skilled labour to the firms in the cluster. Second, membership in the cluster makes it easier for firms to source needed parts and components, thereby enhancing the technological and productive capabilities. A third key benefit of clusters arises from the formation of new firms when larger, anchor firms generate new ideas and research findings that support entrepreneurial spin-offs taking breakthroughs to market. Finally, the strength of clusters can provide an important stimulus to public investment in specialized infrastructure, such as communication networks, joint training and research institutions, specialized testing facilities and the expansion of public laboratories or post secondary educational institutions. As the depth and value of such investments increase, so do the economic benefits flowing to firms located in the cluster and their surrounding communities. Indeed, the

strength of the cluster and its supporting infrastructure of public investments and collaborative institutions create a mutually reinforcing positive feedback loop that benefits the entire region (Wolfe and Gertler 2004).

This is precisely the rationale elaborated in the most recent policy document from the European Commission specifying the various programs and policy mechanisms that can be used to realize the goal of smart specialization. The Commission identifies clusters as a critical component of smart specialization strategies as they provide a convenient means for streamlining the delivery of a range of different policy focused on the goal of stimulating innovation in regional economies. Cluster initiatives afford policy-makers a lens or focusing device through which they can address a wide range of business needs in a collective fashion and ensuring a cost effective means of delivering their programs to a critical mass of recipients in a manner that has been designed through a joint public-private decision-making process (Landabaso and Rosenfeld 2009). Clusters are effective as a policy instrument because they can help promote linkages between firms, universities and research institutes and provide a basis for firms to take better advantage of market opportunities. They also afford the opportunity for small and medium-sized firms to establish connections with larger partners and multinational firms. There is solid evidence that inward investment from global partners is also drawn to regional economies with a strong concentration of research expertise and a dense network of firms with unique local capabilities (Cooke 2005).

The Commission document on ways to implement regional policy for smart growth specific a number of key policy areas to support in order to gain the maximum benefit from existing local and regional clusters. These include support for the internalization of cluster firms, the commercialization of research results, specialized programs and training institutes for the local labour force, joint branding and marketing programs for cluster firms and policies to help cluster firms take better advantage of the trend towards open innovation in the R&D strategies of large multinationals. Existing cluster organizations can also provide a convenient mechanism for delivering specialized business and innovation support programs to cluster firms and developing collective strategies to promote the growth of local clusters (European Commission 2010a).

The European Union has not been alone in the recent turn to clusters as the most effective organizational instrument for promoting the implementation of its strategies for smart specialization. The election of the Obama administration in the U.S. marked a significant turn in the centrality afforded by the U.S. government to clusters as a critical instrument of regional development policy. The various lobbying efforts for a more concerted federal strategy in support of regional innovation clusters that had been underway for a number of years found strong resonance in the federal budget for FY2011 introduced in February. In a series of items that marked the current government as the first U.S. administration as the first to express embrace a cluster strategy, the budget introduced several proposals to support the growth of regional innovation clusters through coordinated measures across several different departments. The centre piece of these measures is the Economic Development Administration's (part of the U.S. Department of Commerce) proposal to establish a \$75 million program to support Regional Innovation Clusters with funds for regional planning efforts and matching grants to support cluster initiatives. The Small Business Administration of the Department of Commerce also will receive \$11 million to assist the participation of small business in regional clusters through the provision of funds for business counselling, training and mentorship. The Department of Labour will be able to deploy up to \$108 million from its new Workforce Innovation Fund to help align workforce development with cluster initiatives by promoting collaboration among training and

employment service providers to link worker training more effectively with emerging job opportunities. The National Science Foundation will receive \$12 million to invest in “innovation ecosystems” that support efforts by faculty and students in universities to commercialize research results and stimulate start-up firms. The goal of these budget initiatives is to provide funding across multiple federal agencies, all targeted at supporting the growth of stronger regional clusters (U.S. Office of Management and Budget 2010, 22).

