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**CLUSTERS AND REGIONAL DEVELOPMENT:  
THE CASE OF THE PUGET SOUND REGION (USA)**

**CLUSTERS ET DEVELOPPEMENT REGIONAL:  
LE CAS DE LA REGION PUGET SOUND (ETATS-UNIS)**

**Paul SOMMERS**

**Abstract** – This article discusses the introduction of the industry cluster idea in the United States and the use of this idea in crafting an economic development initiative in the Puget Sound region, a multi-country region in the state of Washington. The Puget Sound's initiative, called the Prosperity Partnership, uses a cluster analysis to focus attention on issues such as education and infrastructure. However, limited attention to actual inter-industry relationships in the Prosperity Partnership initiative may have hampered the effectiveness of the initiative and its ability to draw in significant actors in the regional economy.

**Résumé** – Cet article discute l'introduction de l'idée de cluster industriel aux Etats-Unis et l'utilisation de cette idée qui ouvre une initiative de développement économique dans la région de Puget Sound, une région composée de plusieurs localités dans l'Etat de Washington. L'initiative de Puget Sound, appelée Partenariat de Prospérité, utilise l'analyse de cluster pour concentrer l'attention sur des questions telles que l'éducation et l'infrastructure. Cependant, une attention limitée accordée aux rapports interindustriels dans l'initiative Partenariat de Prospérité a entravé jusqu'à présent l'efficacité de cette initiative et de sa capacité à mobiliser les acteurs les plus importants de l'économie régionale

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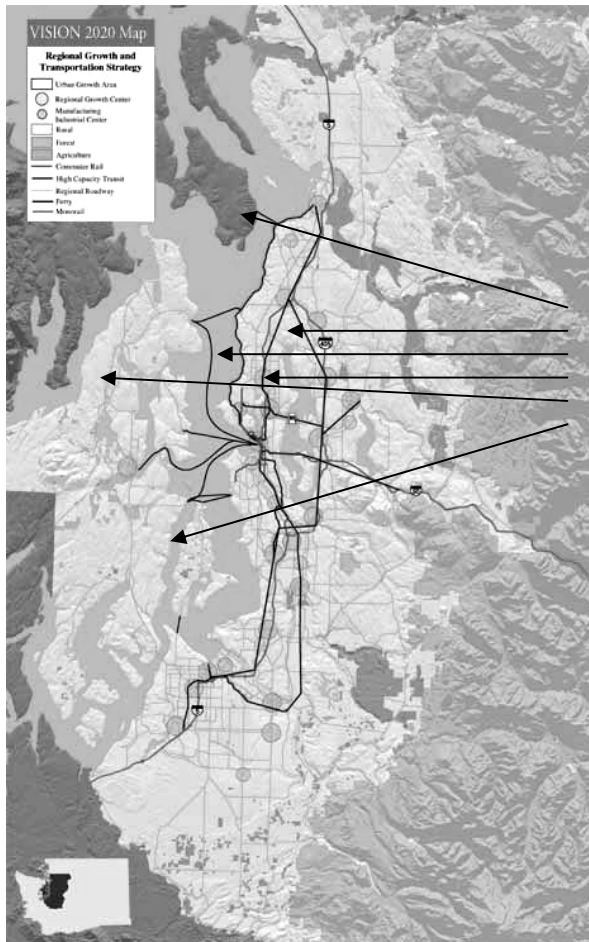
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## Introduction

In this article I summarize a presentation made at the University of the Littoral, Dunkerque, France, September 13, 2007, and at the Franco-American Foundation in Paris, France, September 13, 2007. This article discusses the introduction of the industry cluster idea in the United States and the use of this idea in crafting an economic development initiative in the Puget Sound region, a multi-country region in the state of Washington (see map) including the city of Seattle (the largest city in Washington State), and several nearby municipalities including Tacoma (second largest city in the state), Everett (location of Boeing's main airplane factory), Bellevue (fourth largest city), and Redmond (home of Microsoft). After describing the regional cluster based strategy, I provide a critical assessment of the strategy and conclude with some suggestions for further research on clusters in this region.



