

# **The Task Force on Competitiveness, Productivity, and Economic Progress**

## **Consultation with Stakeholders**

**Presentation by  
Roger L. Martin, Chairman**

**Sudbury  
July 25, 2002**

This is a copy of the presentation given by Roger Martin in Sudbury on July 25<sup>th</sup> 2002. It was part of a consultation organized by the Institute and the Economic Development & Planning Services, City of Greater Sudbury.

This document provides an outline of the presentation and is incomplete without the accompanying oral commentary and discussion. It represents work in progress based on research conducted by the Institute for Competitiveness and Prosperity.

Much of the material is from the Institute's first Working Paper, *A View of Ontario: Ontario's Clusters of Innovation* which can be viewed at our Web site, [www.competeprosper.ca](http://www.competeprosper.ca)

The Web site also provides more information on the Institute and the Task Force on Competitiveness, Productivity, & Economic Progress.

We ask that you acknowledge the Institute as the source if you use the material from this presentation.

## **Task Force Mandate**

**To measure and monitor Ontario's competitiveness, productivity and economic progress compared to other provinces and the US states and to report to the public on a regular basis.**

## **Long Term Aspiration**

**We aspire to have a significant influence in increasing Ontario's competitiveness, productivity and capacity for innovation. This will help ensure continued success in the creation of good jobs, increased prosperity and a high quality of life for all Ontarians.**

**We will accomplish this by undertaking research, publishing breakthrough reports and proposing significant innovations in public policy which stimulate businesses, governments and educational institutions to take action.**

**The Institute's First Working Paper, *A View of Ontario: Ontario's Clusters of Innovation* released April 29**

**Stakeholder consultations with:**

- **Central Ontario Smart Growth Strategy Sub-Panel**
- **Ontario Ministries of Municipal Affairs & Housing, Northern Development and Mines**
- **Queen's Park Liaison Forum**
- **City of Toronto and Toronto Financial Services Alliance**

**Second Working Paper, *Measuring Ontario's Prosperity: Developing an Economic Indicator System* to be released in mid-August**

# A View of Ontario: Ontario's Clusters of Innovation

## **GDP per capita is a key indicator of economic prosperity**

- ◆ **Ontario is a leader in Canada but just one of the pack in North America**

*Effectiveness and Utilization drive GDP per capita*

*Clusters of traded industries increase competitiveness*

*Ontario's Clusters of Innovation*

# Canada Among Leading Nations

## GDP per Capita at Purchasing Power Parity (PPP) in \$US (2000)

Rank	Country	GDP per capita at PPP
1	United States	\$35,619
2	Norway	\$30,166
3	Switzerland	\$30,138
4	Ireland	\$29,174
5	Denmark	\$29,061
6	Canada	\$27,998
7	Netherlands	\$27,836
8	Austria	\$27,001

Note: Only countries with population over 3.8 million are included here. If all countries were included, Canada would rank 8<sup>th</sup>.  
Source: OECD Main Accounts, National Data; CANSIM

## Ontario Lags Alberta in GDP per Capita (2000)

Rank	Province	Nominal GDP Per Capita in \$CDN	GDP per Capita at PPP in \$US
1	Alberta	\$47,659	\$40,016
<b>2</b>	<b>Ontario</b>	<b>\$36,837</b>	<b>\$30,420</b>
3	Saskatchewan	\$32,775	\$27,519
4	British Columbia	\$31,452	\$26,408
5	Québec	\$30,307	\$25,052
6	Manitoba	\$29,493	\$24,763
7	Newfoundland	\$26,166	\$21,970
8	New Brunswick	\$26,092	\$21,908
9	Nova Scotia	\$25,552	\$21,455
10	PEI	\$24,236	\$20,349

Source: OECD Main Accounts, National Data; CANSIM; Institute for Competitiveness & Prosperity analysis

# Ontario Fares Well Among Leading Nations

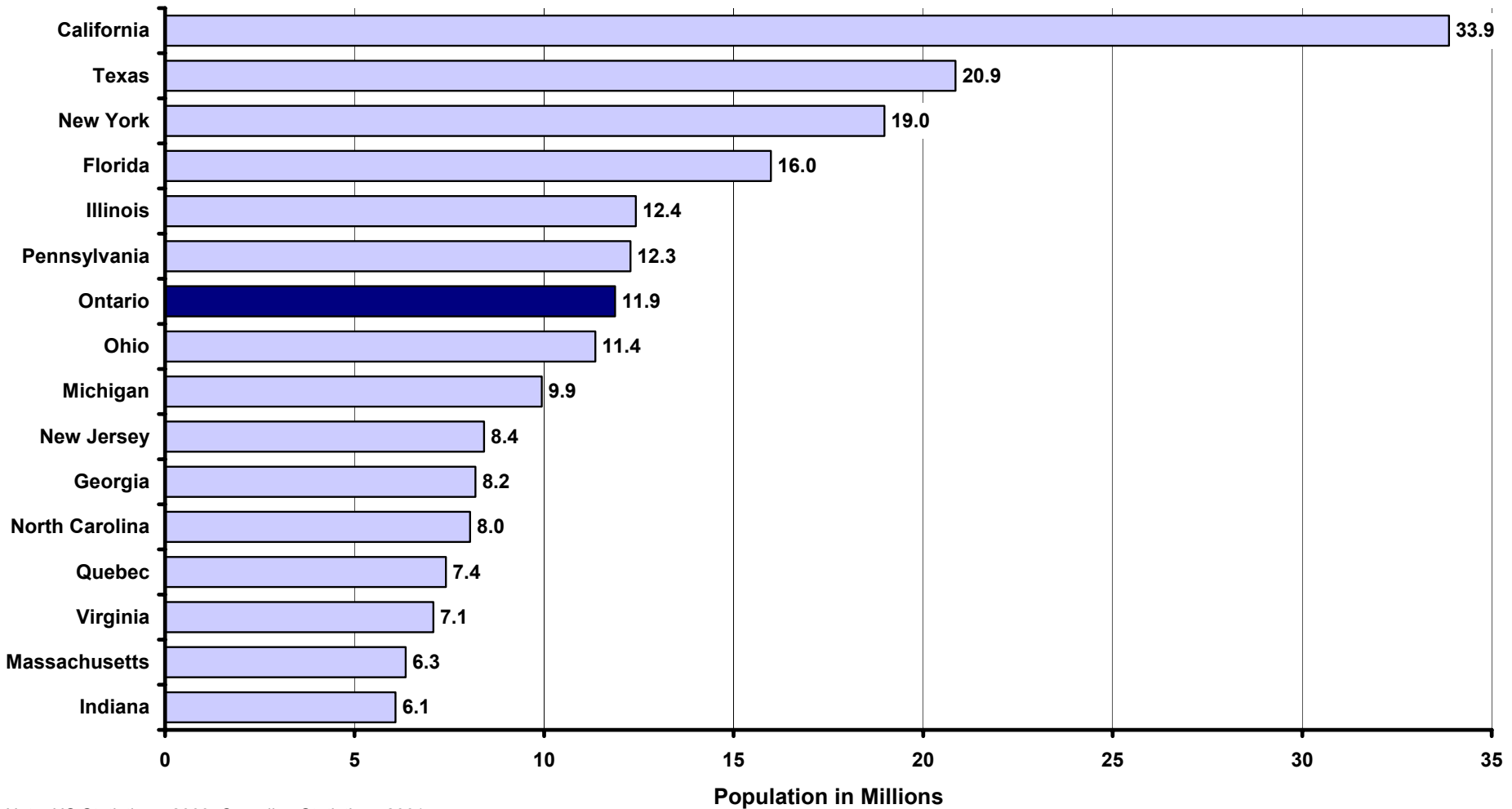
## GDP per Capita at Purchasing Power Parity (PPP) in \$US (2000)

Rank	Country	GDP per Capita at PPP
1	United States	\$35,619
	<b>Ontario</b>	<b>\$30,420</b>
2	Norway	\$30,166
3	Switzerland	\$30,138
4	Ireland	\$29,174
5	Denmark	\$29,061
6	Canada	\$27,998
7	Netherlands	\$27,836
8	Austria	\$27,001

Source: OECD Main Accounts, National Data; CANSIM; Institute for Competitiveness & Prosperity analysis

# Select States and Provinces for Comparison

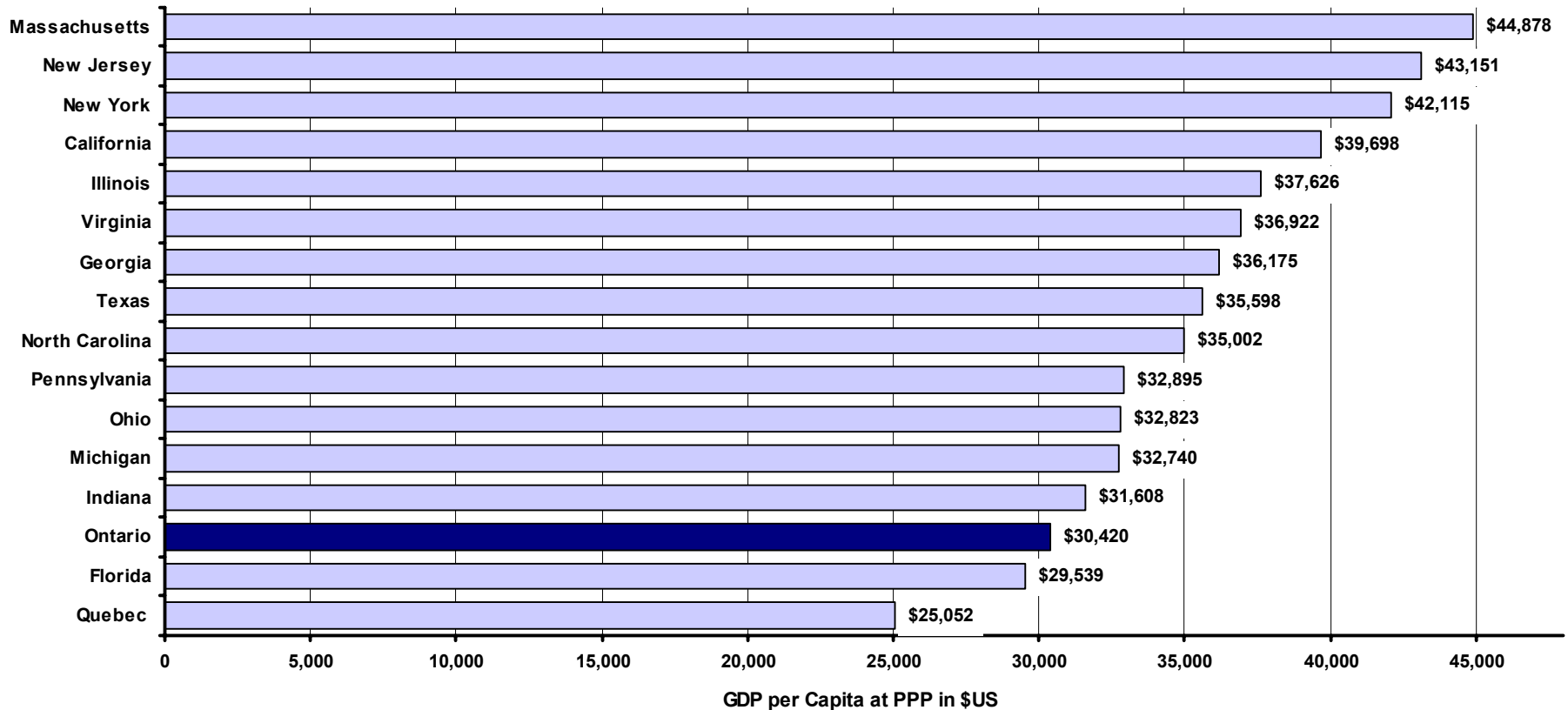
## States and Provinces with Population over 6 Million