The rationale for the federal government’s new approach to regional economic development was spelled out in a speech given by John Fernandez, the former Mayor of Bloomington, Indiana and current Assistant Secretary of Commerce for Economic Development in January, 2010. He noted that dynamic and innovative companies thrive in places where scientists, businessmen, highly skilled workers and venture capitalists cluster together with similar and interrelated firms, “. . . place matters. Entrepreneurs and researchers and innovators want to be around each other. They want to feed off the shared creative energy. They want access to a shared talent pool. They want to build relationships.” In order to support this process, the federal government was replacing what it referred to as the previous ‘buckshot approach’ with a more focused strategy to support the growth and development of innovative clusters in a multitude of regions across the country. The purpose of the new approach is to provide a framework for local and regional actors to assess their regional strengths and fashion a strategy to bring together the technology, human resources and financial capital to help transform the region’s unique assets into the basis for its future economic growth and prosperity (Fernandez 2010).

The hallmark of the U.S. government’s cluster strategy is a recognition that successful cluster initiatives can be implemented without expending substantial sums of public funds. In most of the measures that have been introduced, public funds represent a small proportion of the total amount supporting the growth of the cluster. A leading example where this has occurred in the recent past is public support for the expansion of the nanotechnology cluster in Albany, New York where \$800 million in public funding has triggered overall private investment of almost \$5 billion in the local cluster. The federal government has wasted little time in rolling out the first round of grants from a range of U.S. agencies under the cluster program announced in the February budget. In September, the Department of Commerce awarded six grants to the winners of the I6 Challenge, the results of a competition held in six different regions of the country over the strongest proposals to accelerate the commercialization of technology and promote new firm formation. In each case, the awards went to cluster groups that were well organized with support from a broad local coalition and dense networks of firms and support organizations. At the same time, the Small Business Administration provided ten different clusters with awards to support the greater participation of small businesses in cluster activities. The Department of Agriculture also announced the 27 winners of Regional Business Opportunity Grants which went to well organized agricultural coalitions each of which has developed a focused innovation strategy. In the largest award made to date, the Department of Energy awarded a grant of \$129 million to the Greater Philadelphia Innovation Cluster, a consortium of five industry participants, to support its plan for the Energy Regional Innovation Cluster, designed to create an energy innovation hub in the Philadelphia Navy Yard. The significance of these new initiatives is clearly being drowned out in the sound and fury that marks the current mid-term elections. However, there can be little doubt about the longer term significance for economic development policy of this coordinated approach to stimulating cluster development across the world’s largest economy (Sallet 2010).

Thus both the E.U. and the U.S. have recently recognized that cluster-building dynamics are central to the economics of smart specialization. An underlying principle of smart specialization states that the simple co-location or concentration of resources in one place does not necessarily translate into economic innovation. Rather, the key is how such resources are deployed and leveraged into unique jurisdictional assets. The challenge and opportunity for regions is to coordinate and focus the impact of regional development policies in such a way as to exploit the synergies among organizations and industrial sectors. Regions need to blend different kinds of knowledge in high-performing partnerships joining industry and educational institutions, venture capitalists and commercialization incubators, anchor firms and spin-off entrepreneurs, and skills centres and business associations. The successful cases of the recent round of U.S. cluster awards described above all display these characteristics. Consistent with the policy principle that ‘no one size fits all’, there is tremendous potential for different development projects — reflecting unique territorial assets and economic opportunities across the province — to help transform the Ontario economy. While there has been no concerted policy at the federal or provincial level promoting this approach, a number of valuable and highly instructive projects have emerged at the local level through a bottom-up cluster building strategy. Examples of such projects include:

- *Knowledge Economy Corridors*

A major challenge for the Southern Ontario economy is bringing new ideas and products to market through intensive networking among leading researchers and their students, entrepreneurs and venture capitalists, and local or regional economic development agencies. Simply put, Southern Ontario needs more globally-oriented business clusters rooted in local communities. An excellent example of such an innovation cluster can be found in Southwestern Ontario, linking and leveraging the knowledge and creativity of Waterloo, Stratford, and London. The cluster finds its origins in the outstanding ability of firms in Waterloo Region to recognize emerging technology trends and mobilize key segments of the local business community, civic associations and the regional research infrastructure in support of new initiatives to capitalize on those trends. The current economic recession has severely impacted the more traditional manufacturing base in the Southwestern Ontario. In response, the local municipalities have drawn upon existing federal and provincial program initiatives to link the regions’ industrial capabilities with the expansion of the its post-secondary institutions into digital media. The Digital Media Corridor brings together the City of Stratford, University of Waterloo, and University of Western Ontario, major technology industries, and municipal authorities, for innovation at the intersection of technology, culture, and commerce. The most recent measure involves linking a new branch of the University of Waterloo in Stratford working on the creation of content for digital media with a new Digital Media Convergence Centre in downtown Kitchener. With initial support from the CEO’s of key local firms, such as Open Text and Christie Digital, and the Communitech Technology Association playing a leadership role, the Digital Media Hub aims to create Canada’s largest concentration of digital media research, development, and commercial expertise while developing globally competitive capacity in digital innovation (Wolfe 2010b).