## 1. Background: Origins of the Cluster Idea

In the first decade of the 21<sup>st</sup> Century, cluster based economic development initiatives became very popular in a number of countries, including France and other countries in Europe, the United States, and New Zealand, among many others. The popularity of this construct is documented in the *Cluster Greenbook*, a report summarizing results from a survey of 300 cluster initiatives.<sup>2</sup> The widespread use of this strategic approach to construction of economic development initiatives in the United States can be traced to two forces: prior work in a number of states on flexible manufacturing networks, and an initiative of Prof. Michael Porter together with two highly visible national organizations.

In fact the intellectual antecedents of the cluster idea go back to the beginnings of the economics discipline. Adam Smith wrote that the division of labor is limited by the extent of the market; in other words, in large markets in densely populated urban areas, very specialized producers emerge and many separate firms will become involved in producing a single product. Smith was talking mainly about specialized workers inside a large factory, but with Alfred Marshall in the 19<sup>th</sup> Century we have the idea of industrial districts with specialized firms whose transactions with each other enable a more efficient production system than single firms who carry out all production steps internally.

The idea of flexible manufacturing networks was introduced by Michael Piore and Charles Sabel in a book called *The 2<sup>nd</sup> Industrial Divide*,<sup>3</sup> published in the 1980s after a visit by these two authors to northern Italy where they found a vibrant economy with rapidly growing personal income levels, in contrast to other regions of Italy that had stagnated. They also documented in the northern provinces a pattern of very small, specialized firms who developed sophisticated products and penetrated distant markets with great success through collaboration with other such companies with related specializations. Piore and Sabel labeled this mode of production “flexible manufacturing networks.” In a similar time frame a number of economic geographers began to write about flexible specialization, a related idea, which involved specialized firms identifying small market niches, substituting customized products for the mass production runs of standardized products which these authors characterized as “Fordist” production.<sup>4</sup> The term “Fordist” is a reference to Henry Ford and his quip that customers could have a Model T automobile in any color they wanted “so long as it was black.”<sup>5</sup>

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<sup>2</sup> Sövell, Örjan, Göran Lindqvist, and Christian Ketels. (August 2003) The cluster initiative greenbook. Stockholm, Sweden, Ivory Tower AB (<http://www.cluster-research.org/greenbook.htm>, September 2007).

<sup>3</sup> Piore, Michael J. and Charles F. Sabel. *The second industrial divide: Possibilities for prosperity*. (1984) New York: Basic Books.

<sup>4</sup> See for example Michael Storper and Susan Christopherson, Flexible specialization and regional industrial agglomerations: The case of the U.S. motion picture industry. (1987) *Annals of the Association of American Geographers*, 71(1): 104-117; and Gertler, Meric S. (1988). The limits of flexibility: Comments on the post-Fordist vision of production and its geography. *Transactions of the Institute of British Geography*, 13(4): 419-32.

<sup>5</sup> Henry Ford may never have uttered these words which are often attributed to him, according to an authoritative website on Henry Ford and the automobiles he created; see <http://www.hfmvgv.org/exhibits/showroom/1908/model.t.html> (September 2007). However, a Wikipedia article on Ford says “Henry Ford is commonly reputed to have made the statement “Any customer can have a car painted any color that he wants so long as it is black.” ([http://en.wikipedia.org/wiki/Ford\\_Model\\_T](http://en.wikipedia.org/wiki/Ford_Model_T),

A foundation called the German Marshall Fund used these ideas to structure a number of study tours by regional business and political leaders who traveled to Italy to see the phenomena identified by Piore and Sabel, to northern European countries such as Sweden where other cooperative strategies were employed, and to Denmark to see a national initiative at work aimed at encouraging small Danish firms to launch new manufacturing initiatives based on the flexible network model. The author led one of these study tours, focusing on the use of collaboration among small specialized companies in value added wood product manufacturing. The goal of the study tour was to use this model of production to stimulate new product development and market penetration to expand this set of industries in Oregon and Washington to offset losses of employment in primary wood products. Other initiatives inspired by the German Marshall Fund study tours focused on applications of the idea to the hosiery industry in North Carolina and precision manufacturing in New England.