Note: US Statistics – 2000; Canadian Statistics - 2001  
Source: Statistics Canada (Census 2001); US Census Bureau (Census 2000)

# Ontario in a North American Context

## GDP per Capita for Select States and Provinces (2000) (Provinces at Purchasing Power Parity in \$US)



Source: OECD Main Accounts, National Data; CANSIM II; US Department of Commerce, BEA (June 2002); Institute for Competitiveness & Prosperity analysis

# A View of Ontario: Ontario's Clusters of Innovation

*GDP per capita is a key indicator of economic prosperity*

## **Effectiveness and Utilization drive GDP per capita**

- ◆ **These two components are the ones with real leverage potential to increase GDP per capita**

*Clusters of traded industries increase competitiveness*

*Ontario's Clusters of Innovation*

# Components Parts of GDP per Capita

$$\frac{\text{GDP}}{\text{Capita}} = \left[ \frac{\$ \text{ Output}}{\text{Hour}} \right] \times \left[ \frac{\text{Hours}}{\text{Workers}} \right] \times \left[ \frac{\text{Workers}}{\text{Potential Labour Force}} \right] \times \left[ \frac{\text{Potential Labour Force}}{\text{Population}} \right]$$

**Effectiveness**      **Intensity**      **Utilization**      **Profile**

Source: Baldwin, J., Maynard, J.P., and Wells, S. (2000). "Productivity Growth in Canada and the United States." *Isuma*. Vol. 1, No. 1 (Spring 2000). Ottawa: Policy Research Initiative; Institute for Competitiveness & Prosperity analysis

# The Components of GDP per Capita

**Effectiveness:** Represents the average value of output that is produced by an average worker in an hour. This term is the most widely used measure of labour productivity.

**Intensity:** Represents the average number of hours an employed person works on average.

**Utilization:** Represents the ratio of the number of people who have jobs to the number of people who are of working age in the region. This measure combines two features – the percentage of those seeking a job who are able to attain a job (participation rate), and the percentage of those able to work who seek to work (employment rate).

**Profile:** Represents the ratio of the working age population to the total population. This is often referred to as a region's dependency ratio and is primarily determined by demographics.

Source: Institute for Competitiveness & Prosperity (2002). *A View of Ontario: Ontario's Clusters of Innovation*.

# Decomposing Ontario and Canada's GDP per Capita

$$\frac{\text{GDP}}{\text{Capita}} = \left( \frac{\$ \text{ Output}}{\text{Hour}} \right) \times \left( \frac{\text{Hours}}{\text{Workers}} \right) \times \left( \frac{\text{Workers}}{\text{Potential Labour Force}} \right) \times \left( \frac{\text{Potential Labour Force}}{\text{Population}} \right)$$

Effectiveness
Intensity
Utilization
Profile

## Ontario

C\$36,837

\$52.35

1,680

0.616

0.680

## Rest of Canada

C\$32,779

\$50.90

1,620

0.579

0.686

## % Difference

11%

3%

4%

6%

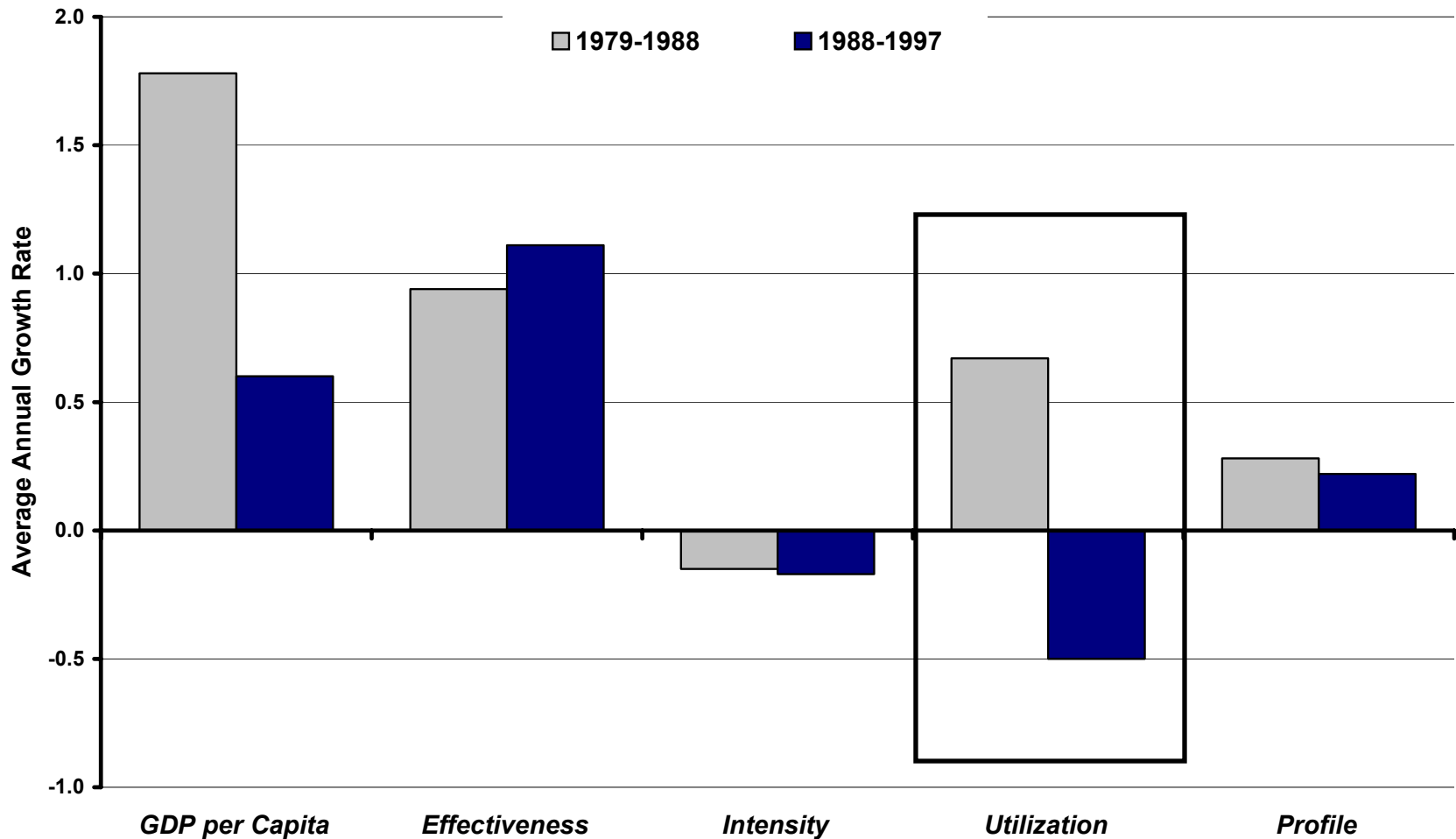
-1%

Note: 2000 data

Source: Statistics Canada, Annual Estimates of Employment, Earnings and Hours, 1991-2000; CANSIM; Institute for Competitiveness & Prosperity analysis

# Baldwin's Diagnosis: Impact of Decreased Utilization

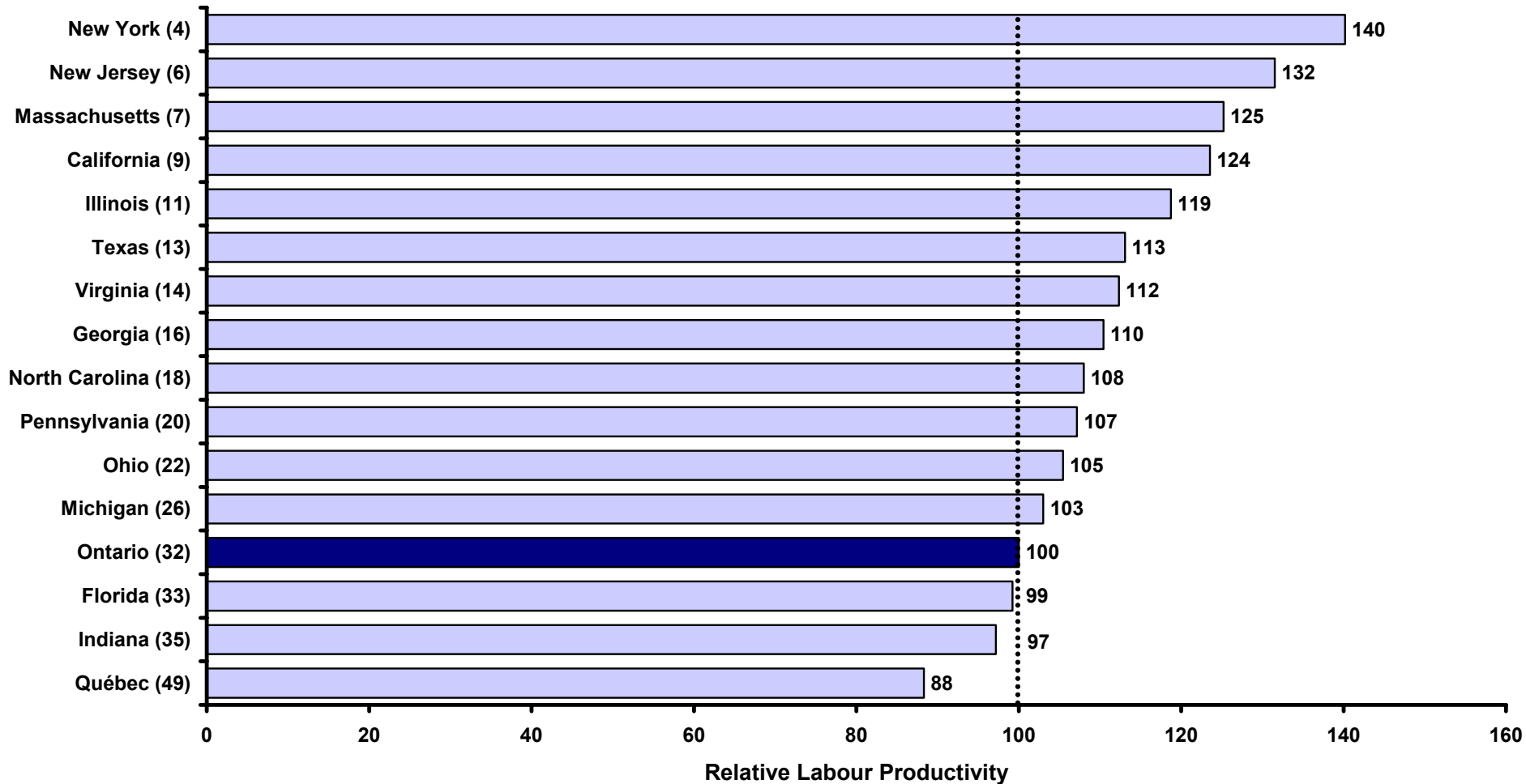
## Growth in Real GDP per Capita in the Canadian Economy (1979 – 1988 versus 1988 - 1997)