Similar examples of such cluster-based initiatives can be found in other cities and regions in Southern Ontario. Hamilton has long been the home to Canada’s steel industry and both its university and college have great strengths in traditional and new materials research. The recent launch of the McMaster Innovation Park, the much anticipated relocation of the federal CanMet laboratory to the Innovation Park and related efforts to expand the local R&D activities of the leading international steel firms in the Hamilton region represent another critical opportunity to

support current and prospective cluster building efforts. Similar opportunities exist in the Windsor and London areas with their existing concentrations of automotive assembly and parts production and research expertise in fields from green technologies to tool, die and mould making. In other Canadian and international regions, national regional development agencies have recognized the transformative potential of such regional clusters of industrial strength and supported them with investments, incentives, and assistance.

### **Policy Implications and Conclusion**

The recent experience of regional development policy discussed above—in the E.U. and the U.S.—point in the same direction. There is an emerging consensus on the need to focus public spending and align resources more effectively across varying levels of government in support of smart specialization strategies. This reflects the need to focus resources on enhancing regional strengths by concentrating local resources in support of those sectors and clusters with the potential to achieve sustained economic growth. This involves the recognition that regions vary considerably in their growth potential and innovative capacity and the most effective development strategies must build on local capabilities to exploit that potential.

There is also a growing consensus on the need for and value of collaborative planning processes to engage a broad cross-section of local and regional actors in the formulation and implementation of regional strategies, in other words, what has been referred to elsewhere as the strategic management of cities and regions (Audretsch 2002). The successful adoption of a ‘strategic management’ approach requires not just a new category of policy approach, but a new style of policy development. Successful regions engage in strategic management exercises that identify and cultivate their assets, undertake collaborative processes to plan and implement change, and encourage a regional mindset that fosters growth. These processes can only succeed if the prevailing structures of regional governance provide the necessary support to allow these strategic management exercises to be effective. This involves the recognition that in a complex and interdependent world of policy formation, no level of government holds all the policy levers to implement a successful strategy and that effective policy design requires some form of multi-level governance.

The other significant shift in the evolution of regional development policy is the growing recognition on both sides of the Atlantic that national and supra-national levels of government must work closely with local and regional levels in a new mode of governance that creates a participatory framework for designing and implementing commonly agreed upon regional development goals and objectives. While the organizational mechanisms for implementing this mode of governance varies widely across the different members of the E.U. and in the U.S., its basic feature recognizes a common set of practices with respect to integrated multi-year planning, the establishment of partnerships between public and private sector actors, sharing and learning from best practice across a diverse set of regions and countries and building common conceptual models and frameworks for regional development policy. In this respect, the evolution of this new approach to multi-level governance is helping bring about a greater degree of what the OECD refers to as ‘policy alignment’ (OECD 2007).

However, the OECD has also documented the missed opportunities to promote cluster development at the regional scale that result from a lack of alignment and coordination between different policy instruments and across multiple scales of governance. For example, many OECD countries have introduced government funding for research centers or centre of excellence programs in parallel with other innovation support policies. These policies typically develop

from a research focus based in ministries of higher education with responsibility for university funding. The centers funded under these initiatives serve to support the development of regional specialization, but without formulating direct linkages to existing regional development policies and strategies, regions cannot capture the full benefits of that research. Similar gaps arise from the lack of integration of science and industrial parks with other programs (OECD 2007). Programs to promote science and industrial parks often originate at the local level and are therefore not explicitly aligned with innovation policies and programs originating at the national or provincial level. The new focus on smart specialization in the E.U. with a concomitant emphasis on greater coordination of the various policy instruments that fall under both the framework programs to support research and innovation and the Structural Funds to support Cohesion Policy signify a move towards more effective policy alignment. Similarly, the new coordinated approach to working with regional innovation clusters in the Obama administration and implementing this approach across a wide range of federal departments and agencies signifies a similar recognition.