These experiments with the flexible manufacturing concept created an awareness of the potential for collaboration among small firms. They also made academics and economic development professionals aware of a distinction between specific collaborations among a set of firms in a region, and the broader set of industrial linkages in a region involving the same industries. Specific initiatives could be aimed either at the entire set of industries, making firms more aware of the linkages or building up the capacity of key supporting institutions such as research institutes or workforce development organizations, or they could focus on identifying specific combinations of firms who could pursue a particular market opportunity.<sup>6</sup> By identifying linkages across industries at a regional scale, the literature on networks anticipated the later literature on the cluster idea.

Starting in 1990, Michael Porter, who was already very well known, began to write and give speeches on the idea of clusters, arguing that strong clusters in a region are the key to regional competitiveness. He published one very compelling paper showing that regions with strong clusters had stronger rates of personal income growth. Furthermore, this paper argued that diversification efforts, a key strategy of economic development organizations in many regions, would not necessarily produce higher personal income since he found no statistical association between the number of clusters and personal income levels or growth.<sup>7</sup> This paper sent a very clear signal to the economic development profession that a cluster based strategy aimed at strengthening existing clusters in a region could be a superior strategy compared to the diversification approach.

To encourage application of cluster-based strategies, Porter established an institute that created a nationwide database at a metropolitan scale, offering regional organizations

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September 2007), and another website indicates that he said “People can have the Model T in any colour--so long as it's black,” but does not give a location or occasion where the remark was recorded (<http://www.quotationspage.com/quote/92.html>, September 2007).

<sup>6</sup> Sommers, Paul. Rural Networks in the United States: Lessons from Three Experiments. *Economic Development Quarterly*, 12(1), February 1998, 54-67; and Stuart Rosenfeld, “Backing into clusters: Retrofitting public policies.” 2001. Cambridge: John F. Kennedy School Symposium, Harvard University (<http://www.rtsinc.org/publications/Harvard4%20doc%20copy.pdf>, September 2007).

<sup>7</sup> Porter, Michael E. (2003) “The economic performance of regions.” *Regional Studies*, 37(6&7): 549-578.

data on the strength of clusters in each metropolitan area. He also crafted a metropolitan cluster initiative with two very visible national organizations, the Competitiveness Council, a respected business organization, and the National Governor's Council, an organization bringing state governors together on a regular basis to discuss common problems and strategies. Together with these organizations, Porter carried out five model metropolitan area cluster studies, assessing cluster strength and making recommendations to strengthen clusters in these metropolitan areas. The results of these studies were presented at a national conference in Washington, D.C.<sup>8</sup> and widely disseminated. Subsequently, many states, cities, and regional groups launched cluster initiatives.