Source: Baldwin, J., Maynard, J.P., and Wells, S. (2000). "Productivity Growth in Canada and the United States." *Isuma*. Vol. 1, No. 1 (Spring 2000).

# Measuring Effectiveness in North America

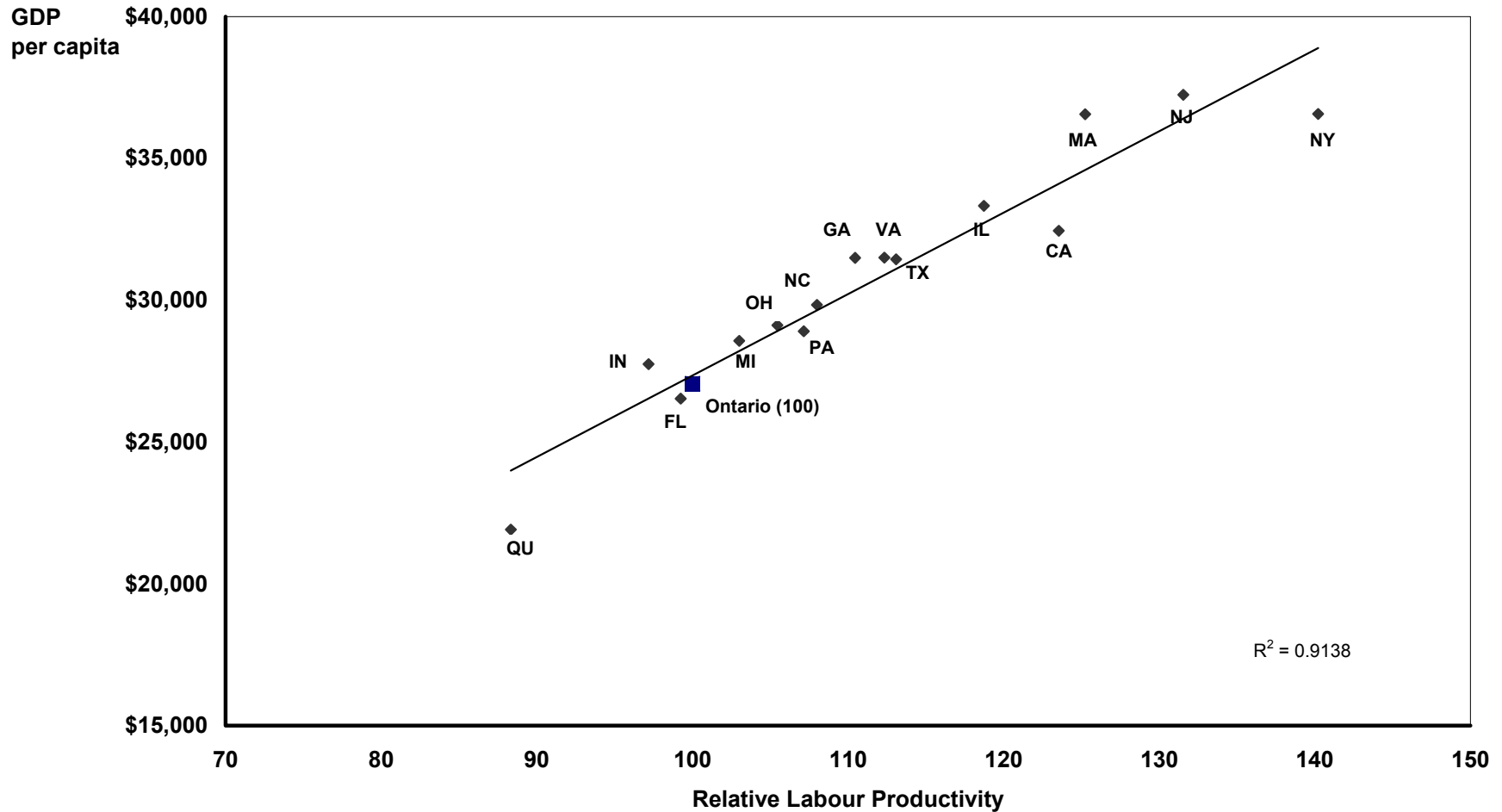
## Labour Productivity for Select States and Provinces (1997) (Ontario = 100)



Source: Letourneau, R. (2000). "A Regional Perspective on the Canada-U.S. Standard of Living Comparison." *Occasional Paper No. 22*. Industry Canada

# Effectiveness Drives GDP per Capita

## GDP per Capita and Productivity in North America (1997)



Source: OECD Main Accounts, National Data; CANSIM II; US Department of Commerce, BEA (June 2001); Letourneau, R. (2000). "A Regional Perspective on the Canada-U.S. Standard of Living Comparison." *Occasional Paper No. 22*. Industry Canada; Institute for Competitiveness & Prosperity analysis

# A View of Ontario: Ontario's Clusters of Innovation

*GDP per capita is a key indicator of economic prosperity*

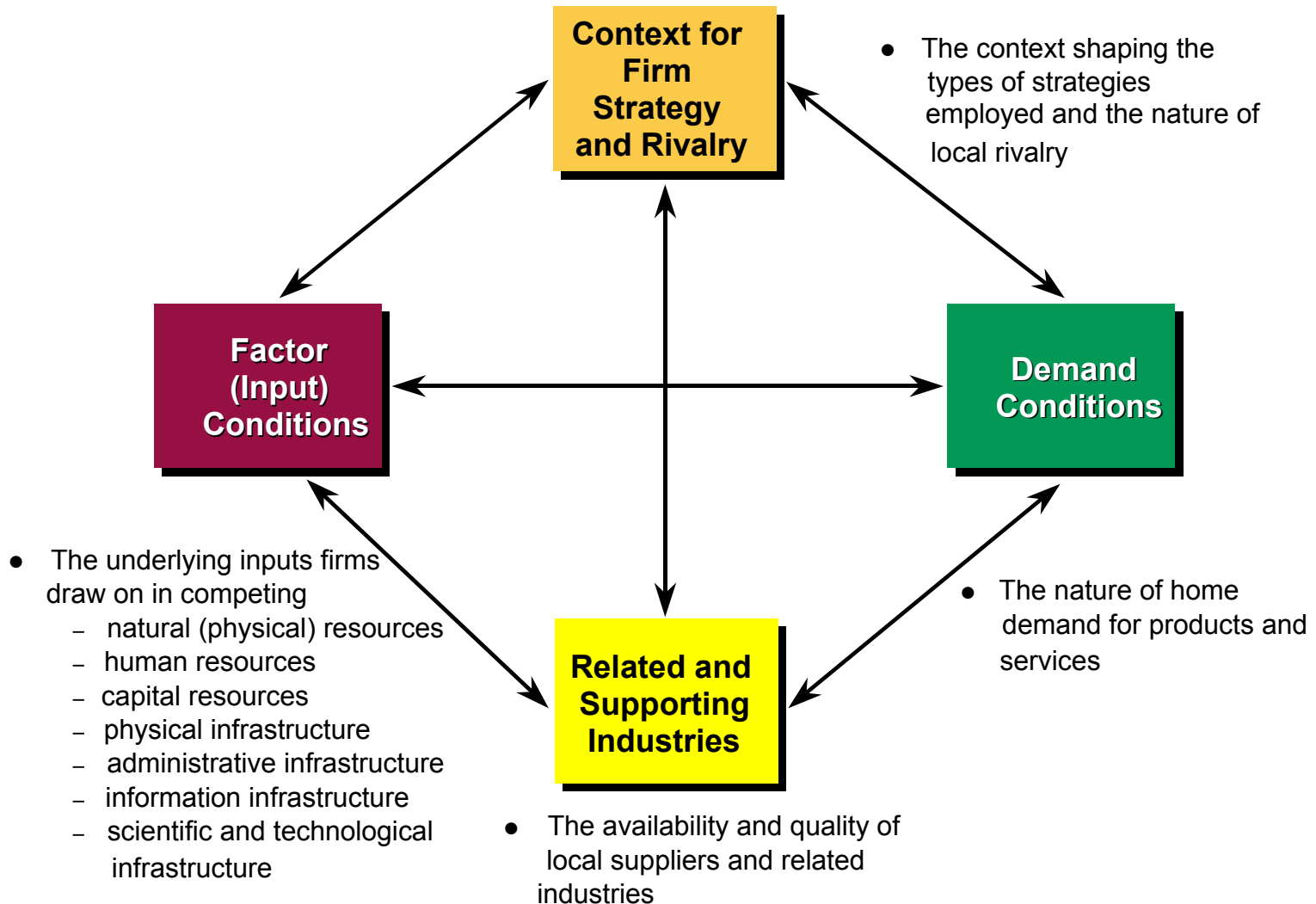
*Effectiveness and Utilization drive GDP per capita*

## **Clusters of traded industries increase competitiveness**

- ◆ **Ontario's performance is encouraging and mystifying**

*Ontario's Clusters of Innovation*

# Dynamics of a Cluster: Pressure and Support



Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Competitive vs. Uncompetitive Clusters