The emerging consensus around a coordinated approach to regional development policy in Europe and the U.S. is no longer just an abstract concept of relevance for academic studies of policy making. It has pressing relevance for the challenge of economic development in the Canadian federation. Many of the existing policies and programs to support regional development have been implemented in a traditional top-down, bureaucratic fashion, administered by individual departments or agencies with little cross-jurisdictional coordination and often little attention paid to the broader implications of the program for cluster development in the local or regional innovation system. One illustration of this dilemma is the Canada Foundation for Innovation, which makes major infrastructural investments in expanding the research capacity of post-secondary institutions and hospitals across the province with little regard to the integration of these important new facilities into the existing or emerging industrial structure or local clusters of those regions. While these investments must continue to be made on the basis of academic excellence, their potential for supporting smart specialization in the cities and regions in which they are made represents a classic case of a missed opportunity that we can no longer afford. There is tremendous potential to realize a greater degree of policy alignment in both federal and provincial spending on research and innovation programs to support the needs of existing sectoral groups and industry clusters in the dynamic growth regions of the province.

The current tension found within the debate over the future direction of European regional development policy is strongly reminiscent of that often found in Canadian debates over the virtue of concentrating greater economic resources in the most dynamic and leading cities and regions of the country and the goal of distributing regional development funds to the less advanced parts of the country. Echoes of the trade-off between the convergence goals of European Union cohesion policy and the competitiveness and innovation goals of the Lisbon Agenda resonate with Canadian debates over the way in which regional development and redistributive objectives enter into a wide array of federal government programs at the expense of the leading research and innovation centres of the country. The gradual evolution of European Union cohesion policy towards a tighter integration of its convergence and competitiveness objectives suggests that Canada has much to learn from the past four decades of regional development policy in the European Union.

One of the key virtues of this approach is the emphasis that it places on involving key actors at the local level in thinking about how to design effective regional innovation strategies within the framework of existing supra-national, national and regional policies. The relevance of

this analysis for regional development policy in Canada highlights the need for a better understanding of the way in which policies at all levels of government affect the innovative capabilities of firms across a wide range of diverse industrial sectors and geographic regions. Considerable resources are expended annually by all levels of government on innovation related programs and economic development initiatives, but they are designed and implemented in a hierarchical and siloed fashion. There is little attempt at policy alignment across different program areas and levels of government. The creation of a new regional development agency for Southern Ontario affords us the opportunity to learn from the growing consensus around best practice in regional development policy in Europe and the U.S. and a fashion our own 'place-based' policies to support the regional and urban economies in this province.

## References

- Audretsch, D. B. 2002. The Innovative Advantage of US Cities. *European Planning Studies* 10(2):165–76.
- Barca, F. 2009. *An Agenda for Reformed Cohesion Policy: A place-based approach to meeting European Union challenges and expectations*. Independent Report prepared at the request of Danuta Hubner, Commissioner for Regional Policy. Brussels: European Commission.
- Cooke, P. 2005. Regional Knowledge Capabilities and Open Innovation: Regional Innovation Systems and Clusters in the Asymmetric Knowledge Economy. In *Clusters, Networks and Innovation*, eds S. Breschi and F. Malerba, 80–109. Oxford and New York: Oxford University Press.
- Delgado, M., M. E. Porter, and S. Stern. 2010. Clusters, Convergence and Economic Performance. Institute for Strategy and Competitiveness, Harvard Business School. Cambridge, Mass. [Http://www.isc.hbs.edu/econ-clusters.htm](http://www.isc.hbs.edu/econ-clusters.htm).
- European Commission. 2010a. *Document accompanying the Commission Communication on Regional policy contributing to smart growth in Europe 2020*. COM (2010) 553 Final. Commission Staff Working Document. Brussels: European Commission.
- , 2010b. *Regional policy contributing to smart growth in Europe 2020*. COM (2010) 553 Final. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels: European Commission.
- Feldman, M., and R. Martin. 2005. Constructing jurisdictional advantage. *Research Policy* 34(8), October:1235–49.
- Fernandez, J. 2010. *Remarks prepared for delivery to the Chicago Rail Summit*. Chicago, Illinois: Economic Development Administration, U.S. Department of Commerce.
- Foray, D., P. A. David, and B. Hall. 2009. *Smart Specialisation -- The Concept*. Knowledge Economists Policy Brief no. 9. Brussels: European Union. [Http://ec.europa.eu/invest-in-research/monitoring/knowledge\\_en.htm](http://ec.europa.eu/invest-in-research/monitoring/knowledge_en.htm).
- Hingel, A. J. 1992. *Science, Technology and Community Cohesion: Research Results and RTD Policy Recommendations*. Monitor-FAST Programme, Prospective Dossier No. 1. Brussels: Commission of the European Communities.
- Landabaso, M., and S. Rosenfeld. 2009. Public policies for industrial districts and clusters. In *A Handbook of Industrial Districts*, eds G. Becattini, M. Bellandi, and L. De Propris. Nottingham: Edward Elgar.