## **2. Clusters in the Puget Sound: The Prosperity Partnership**

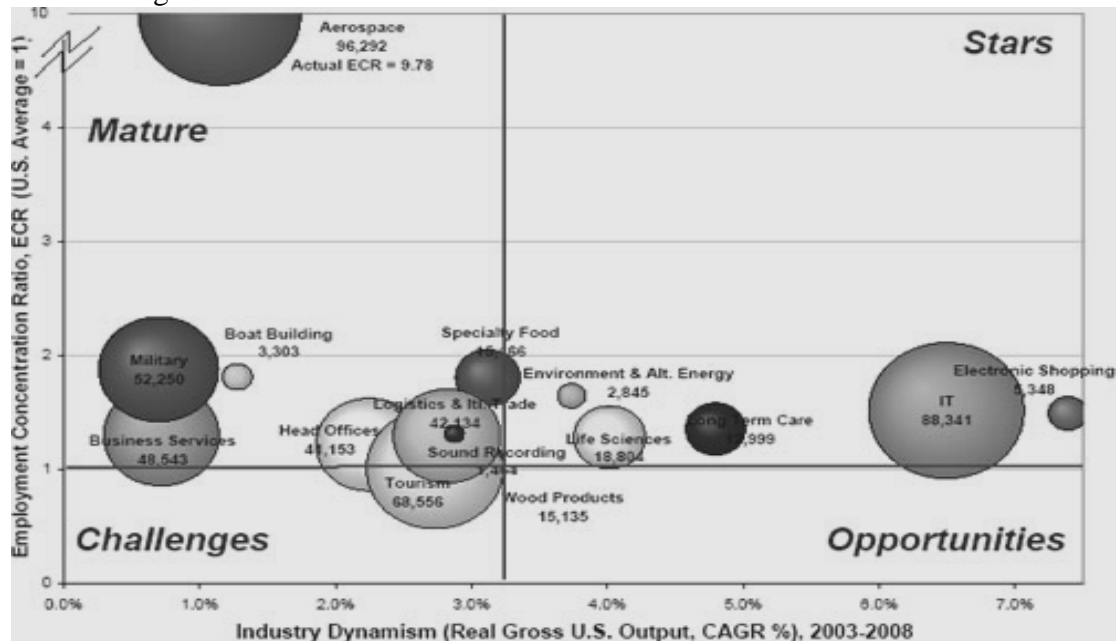
Cluster strategies came to the Puget Sound region in 2004 after prior efforts by the author to introduce the concept statewide through papers prepared for several state agencies. Thus, when a new executive director, Bob Drewel, came into the Puget Sound Regional Council (PSRC) in 2004 and launched a cluster initiative that fall, some analysts and higher education leaders were already familiar with the idea due to Porter's efforts or the initiatives of the state agencies. The PSRC initiative, called the Prosperity Partnership, was aimed at elevating the rate of growth of the region. Seattle at the time was recovering slowly from a severe recession involving simultaneous downturns in the national economy and specifically in airplane production at the Boeing plants, combined with the end of the "dot com bubble" economy of the late 1990s. With forecasts of lower growth rates in the decades ahead, the executive director suggested adoption of a cluster strategy to increase growth rates by creating "clusters, not clumps of industries." By distinguishing "clumps" from "clusters," Bob Drewel was suggesting that firms who are explicitly aware of inter-industry linkages and building strategies for their own firms based on these linkages will be more successful than those who follow individual competition-based business plans.

The Prosperity Partnership was introduced at a conference of 1,100 people in Seattle in November 2004. A consultant's report was presented, identifying 15 clusters with significant competitive strength in the Puget Sound region (Chart 1). This report uses the location quotient or "employment concentration ratio" as a key metric of cluster strength, comparing the density of employment in the region to that in the nation for each cluster.

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<sup>8</sup> <http://www.compete.org/newsroom/readnews.asp?id=76> (September 2007).

Chart 1: Regional Cluster Size and Growth



Source: Prosperity Partnership (<http://www.prosperitypartnership.org/clusters/index.htm>)

In addition, the consultants used expected cluster size, growth, and propensity to export products or services out of the region as key measures of cluster strength. They suggested a portfolio of five clusters to be the initial focus of a regional strategy, four of which were strong and very visible clusters with significant growth potential, and a fifth that was just emerging but which could perhaps become a significant source of growth if nurtured:

- Aerospace (Boeing and subcontractors)
- Life sciences (biotechnology firms, private research institutes and University of Washington research programs, biomedical product manufacturing)
- Information technology (software publishing, internet based companies, computer related manufacturing industries)
- Logistics and international trade (ports engaged in international commerce, international shipping companies, railroads, trucking companies, warehousing, and related trade services)
- Clean Technology/Alternative Energy (companies developing products or services for cleaning up environmental pollution or introducing non-carbon based energy sources)

In order to develop strategies to support these clusters, two steps were taken. First, a series of cluster working groups were arranged. In the course of several months, volunteers from the industries themselves, as well as interested associations, educational institutions, and economic development organizations, crafted an action plan for each of



the five target clusters.<sup>9</sup> Second, the consultants offered a framework to engage a wide array of public, non-profit and private organizations interested in a new regional development strategy but without any tie to a specific cluster. Chart 2 was presented to these groups, showing a relationship between strong, competitive clusters and regional foundations, defined as human resources, technology, access to capital, business climate, physical infrastructure, and social capital. These supporters of the initiative were labeled as the “Partnership Roundtable,” and with staff encouragement they set about crafting some initiatives with respect to selected foundation issues.