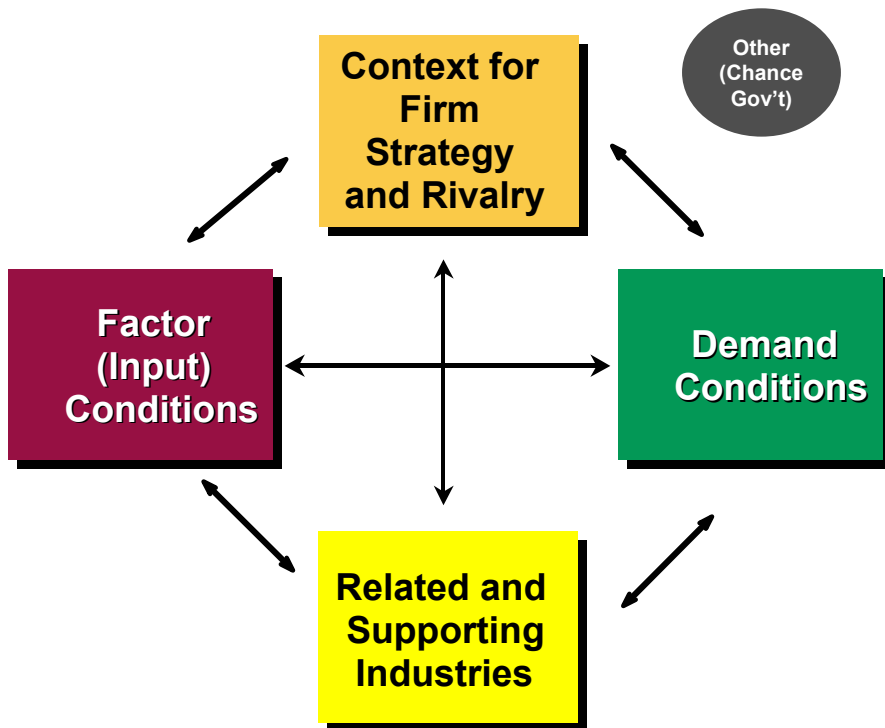
**A large body of literature on industry clusters has been created during recent years by cluster practitioners and academic researchers alike. Over the past few years the Institute for Strategy and Competitiveness at Harvard Business School has conducted a cluster meta-study to aggregate systematically this information in order to learn more from it as a whole. Based on data on more than 700 clusters in close to 50 nations all over the world, it analyzes the locational, economic and competitive characteristics of industry clusters, the reasons behind their competitiveness or lack of competitiveness, and their patterns of evolution over time as well as the reasons behind these patterns. More information can be found at**

**<http://www.isc.hbs.edu/econ-clustermetastudy.htm>**

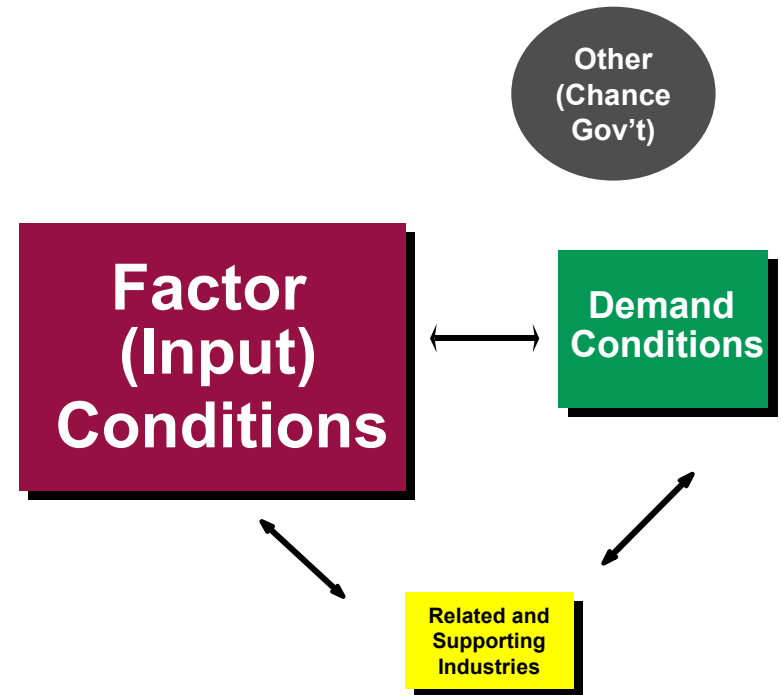
**On the following page is a chart from this Web site that represents the differences between “competitive” and “uncompetitive” clusters. The size of each element of the Porter diamond represents the number of clusters studies that have this element in place.**

# Competitive vs. Uncompetitive Clusters

**Competitive Clusters:**  
May rely on any part of the full diamond



**Uncompetitive Clusters:**  
Usually only rely on factor conditions



See previous slide for explanation

Source: van der Linde and Porter, Cluster Meta-Study October 2001, Institute for Strategy and Competitiveness, Harvard Business School

# From commodity to cluster

## **California wine cluster - benefits of pressure and support.**

- **680 commercial wineries, located near each other, competing with each other, and driving each other to succeed.**
- **intense competition of so many producers creates the spark of innovation – new growing techniques, new grapes – which makes California wine a globally competitive product**

## **Australia – upgrading a natural resource**

- **Started with imitation Port and Sherry**
- **Willing to apply new technology and to source technology from around the world**
- **Now world-class wines**

## **Niagara – drawing on unique characteristics**

- **Local producers capitalized on the weather by making ice wine, a unique, high-quality product that is globally competitive**
- **local competition to produce ever-better variations.**

Source: Porter, Institute for Strategy & Competitiveness, Harvard Business School and Institute for Competitiveness & Prosperity

# Clusters evolve – they're not created

## Japan and consumer electronics



Source: Porter, Institute for Strategy & Competitiveness, Harvard Business School and Institute for Competitiveness & Prosperity

# Clusters and Government

- **Create sound economic policies**
- **Support upgrading to all clusters, not choose among them**
  - **Productivity depends on how firms compete, not what industries they compete in**
- **Reinforce established and emerging ones, instead of trying to create entirely new ones**
- **Remove obstacles, relax constraints, eliminate inefficiencies**

Source: Porter, Institute for Strategy & Competitiveness, Harvard Business School

# Some lessons learned from cluster work in the U.S.

- **Focus should be on sustaining prosperity not just growth for its own sake**
- **Success defined by innovation, not efficiency**
- **Diffusion of knowledge more important than level of R&D**
- **Success in traded clusters pulls along non-traded clusters**
- **“Low tech” successful clusters are more numerous than “high tech”**
- **Successful regions don’t pick winners but build on advantages to create specialized economies**

Source: U.S. Council of Competitiveness

# Results from the US Cluster Mapping Project

## Identifying 41 Clusters of Traded Industries

### *Upstream Materials and Products*

**Metals and Materials**

Construction Materials

Metal Manufacturing

**Forest Products**

Forest Products

**Petroleum/Chemicals**

Oil and Gas

Chemical Products

Plastics

**Semiconductors/Computer**

Information Technology

### *Industrial and Supporting Functions*

**Multiple Business**

Education and Knowledge Creation

Business Services

Heavy Machinery

Financial Services

Motor Driven Products

Prefabricated Enclosures

Production Technology

Analytical Instruments

Heavy Construction Services

**Transportation and Logistics**

Automotive

Distribution Services

Transportation and Logistics

**Power**

Power Generation

Power Transmission and Distribution

**Office**

Publishing and Printing

**Telecommunications**

Communications Equipment

**Defense**

Aerospace Engines

Aerospace Vehicles and Defense

### *Final Consumption Goods and Services*

**Food/Beverages**

Agricultural Products

Processed Foods

Fishing and Fishing Products

**Housing/Household**

Building Fixtures, Equipment & Services

Lighting and Electrical Equipment

Furniture

**Textiles/Apparel**

Textiles

Apparel

Footwear

**Health Care**

Medical Devices

Pharmaceuticals and Biotechnology

**Personal**

Leather and Sporting Goods

Jewelry and Precious Metals

Tobacco

**Entertainment/Leisure**

Entertainment

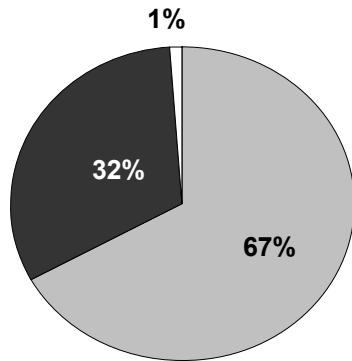
Hospitality and Tourism

Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

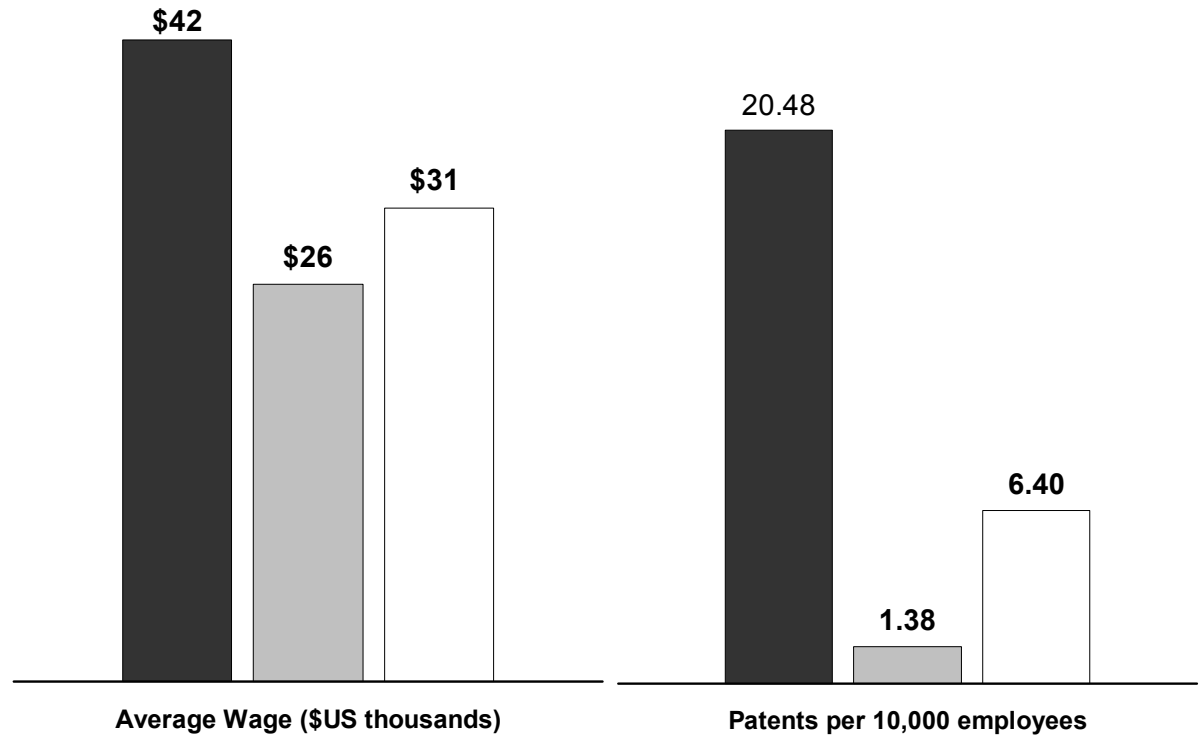
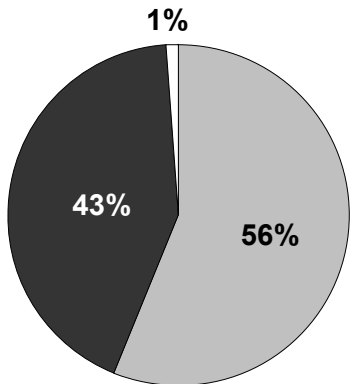
# Results from the US Cluster Mapping Project

