SW Ontario Automotive Cluster Analysis

July 16, 2004
Geographic Bounds

There are over 900 automotive firms across SW Ontario, from Windsor to Oshawa.
Components of the Automotive Cluster

- Related Vehicles
- Related Process Machinery
- Industrial Trucks and Tractors
- Motor Vehicle Assembly
- Small Vehicles & Trailers
- Automotive Parts
- Machine Tools
- Flat Glass
- Metal Processing
- Marine, Tank & Stationary Engines
- Automotive Components
- Narrow Sub Clusters
- Die Castings
- Forgings and Stampings
- Broad Sub Clusters
- Production Equipment
- Related Parts
- Motors and Generators


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Porter’s Diamond – an Explanation

The context shaping the types of strategies employed and the nature of local rivalry

The nature of home demand for products and services

The availability and quality of local suppliers and related industries

The underlying inputs firms draw on in competing
- natural (physical) resources
- human resources
- capital resources
- physical infrastructure
- administrative infrastructure
- Information infrastructure
- scientific and technological infrastructure

Evaluating Cluster Strength

- Clusters are profiled and assessed using a cluster template developed by Michael Porter’s Institute for Strategy and Competitiveness at Harvard Business School

- The four elements of Porter’s “Diamond” are analyzed using 120 variables

- Each variable is evaluated on the same scale: from a minimum of -3 to a maximum of +3, with 0 as neutral

- This quantitative framework is used to analyze cluster strengths and weakness - and to compare cluster competitiveness
Ontario’s Auto Cluster Has Broad Sources of Strength

[Diagram showing the context for firm strategy and rivalry, with four main factors: factor (input) conditions, demand conditions, related and supporting industries, and context for firm strategy and rivalry. Each factor has an advantage level (1 - Weak Advantage, 2 - Advantage).]

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The Ontario automotive industry is the eighth largest in the world.

In 2002, 99% of Canadian-made vehicles were made in Ontario.

Ontario's automotive cluster has been annually producing roughly 5% of the world's motor vehicles for each of the last four years.

The value of production shipments has risen from $56 billion in 1991 to $99 billion in 2002.

Ontario’s Automotive Cluster is a Global Leader

Motor Vehicle Production (2002)

*Note: In 2002, all but 30,000 of the 2.6 million motor vehicles produced in Canada were produced in Ontario.
Source: “Canada’s Automotive Industry 2003” - Industry Canada

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Ontario’s Automotive Output Continues to Climb

Motor Vehicle Production (Canada)

(000s of units)

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Canada is a Leading Automotive Exporter

The value of national exports as a percentage of the value of total global exports - 2002.
Source: WTO Trade-by-Sector Report, 2002

Rest of the World: 11.4%
EU: 48.8%
Canada: 9.1%
Mexico: 5.0%
US: 10.8%
Japan: 14.9%
Rest of the World: 11.4%
Ontario’s Auto Cluster Benefits from Impressive Factor Conditions

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Cluster Assessment Scale

3 = strong advantage
2 = advantage
1 = weak advantage
0 = no effect
-1 = weak disadvantage
-2 = disadvantage
-3 = decisive disadvantage

Ontario’s Factor Conditions

- Proximity to the Michigan-Ohio automotive cluster is a key advantage
- Labour costs are lower in Ontario than in Michigan - but other inputs are closer to parity
- Highway 401 and an extensive rail network allow easy transportation of vehicles and parts
- The Toronto financial hub provides a nearby source of financial capital and expertise
- The historic weakness of the CAD vs. the USD has been a boon to exporters
- Government support - both as tax credits and as subsidies - is reliable and long-standing

- Ontario’s automotive workers are among the world’s best
- Vocational and college training programs are numerous and specialized
- Public information sources are numerous and comprehensive
In 2002, Americans purchased slightly more cars and light trucks than Canadians: 58 per 1000 residents vs. 54 per 1000

- Canadian customers adopt trends quickly and easily - but they’re not pioneers
- Vehicle safety and emissions regulations are becoming increasingly harmonized between the two countries

Local Demand is Strong but Unsophisticated

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Ontario Demand
Canadian Demand is Steadily Increasing

Demand

Sources: ICAP, “Canada’s Automotive Industry 2003”

(vehicles purchased per 1000 inhabitants)
Canadians Prefer Cheaper and Simpler Vehicles

Vehicle Demand, 2002

Source: Institute for Competitiveness and Prosperity based on “Canada’s Automotive Industry 2003”
Ontario’s Cluster Benefits from Highly Capable Suppliers

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**Cluster Assessment Scale**

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**Ontario’s Related and Supporting Industries**

- Strong synergies exist between the SW Ontario automotive cluster and the Hamilton steel cluster.
- Metalworking machinery manufacturing firms enjoyed steady gains through the 1990s, but plastics companies were hindered by their small size and modest R&D expenditures.
- The Canadian market is open to international suppliers, especially American and Mexican firms.
Ontario’s Auto Cluster Benefits from Competitive Intensity

Honda, Toyota and the “Big 3” all operate assembly plants in SW Ontario
GM assembles the most vehicles in Ontario - but Honda and Toyota assemble a higher percentage of their North American vehicles
Over 900 parts companies fuel competition
Key industry associations - APMA, AIA, CVMA and JAMA - are effective lobbyists and help drive public policy
The marginal fiscal burden on the cost of doing business is 10 percentage points higher in Ontario than in the US.

Federal and provincial subsidies remain high – but tariffs have been declining.

Canada is a global leader in intellectual property protection.

Close ties with American plants and R&D facilities promote domestic innovation.
Competitive Clusters:  
May rely on any part of the complete diamond

Uncompetitive Clusters:  
Usually rely on factor conditions alone