Over time, the cluster working groups achieved their initial objectives, and without any staff encouragement to keep meeting and craft new objectives, all activity within these cluster working groups ceased and attention gravitated to the foundation initiatives. Even in the first work program for the calendar year 2006, foundation initiatives were more prominent than cluster specific actions. Just 7 of the 18 action items are aimed at specific clusters, and just 4 of the 5 priority clusters are addressed by one of these cluster-specific initiatives. The remaining 11 actions are aimed at foundation issues (see Chart 3). During 2007, the major focus was on a push for expansion of higher education capacity in targeted fields supporting the high tech clusters in the Puget Sound. The PSRC staff conducted a study documenting growing needs for software engineers and a variety of scientific disciplines in the Information Technology and Life Sciences clusters, and a level of degree granting in these fields far lower than projected demands from local companies. The PSRC study added impetus to efforts by the state’s governor to persuade the legislature to invest more resources in higher education, resulting in funding for several thousand new seats in public higher education system of the state.<sup>10</sup>

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<sup>9</sup> A description of each cluster is provided at <http://prosperitypartnership.org/clusters/index.htm>, as well as a list of initiatives crafted by the working groups.

<sup>10</sup> See <http://prosperitypartnership.org/foundation/index.htm> (September 2007) for a list of foundation initiatives including several documents describing the higher education project. See also <http://www.washingtonlearns.wa.gov/ourwork.htm> for materials describing the complementary state policy development effort led by Gov. Christine Gregoire.

Chart 2: Cluster Framework



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Use of a regional cluster analysis to motivate action on cross cutting issues affecting multiple industry clusters is not an unusual strategic approach. Several statewide cluster strategies offer a similar focus. For example, in 2004, Texas governor Rick Parry “actively engaged” over 700 stakeholders around the state, and with input from these citizens, the state crafted a strategy emphasizing workforce development, education, and technology commercialization initiatives to support clusters in Texas. Clusters were identified in information technology, advanced manufacturing, aerospace and defense, biotechnology and life sciences, and energy (including petroleum refining). Several documents on the Texas website suggest continuing cluster-focused workforce development efforts in 2006 and 2007.<sup>11</sup> This approach is very similar to the Prosperity Partnership’s process: engagement of a large number of stakeholders with a cluster analysis, followed by action on foundation issues affecting many of the clusters in a large and diverse region. New York’s economic development agency, Empire State Development, lists 13 major industry clusters in New York, and indicates that it “uses industry clusters as a framework for understanding the state and regional economies, and guiding economic development policy and initiatives.” No specific cluster initiatives are

<sup>11</sup> <http://www.twc.state.tx.us/news/ticluster.html> (September 2007).

Chart 3: Prosperity Partnership First Year Action Plan

<i>ACTION INITIATIVE</i>	<i>Cluster or Foundation Area</i>	<i>Responsible Organization</i>	<i>Completion Date</i>
1 Develop a vision for the life sciences (part of Develop and enact a vision for the life sciences initiative).	<i>Life Sciences</i>	WBBA	Sep-05
2 Work with partner organizations to create ongoing opportunities for researchers and local companies to network, exchange ideas and learn of the research taking place throughout the region.	Technology Commercialization	Prosperity Partnership	Jan-06
3 Communicate a jointly developed logistics and international trade message.	<i>Logistics &amp; Int'l. Trade</i>	Development Alliance	Jan-06
4 Develop a strategy to celebrate and promote arts and culture as a strategic economic advantage for our region.	Social Capital & Quality of Life	Prosperity Partnership	Jan-06
5 Develop consensus freight message that resonates with the public (securing sustained funding and developing chokepoint solutions)	<i>Logistics &amp; Int'l. Trade</i>	FAST Corridor Partnership	Jan-06
6 Leverage the Alliance of Angels program into high-quality entrepreneurship mentoring, to help both create and grow companies.	New & Small Business Support	Technology Alliance	May-06
7 Ensure Life Sciences Discovery Fund shows strong short term results (part of Develop and enact a vision for the life sciences initiative).	<i>Life Sciences</i>	LSDFA	May-06
8 Identify public policy boards, commissions, committees to which nonprofit leaders can bring their perspective and understanding of complex social issues and innovative solutions.	Social Capital & Quality of Life	Executive Alliance	May-06
9 Pursue the resources and regulatory changes necessary to provide adequate, affordable housing close to jobs for workers at all wage levels.	Social Capital & Quality of Life	Executive Alliance	May-06