## The Economics of Traded Clusters, Local Industries, and Natural Resources

Share of Employment



Share of Income



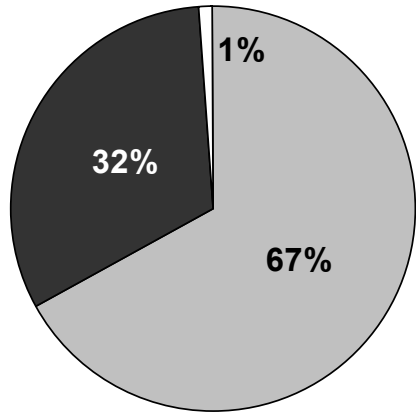
■ Traded Clusters   ■ Local Industries   □ Natural Resources

Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

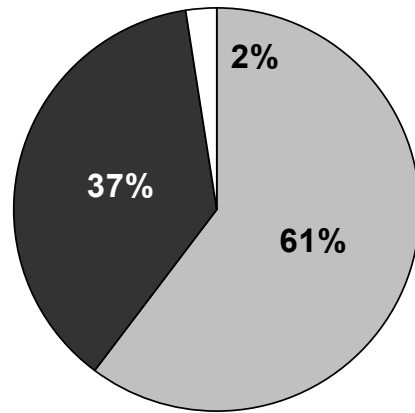
# Distribution of Traded Cluster Employment

## Share of Employment in Traded Clusters

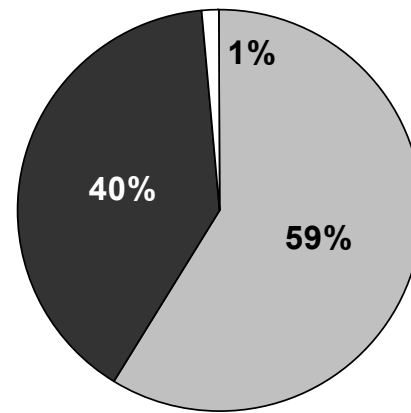
**US**



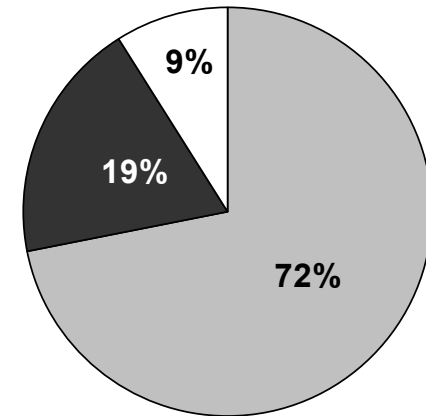
**Canada**



**Ontario**



**Sudbury**



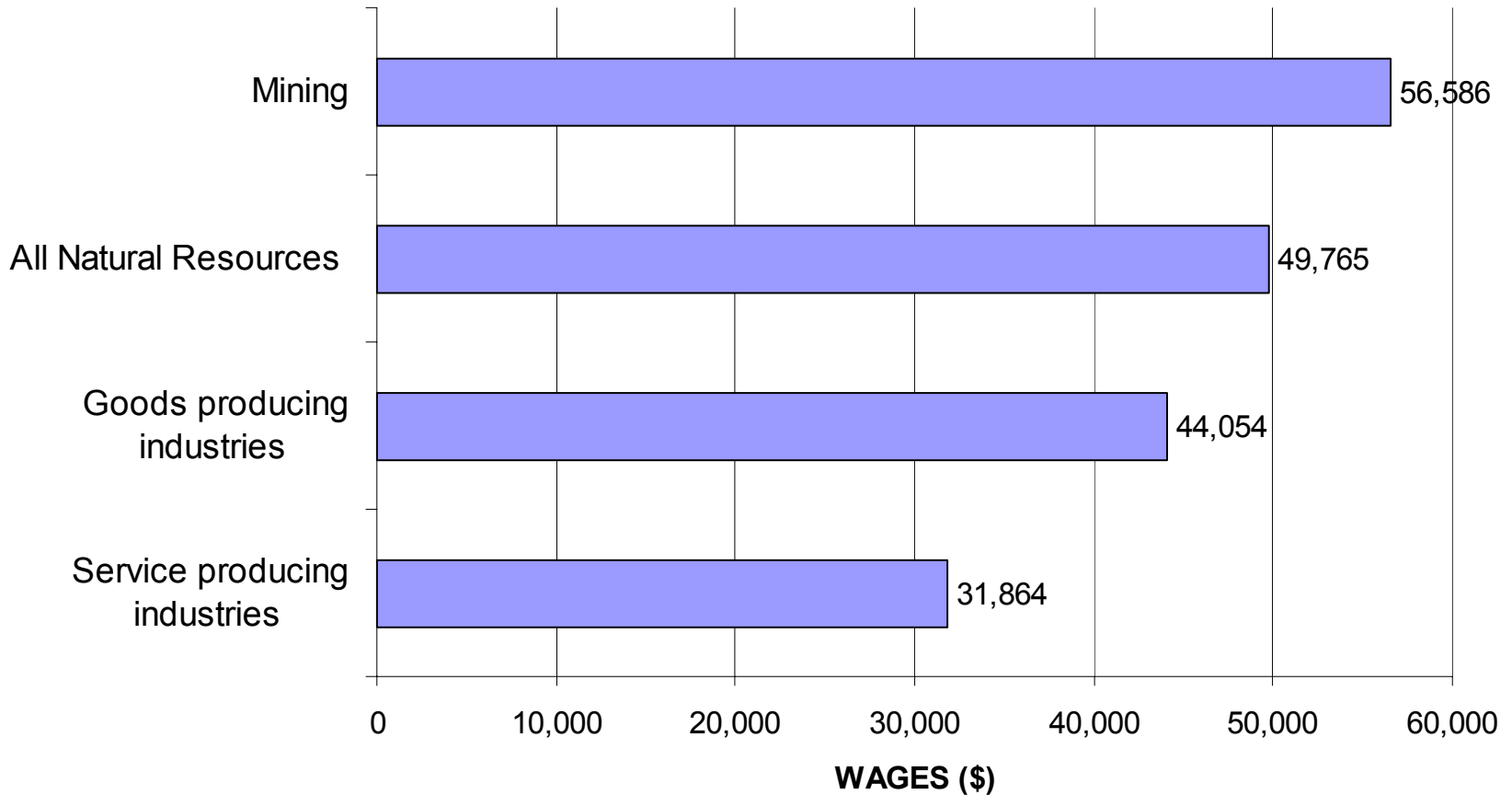
■ Traded Clusters   ■ Local Industries   □ Natural Resources

Note: US Statistics are for 1999; Canadian Statistics are for 2000

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Ontario's Wages for Several Industrial Sectors

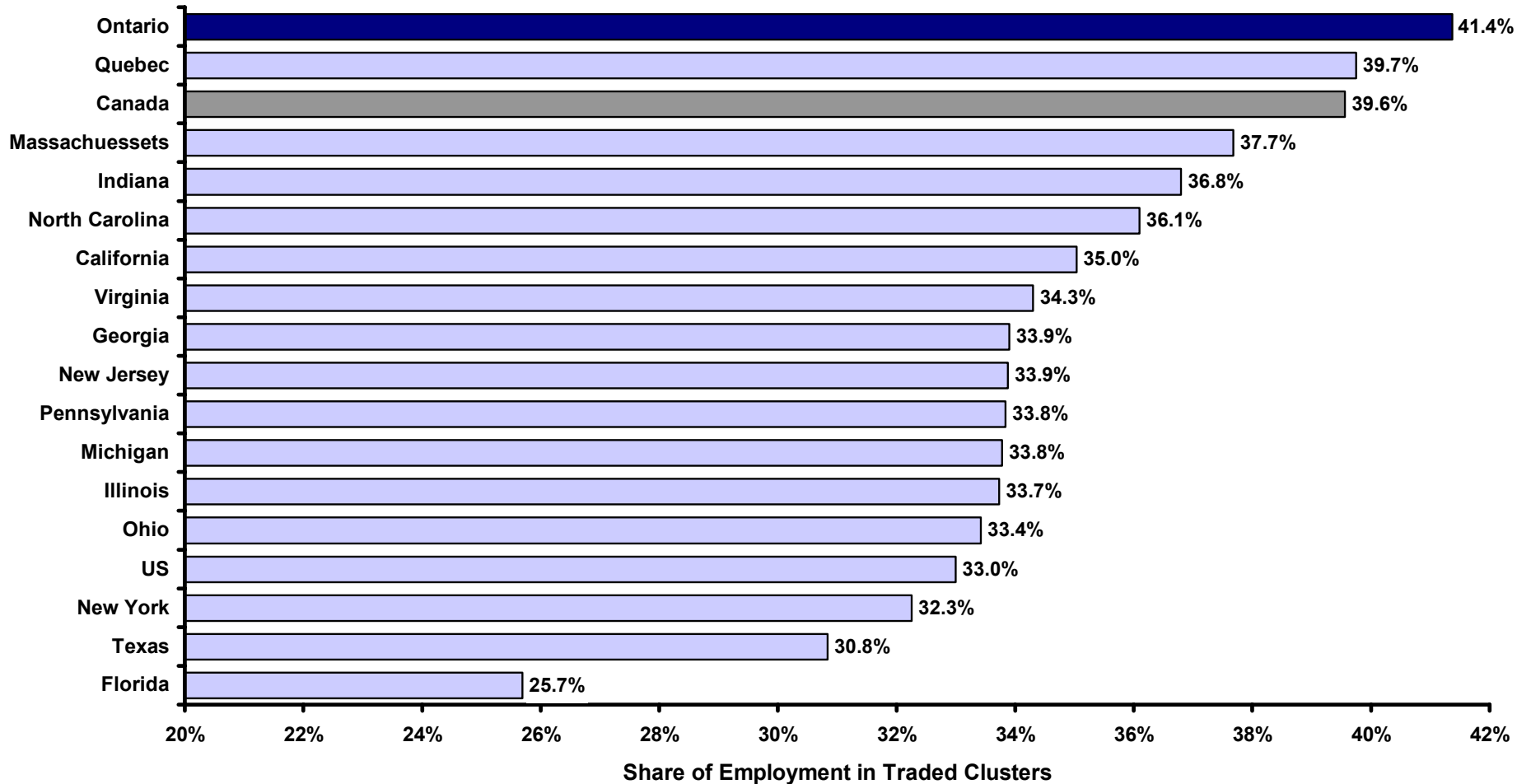
## AVERAGE ANNUAL WAGES IN ONTARIO (2000)