- Manzella, G. P., and C. Mendez. 2009. *The turning points of EU Cohesion Policy*. Background Working Paper prepared for the Report on An Agenda for a Reformed Cohesion Policy (Barca Report). Brussels: European Commission.
- Martin, R., and J. Simmie. 2008. Path dependence and local innovation systems in city-regions. *Innovation: Management, Policy & Practice* 10(2–3), December:183–96.
- Martin, R., and P. Sunley. 2006. Path dependence and regional economic evolution. *Journal of Economic Geography* 6(4), August:395–437.
- Maskell, P., and A. Malmberg. 1999. Localised learning and industrial competitiveness. *Cambridge Journal of Economics* 23:167–85.
- OECD. 2007. *Competitive regional clusters: National policy approaches*. OECD reviews of regional innovation. Paris: Organisation for Economic Co-operation and Development.
- , 2011. *Regions and Innovation Policy*. Paris: Organisation for Economic Co-operation and Development.
- Porter, M. E. 2003. The Economic Performance of Regions. *Regional Studies* 37(6&7):549–78.
- Sallet, J. 2010. Innovation Policy in Tough Times on Tight Budgets. Keynote address. American Chamber of Commerce’s EU Innovation Conference. Brussels. [Http://www.scienceprogress.org/2010/10/innovation-policy-tight-budgets-and-tough-times/](http://www.scienceprogress.org/2010/10/innovation-policy-tight-budgets-and-tough-times/).
- Spencer, G., T. Vinodrai, M. S. Gertler, and D. A. Wolfe. 2010. Do clusters make a difference? Defining and assessing their economic performance. *Regional Studies* 44(6), July:697–715.
- U.S. Office of Management and Budget. 2010. *Budget of the U.S. Government, Fiscal Year 2011*. Washington, D.C. [Www.budget.gov](http://www.budget.gov).
- Wolfe, D. A. 1994. *The wealth of regions: Rethinking industrial policy*. Canadian Institute for Advanced Research, Program in Law and the Determinants of Social Ordering, Working Paper No. 10. Toronto, Ontario: Canadian Institute for Advanced Research.
- , 2010a. *From Entanglement to Alignment: A Review of International Practice in Regional Economic Development*. Mowat Centre for Policy Innovation Paper. Toronto: Mowat Centre for Policy Innovation. [Www.mowatcentre.ca](http://www.mowatcentre.ca).
- , 2010b. The strategic management of core cities: Path dependence and economic adjustment in resilient regions. *Cambridge Journal of Regions, Economy and Society* 3(1), March.
- Wolfe, D. A., and T. Creutzberg. 2003. *Community Participation and Multilevel Governance in Economic Development Policy*. Background Report prepared for the Ontario Government Panel on the Role of Government. Toronto.
- Wolfe, D. A., and M. S. Gertler. 2004. Clusters from the Inside and Out: Local Dynamics and Global Linkages. *Urban Studies* 41(5–6), May.
- , 2006. Local Antecedents and Trigger Events: Policy Implications of Path Dependence for Cluster Formation. In *Cluster Genesis: Technology-Based Industrial Development*, eds P. Braunerheim and M. Feldman, 243–63. Oxford: Oxford University Press.