10 Perform an assessment of the skills of the region's African-American businesses and challenges they face, and use the results to develop and implement an intervention plan to improve the success rate of those businesses.	New & Small Business Support	African American Partners for Prosperity	May-06
11 Create a domestic logistics mission.	<i>Logistics &amp; Trade</i>	Trade Alliance	Jun-06
12 Create a statewide Aerospace Association (part of Recommend short- and long-term legislative action that supports the aerospace cluster initiative).	<i>Aerospace</i>	Development Prosperity Partnership	Sep-06
13 Determine the need for and feasibility of creating a clean technology advocacy organization.	<i>Clean Technology</i>	PSRC / CTED	Sep-06
14 Work within the region to maximize potential for success of a regional transportation ballot measure (RTID).	Transportation	RTID / PSRC	Nov-06
15 Integrate Regional Economic Strategy into update of the region's long range plan.	Social Capital & Quality of Life	Puget Sound Regional Council	Dec-06
16 Develop an Entrepreneurship Agenda for the state legislature and the central Puget Sound community, for 2007 session.	New & Small Business	Seattle, Tacoma, Bellevue, Everett Chambers of Commerce	Dec-06
17 Develop consensus on tax reform	Tax Structure	Prosperity Partnership	Dec-06
18 Develop consensus higher education reform proposal for 2007 legislature	Education	Prosperity Partnership	Dec-06

Source: <http://www.prosperitypartnership.org/strategy/actionitems2006.pdf> (September 2007)

listed on this website, which describes over a dozen program areas whose activities could potentially be influenced by cluster concepts.<sup>12</sup> Forward Wisconsin's website identifies several existing and emerging clusters in the state. Department strategy is built on a premise that each cluster group must have a champion from within the cluster, and that the state will use its resources and existing programs to assist each identified cluster where there is a need identified by cluster members and a fit with state programs and resources.<sup>13</sup> In all three of these states, cluster frameworks are used mostly to assess the strengths of the state economy with few specific cluster initiatives. Instead, like the Prosperity Partnership, generic or cross-cutting programs are offered, perhaps with some special focus on strong clusters in the state. Wisconsin's program goes the furthest, listing specific state agency contacts for each cluster just as the Prosperity Partnership does on its website.

Focusing on cross-cutting or foundation issues is not the only possible approach to cluster policy. Mary Jo Waits, one of the pioneers of cluster based economic development policy, describes her experience in Arizona, involving cluster assessments for several significant clusters in that state and then development of high value specialized services for specific clusters once clusters had self-organized and articulated their needs to the state. This approach goes beyond Wisconsin's in that not only are industry leaders engaged, but new initiatives specifically focused on individual clusters were developed. Workforce development and export promotion programs were organized around the requirements of particular clusters.<sup>14</sup> The title of Waits' article suggests the range of feasible policy initiatives that can be focused on a particular cluster: economic analysis, strategy development, and service delivery.

The Prosperity Partnership strategy involves at least two of these stages of policy initiatives articulated by Waits: economic analysis and strategy development. However, many of the strategies involve lobbying activities rather than on-going service delivery; thus the activity self-extinguishes once the lobbying objective is reached or is judged unlikely to be successful. Two of the strategies involve creating associations with the goal of carrying on longer term lobbying and other activities; these initiatives may have a longer life time than activities such as lobbying for more funding for higher education or freight-related infrastructure projects. Overall, the Prosperity Partnership resembles the statewide efforts in Wisconsin or New York more than the cluster focused service delivery suggested by Waits for Arizona.

Stuart Rosenfeld's "A governor's guide to cluster-based economic development" suggests four types of policies related to clusters:

- 1) policies to more efficiently organize and develop services to clusters;
- 2) policies that target state investments to the specific needs of the states' clusters;

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<sup>12</sup> [http://nylovesbiz.com/nys\\_home\\_To\\_Business/Industry\\_Clusters/default.asp](http://nylovesbiz.com/nys_home_To_Business/Industry_Clusters/default.asp) (September 2007).