Note: Figures based on weekly wage and 50 working weeks in one year  
Source: Statistics Canada; Institute for Competitiveness & Prosperity analysis

## Share of Employment in Traded Clusters

Canada and the US, and Select States and Provinces



Note: US Statistics are for 1999; Canadian Statistics are for 2000

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity analysis

# A View of Ontario: Ontario's Clusters of Innovation

*GDP per capita is a key indicator of economic prosperity*

*Effectiveness and Utilization drive GDP per capita*

*Clusters of traded industries increase competitiveness*

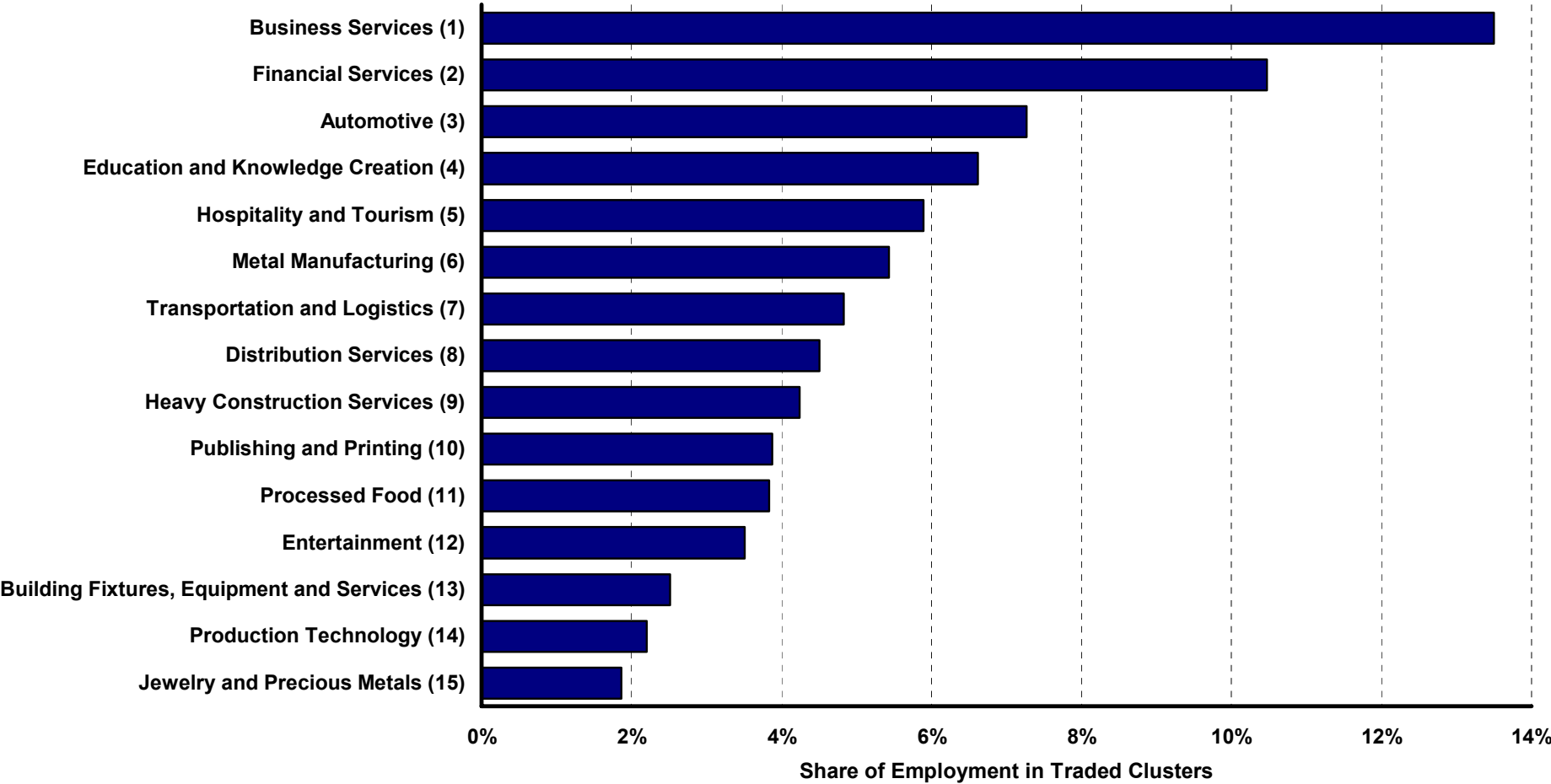
## **Ontario's Clusters of Innovation**

- ◆ **We have strength and diversity**

# A First Look at Ontario's Clusters

## Ontario's Leading Clusters by Share of Employment (2000)

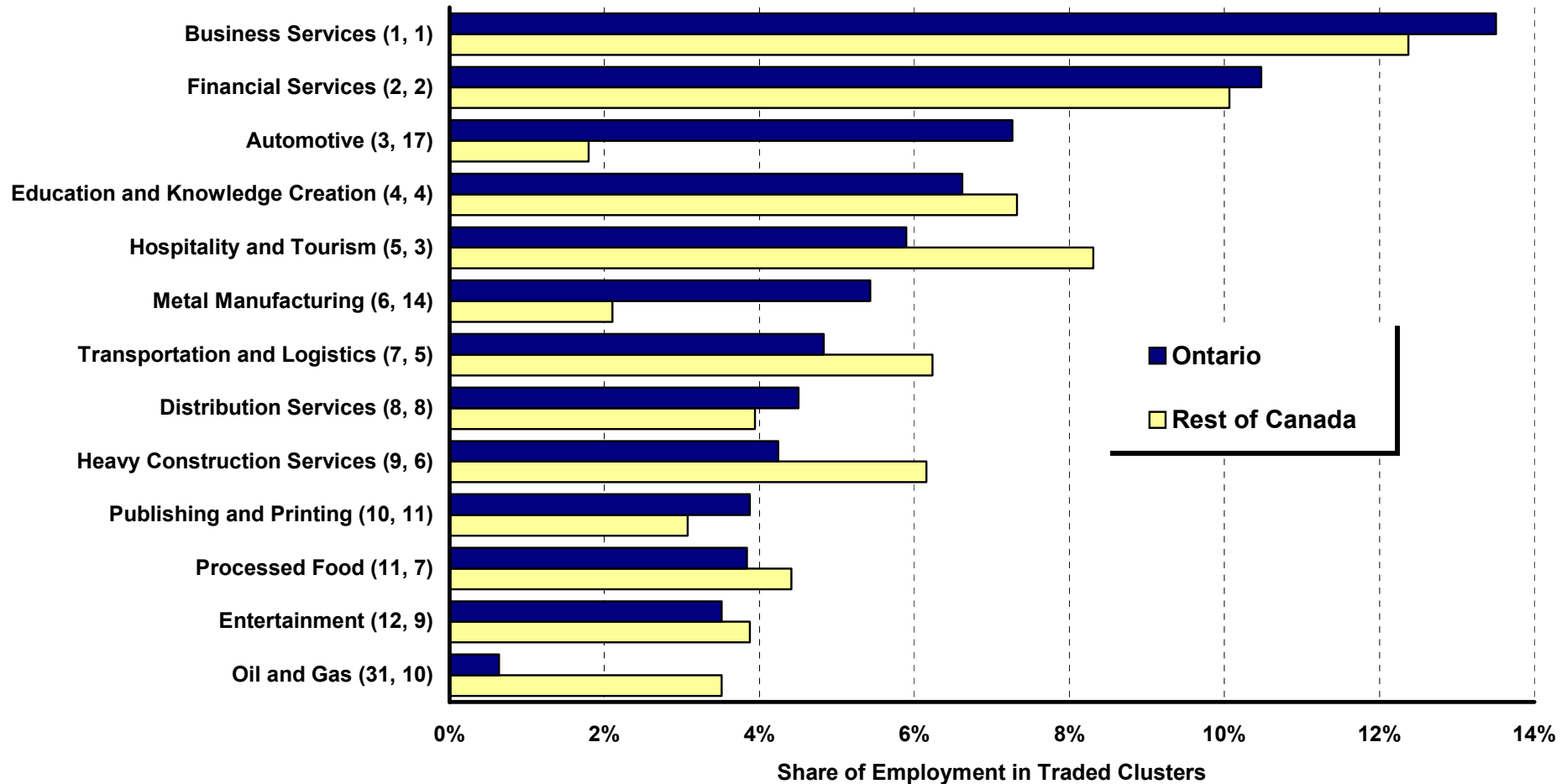
Traded Cluster (Rank in Ontario)



Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity analysis

## Ontario's Leading Clusters Relative to Canada (2000)

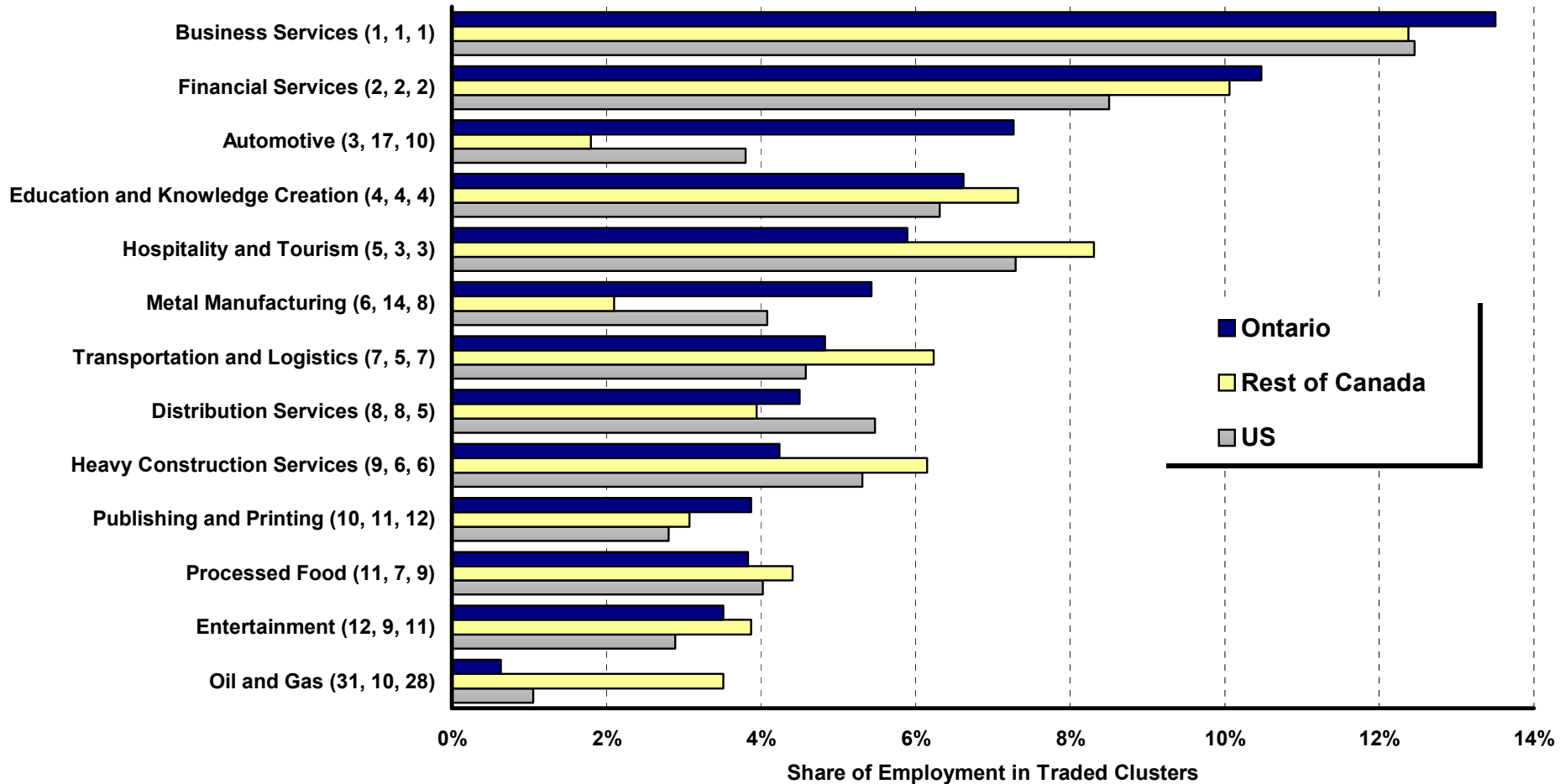
Traded Cluster (Rank in Ontario, Rank in Canada)



Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity analysis

## Ontario's Leading Clusters Relative to Canada and the US

Traded Cluster (Rank in Ontario, Rank in Canada, Rank in the US)



Note: US Statistics are for 1999; Canadian Statistics are for 2000

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity

# Sudbury's Leading Clusters

## Leading Clusters by Share of Traded Cluster Employment (2000)

Cluster	Employment	Share in Region	Share in Canada	Location Quotient
<b>1 Metals Mining</b>	<b>5,908</b>	<b>7.9%</b>	<b>9.4%</b>	<b>15.1*</b>
<b>2 Education and Knowledge Creation</b>	<b>2,482</b>	<b>3.3%</b>	<b>0.8%</b>	<b>1.57</b>
<b>3 Hospitality and Tourism</b>	<b>2,321</b>	<b>3.1%</b>	<b>0.7%</b>	<b>1.29</b>
<b>4 Heavy Construction Services</b>	<b>2,181</b>	<b>2.9%</b>	<b>0.9%</b>	<b>1.66</b>
<b>5 Financial Services</b>	<b>1,220</b>	<b>1.6%</b>	<b>0.3%</b>	<b>0.57</b>
<b>6 Business Services</b>	<b>1,088</b>	<b>1.5%</b>	<b>0.2%</b>	<b>0.35</b>
<b>7 Entertainment</b>	<b>746</b>	<b>1.0%</b>	<b>0.5%</b>	<b>1.01</b>
<b>8 Transportation and Logistics</b>	<b>647</b>	<b>0.9%</b>	<b>0.3%</b>	<b>0.56</b>
<b>9 Publishing and Printing</b>	<b>394</b>	<b>0.5%</b>	<b>0.3%</b>	<b>0.55</b>
<b>10 Distribution Services</b>	<b>384</b>	<b>0.5%</b>	<b>0.2%</b>	<b>0.29</b>

Note: \* indicates that the location quotient is a Canadian quotient. The other quotients are North American quotients.

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity

# The Location Quotient (LQ) Defined

- The location quotient is a ratio measure of the concentration for a cluster in a particular location relative to the North American average
- An LQ >1 indicates a higher than average concentration in the particular location
- Sudbury's cluster LQ's are calculated as follows:

$$LQ = \frac{\left( \frac{\textit{Employment in the Cluster in Sudbury}}{\textit{Total Sudbury Employment}} \right)}{\left( \frac{\textit{Total Employment in the Cluster in North America}}{\textit{Total North American Employment}} \right)}$$

# Sudbury Leads in the 'Metals Mining' Cluster

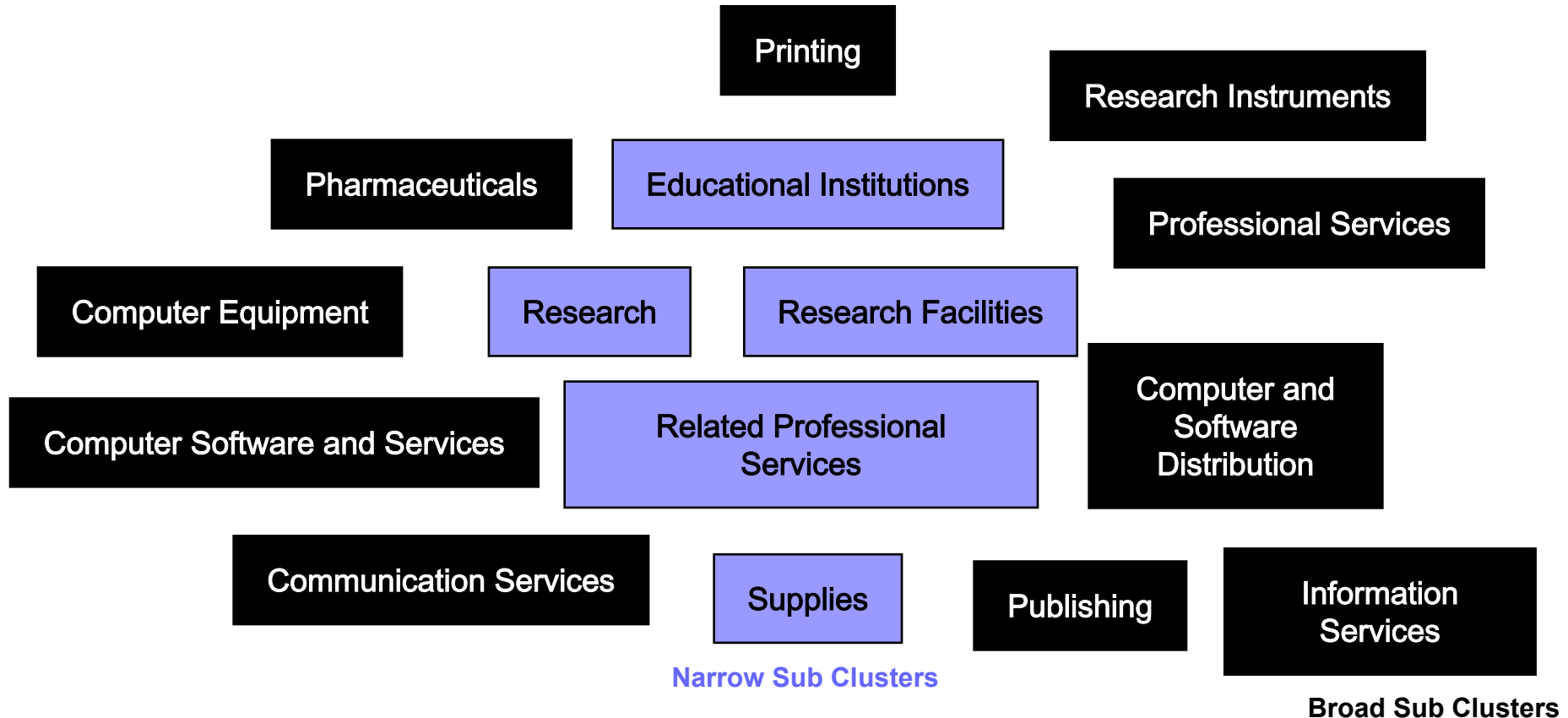
## Leading CMA's by Traded Cluster Employment (2000)

	Ontario CMA	Employment	Location Quotient
<b>1</b>	<b>Sudbury</b>	<b>5,908</b>	<b>15.10</b>
<b>2</b>	<b>Toronto</b>	<b>3,108</b>	<b>0.24</b>
<b>3</b>	<b>Ottawa</b>	<b>1,500</b>	<b>0.58</b>
<b>4</b>	<b>Thunder Bay</b>	<b>380</b>	<b>1.19</b>
<b>5</b>	<b>St. Catharines</b>	<b>341</b>	<b>0.36</b>
<b>6</b>	<b>Hamilton</b>	<b>281</b>	<b>0.16</b>
<b>7</b>	<b>Kitchener</b>	<b>160</b>	<b>0.14</b>
<b>8</b>	<b>London</b>	<b>125</b>	<b>0.11</b>
<b>9</b>	<b>Windsor</b>	<b>100</b>	<b>0.13</b>
<b>10</b>	<b>Oshawa</b>	<b>31</b>	<b>0.04</b>

Note: Location quotients are Canadian

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity

# The Education and Knowledge Creation Cluster



10 Narrow Sub Cluster Industries

30 Broad Sub Cluster Industries

Note: For a definition of Narrow and Broad Sub Clusters, please see: <http://www.competeprosper.ca/public/wp01.pdf>

Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity analysis

# The Education and Knowledge Creation Cluster

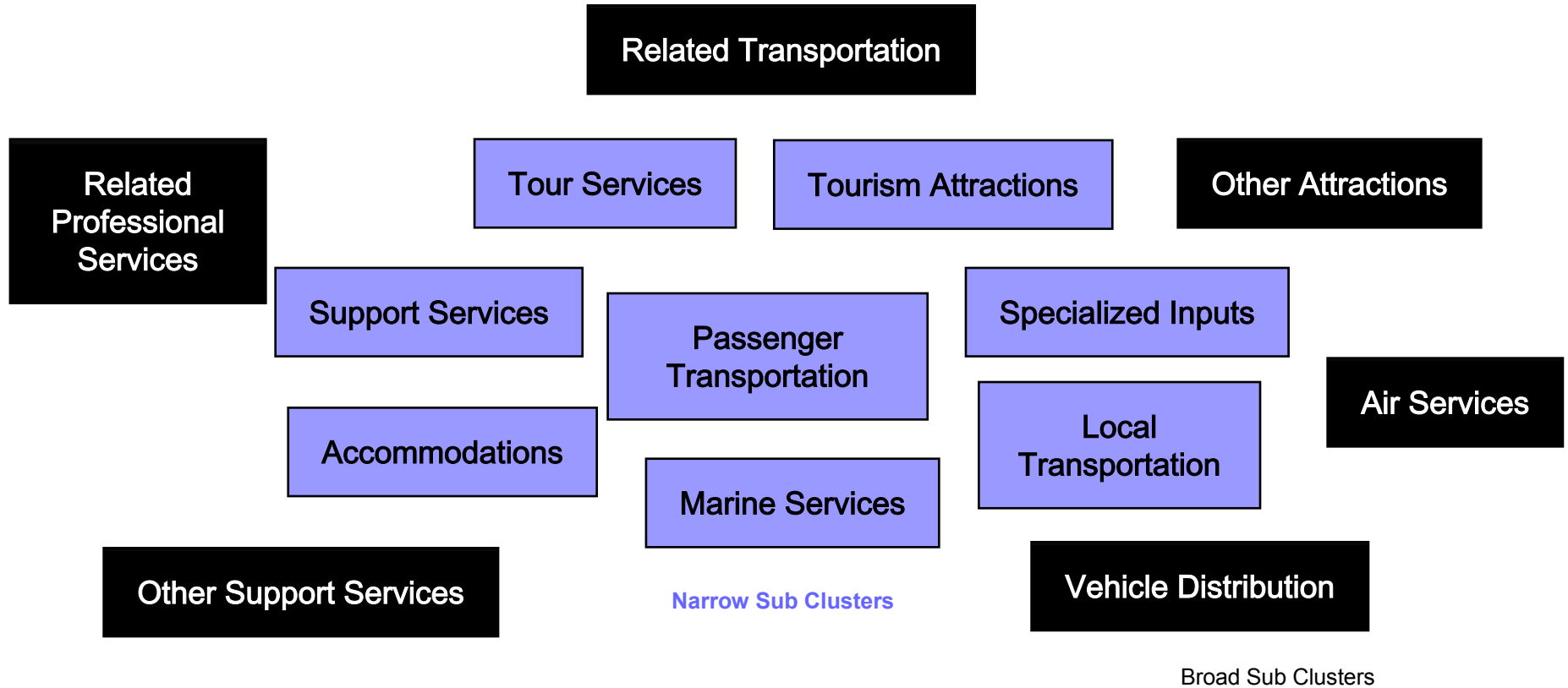
## Leading CMA's by Traded Cluster Employment (2000)

	Ontario CMA	Employment	Location Quotient
1	Toronto	54,523	1.03
2	Ottawa	23,943	2.31
3	Hamilton	10,914	1.56
4	Kitchener	9,904	2.11
5	London	7,680	1.69
6	Windsor	3,985	1.23
7	St. Catharines	3,642	0.95
8	Sudbury	2,482	1.57
9	Thunder Bay	2,181	1.69
10	Oshawa	1,502	0.51

Note: Location quotients are North American

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity

# The Hospitality and Tourism Cluster



22 Narrow Sub Cluster Industries

12 Broad Sub Cluster Industries

Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity analysis

# The Hospitality and Tourism Cluster

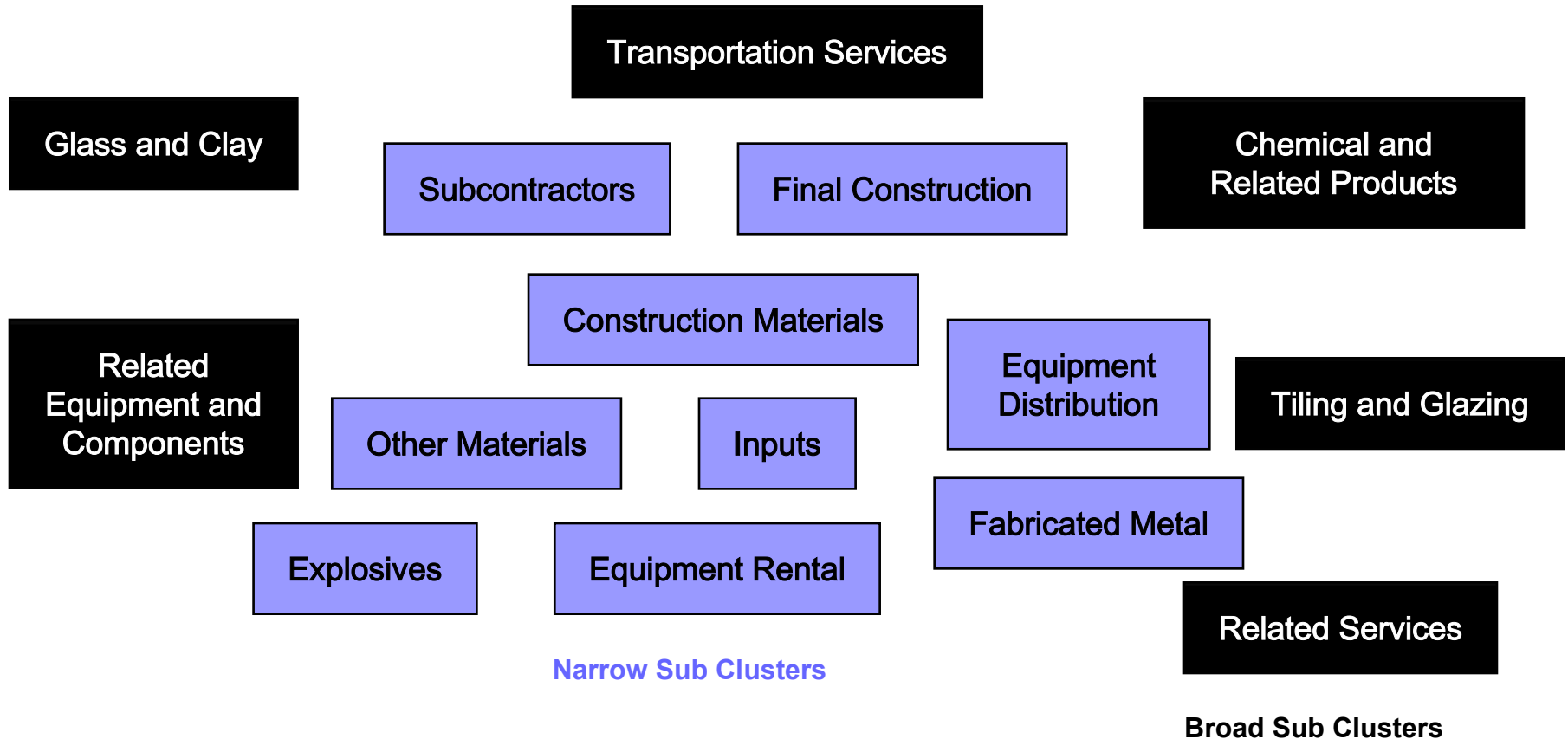
## Leading CMA's by Traded Cluster Employment (2000)

	Ontario CMA	Employment	Location Quotient
1	Toronto	47,965	0.79
2	Ottawa	12,714	1.07
3	St. Catharines	10,930	2.50
4	Windsor	4,985	1.35
5	Hamilton	4,658	0.58
6	Kitchener	3,025	0.57
7	London	2,638	0.51
8	Sudbury	2,321	1.29
9	Thunder Bay	1,951	1.33
10	Oshawa	1,611	0.48

Note: Location quotients are North American

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity

# Heavy Construction Services Cluster



22 Narrow Sub Cluster Industries

14 Broad Sub Cluster Industries

Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity analysis

# Heavy Construction Services Cluster

## Leading CMA's by Traded Cluster Employment (2000)

	Ontario CMA	Employment	Location Quotient
1	Toronto	39,943	0.91
2	Ottawa	7,965	0.92
3	Hamilton	5,695	0.98
4	Kitchener	3,702	0.95
5	St. Catharines	3,251	1.02
6	London	2,574	0.68
7	Sudbury	2,181	1.66
8	Windsor	1,993	0.74
9	Oshawa	1,542	0.63
10	Thunder Bay	1,516	1.41

Note: Location quotients are North American

Source: Statistics Canada, Canadian Business Patterns (June 2000); Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Institute for Competitiveness & Prosperity

## *Measuring Ontario's Prosperity: Developing an Economic Indicator System*

- **Laying the Groundwork – Reprise of First Working Paper**
- **Our Approach to an Indicator System**
- **The Descriptive Part of the Indicator System**
- **The Capacity for Innovation and Upgrading**
- **Social and Environmental Measures**
- **Conclusions and Next Steps**

# Next Steps

- **Ongoing consultation on the results of the first Working Paper**
- **Consultation to determine the level of GDP per capita to which Ontarians aspire?**
  - Median?
  - Top quartile?
  - A one-rank/year advancement?
- **Identifying best practices in peer group states**
- **Fitting natural resources into the cluster approach**
- **Development of themes and recommendations for the Task Force's first Annual Report**

# Some questions to consider together

**Based on your knowledge of the Greater Sudbury Area what industry clusters do you see as most critical to its competitiveness and prosperity?**

**What are the three or four most important factors in Sudbury for the growth and competitiveness of the region and its clusters?**

**What are the greatest strengths of the business environment for enhancing the competitiveness of businesses or industries in Sudbury? What are the greatest challenges?**

**How should universities and colleges contribute to the economic development of Sudbury?**