<sup>13</sup> See <http://www.forwardwisconsin.com/category44/Industry-Clusters> (September 2007), especially a paper "Fostering Cluster Development in Wisconsin" which lays out the department's strategy for supporting clusters.

<sup>14</sup> Waits, Mary Jo, (February 2000), "The added value of the industry cluster approach to economic analysis, strategy development, and service delivery," *Economic Development Quarterly*, 14(1), 35-50.

- 3) policies that increase networking and learning within and among clusters; and
- 4) policies that improve the clusters' workforce.<sup>15</sup>

The Prosperity Partnership strategy addresses points 2 and 4, in the sense that lobbying the state to provide more funding for higher education, especially in fields needed by information technology and life sciences firms, and for transportation infrastructure to benefit the ports and their customers. However, once the working group meetings focused on specific clusters became less active, there was little attention to networking and learning within and among clusters or development of services to specific clusters. Both Waits and Rosenfeld's policy discussions point to missed opportunities for policy development focused on specific clusters in the Puget Sound region.

### 3. Problems with the Economic Analysis

One reason that few long term cluster-specific initiatives emerged from the Prosperity Partnership process may be that the economic analysis did not define the best set of clusters based on economic ties across industries in the Puget Sound region. The basis for the industry groupings labeled as clusters in Chart 1 was not explained in the consultants' report to the Puget Sound Regional Council.<sup>16</sup> Rather, measures of the competitiveness of clusters (size, anticipated growth, economic concentration ratio or location quotient) were applied to industry groupings that had been identified elsewhere and without any justification based on an examination of inter-industry relationships in the Puget Sound region. Other groups such as the City of Seattle and the State of Washington have identified different groups of industries labeled as clusters based on consulting reports that relied heavily on the opinions of private company and industry association leaders to establish cluster definitions and boundaries.<sup>17</sup>

Because the cluster initiative of the Prosperity Partnership was not based on a detailed examination of inter-industry linkages in the Puget Sound region, some of the industry groupings labeled as "clusters" seems problematic. The "Aerospace cluster" consists of one very large firm, Boeing's Commercial Airplane Division, that constitutes 80 or 90 percent of the employment in the Aerospace industry category. On the order of 200 sub-contractors to Boeing exist in the Puget Sound region, but they supply less than 2 percent of the value added in an aircraft such as a 747 or 737. Boeing's major partners in the new

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<sup>15</sup> National Governor's Association, A governor's guide to cluster-based economic development, <http://www.nga.org/Files/pdf/AM02CLUSTER.pdf> (September 2007).

<sup>16</sup> Economic Competitiveness Group and Global Insight. (September 2005) *Economic analysis of the Central Puget Sound: Part III – Puget Sound's Industry Clusters*, Seattle: report for the Puget Sound Regional Council, pp. 26-30, <http://www.prosperitypartnership.org/pubs.htm> (September 2007).

<sup>17</sup> Sommers, P., *Cluster Strategies for Washington*, report for Office of Trade and Economic Development by the Daniel J. Evans School of Public Affairs, University of Washington, Seattle, December 2001; Berk and Associates, "Basic industries cluster analysis study," report for City of Seattle by Berk and Associates, March 2004; Beyers, W., A. Bonds, A. Wenzel and P. Sommers, "The economic impact of Seattle's music industry," report for City of Seattle by University of Washington, February 2004; Sommers, Paul and Derik Andreoli, "Seattle's maritime cluster: Characteristics, trends and policy issues," report for City of Seattle by University of Washington, April 28, 2004.

787 “Dreamliner” program are all located outside the Puget Sound, many of them in Asia and Europe. Thus, if Aerospace is a cluster, it is organized at a planetary scale, not a regional scale, and a cluster initiative organized only with Puget Sound players cannot have a very big impact on the major firm. Another example comes from the Information Technology cluster, which the consultants defined as software plus related computer hardware manufacturing companies. This cluster also has one very large firm in the Puget Sound region, Microsoft.

Microsoft is known for its close relationships with certain hardware manufacturers such as Intel and IBM, but neither of these manufacturers is located in the Puget Sound. Intel is in Silicon Valley, California and the Portland, Oregon area. The first significant hardware manufacturer relationship Microsoft forged was with IBM around its personal computer back in the 1980s. IBM is based in New York on the other side of the country. Again, a regional cluster is meaningless if it is defined as a combination of hardware and software, and all of the significant hardware manufacturers are in other states. One could say that a different type of information technology cluster exists in the Puget Sound, involving software, internet-based services, and cell phone technology, but this is not the cluster structure the consultants presented to the Prosperity Partnership. A third example is provided by the Logistics and International Trade cluster. This cluster features relationships among water, land, and air transportation systems. However, the shipping companies and railroads with whom the ports of Seattle and Tacoma must coordinate to improve cluster competitiveness are headquartered in Asia (shipping companies) or California (railroads). Again, critically important decision makers are not located in the Puget Sound, and if approached by the two ports about some initiative, these companies must balance business interests in the Puget Sound with concerns and opportunities in other locations.

These three clusters, three of the five featured in the Prosperity Partnership strategy, have real structural relationships that extend outside the region and which are not addressed directly by the strategy. Consequently major players in the region may not see the strategy as addressing key business concerns and therefore it may not have long lasting consequences for individual clusters. All players involved may be happy to focus on foundation initiatives beneficial to a broad range of industries while quietly avoiding discussions of issues central to the long term competitive success of individual clusters. Life Sciences varies somewhat from this pattern since there is a clear relationship between the research conducted at the University of Washington and several private research institutes and the commercialization strategies of private life sciences companies located in the region.<sup>18</sup> The fifth cluster, Alternative Energy and Clean Technology, is an emerging cluster with very diverse startup companies and it is impossible to predict how important inter-industry ties at a regional scale will be to this “cluster.”

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<sup>18</sup> Sommers, P., “Public and Private Roles in Cluster Development: A Case Study of Biotech/Life Sciences in the Seattle Area,” paper presented at the International Symposium on Knowledge, Finance, and Innovation at the University of Littoral, Dunkerque, France, September 2006; forthcoming in “Genesis of Innovation,” Elgar Publishing, 2008.

A close examination of inter-industry ties within the Puget Sound might well have led to a different set of industry groupings or clusters, and a different set of strategies may have emerged if the various working groups had confronted evidence about the actual ties, regional, national, and international, that local companies have forged. That possibility will forever remain unexplored since one cannot undo the several years of effort by many individuals that has gone into the Prosperity Partnership exercise. However, by placing better evidence on local economic structures in front of local decision-makers, analysts in the region may be able to influence future initiatives within the Prosperity Partnership structure. An attempt to define clusters using data from an input-output model has just been completed;<sup>19</sup> getting local policy makers to focus on the implications of this new depiction of local industry structure is the next step.

## **Conclusions**

The Puget Sound region has joined a long list of states, regions, and specific municipalities in the United States and other countries using industry clusters as a source of inspiration for new economic development initiatives. Much of this activity can be traced to well publicized efforts of Harvard economists Michael Porter to introduce this idea in the United States and elsewhere, although the intellectual roots of the concept go well back in the history of economic thought. The Puget Sound's initiative, called the Prosperity Partnership, uses a cluster analysis to stimulate formation of working groups that crafted several initiatives aimed at specific clusters and additional initiatives on cross-cutting themes that emerged from the cluster working groups and other discussions stimulated by the initial conference on cluster strategy in the Puget Sound. Examination of this effort in comparison to several statewide cluster initiatives and two typologies of cluster policies reveals that the Prosperity Partnership resembles a number of other U.S. initiatives that mainly used a cluster analysis to focus attention on issues such as education and infrastructure where additional funding or innovations in service delivery might benefit a broad array of businesses in various clusters within a region. However, limited attention to actual inter-industry relationships in the Prosperity Partnership initiative may have hampered the effectiveness of the initiative and its ability to draw in significant actors in the regional economy. A new analysis of inter-industry structure is needed to move the Prosperity Partnership initiative in directions consistent with cluster structure in the region and to build on learning about cluster initiatives and policies in other parts of the world.

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<sup>19</sup> Sommers, P. and William Beyers, "Identifying clusters in the Puget Sound," paper for the TCI conference "Collaboration, Innovation, and Sustainability," Portland OR, Oct 7-12, 2007.