



Ottawa Manufacturers' Network Report on Manufacturing 2006 Eastern Ontario / Western Quebec

15 November 2006

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Executive Summary

- There are over 700 manufacturers in Eastern Ontario / Western Quebec
- These companies employ approximately 41,000 people
- Computer & electronic products, the top sector, represents 27% of firms and 47% of employment
- The largest 4% of companies employ 44% of the people, and the smallest 75% of companies together employ 20% of the people.
- Despite the strain facing Canadian manufacturers, these numbers are stable when compared to the same analysis from 2004 and 2005

While it is unlikely that Ottawa will ever be a city where manufacturing visibly dominates the landscape, many people incorrectly think of Ottawa as a Government city with a healthy electronics and software base, and nothing more. What gets overlooked is that there are other companies here making really interesting products – recreational vehicles, aircraft, DNA collection devices, specialty garments, nuclear medical equipment, solar energy management products, and building materials, just to name a few. Any time there is a diversity of Original Equipment Manufacturers producing, managing, and selling end products to industry or consumers, there is a certainty that supporting manufacturing services will exist, including machine shops, sheet metal fabricators, plastic injection molders, boxes & packaging manufacturers, and the like. All of this is alive and well in our region!

Without a doubt, the strong Canadian dollar, weak U.S. economy, and lack of young people choosing to enter the manufacturing trades and disciplines are all applying great stress to the Canadian manufacturing landscape. The good news is that Ottawa's manufacturers may be less tied to the general economic cycles than manufacturers in some other regions, such as parts of Southern Ontario where automotive, steel and other related products have a much heavier impact than is the case locally.

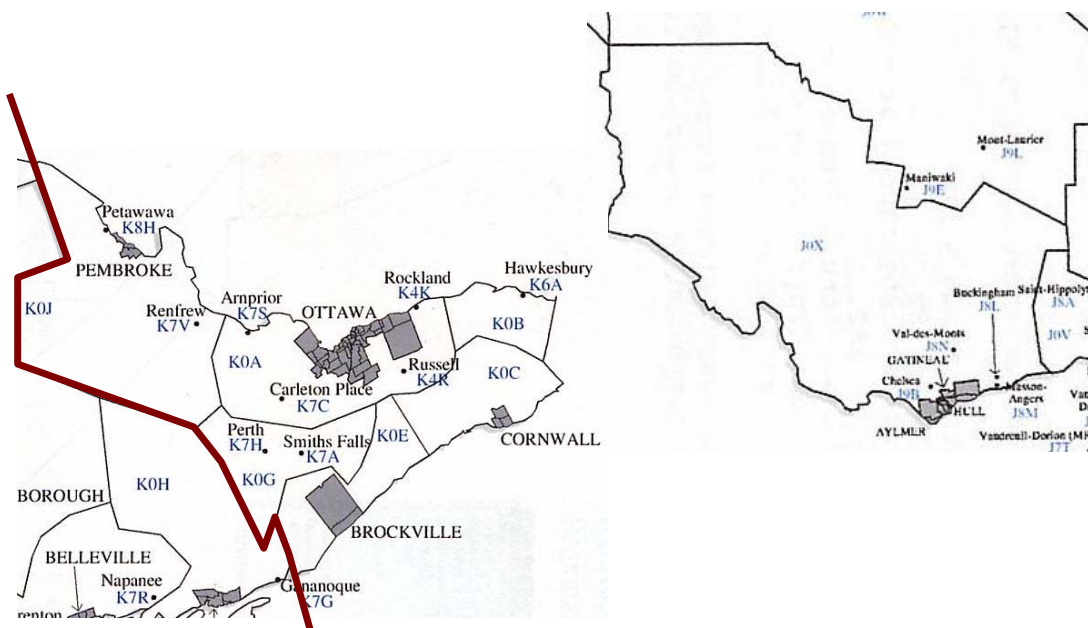
There are a number of very positive stories, including several successful manufacturers set to open brand new facilities this winter / spring. This, of course, is along side some negative stories locally including closures and downsizings. All in all, the region is well balanced, and is experiencing a more modest dose of the stresses facing all Canadian manufacturers.

Background

In the summer of 2004, Sunstrum Hanel & Associates Inc., on behalf of the Ottawa Manufacturers' Network, explored the extent of manufacturing in the region. This work was repeated in the fall of 2005, and most recently in October / November 2006.

One of the first priorities was to define a manufacturer. For the purposes of this work, a manufacturer is defined as any company that conducts manufacturing directly, or has responsibility for manufacturing of a physical product, even if value-added production steps are outsourced. Most of these firms identify themselves as having a primary NAICS (North American Industry Classification System) code of 31, 32, or 33. Services firms such as consultants and software providers to the manufacturing sector are examples of companies not included in this data, but ones that benefit from the multiplier effect of manufacturing. Manufacturers based outside the region, with only sales or administrative offices in the region, were also excluded.

In defining our region, 79 postal codes in Eastern Ontario / Western Quebec were used, as outlined in the maps below.



The Research

A number of sources and methods were used in the assembly of the relevant data, with the primary ones identified below:

- Custom extracts from Industry Canada's Strategis 'Canadian Companies Capabilities' (CCC) data base.
- Manual reviews of the CCC output for legitimacy according to the previously mentioned definition of a manufacturer. This has been conducted annually using websites as the primary source of information.
- Manual inclusion of companies discovered through other means, not in the CCC extract. Sources include the OCRI/OBJ High-Tech List and lists that the Ontario Ministry of Economic Development & Trade, the City of Ottawa, and outlying communities in the region maintain.
- Annual Industry Roundtable meeting in spring of 2006, at which manufacturing leaders in the region voiced their opinions about the specific challenges faced locally.

Manufacturing Companies and Sectors Represented

This work specifically identified 700 manufacturing companies. With the unlikelihood of identifying 100% of applicable firms in this research, it can be said with confidence that there are over 700 manufacturing companies in the region.

Not surprisingly, Computer & Electronic Products is the most common, with 190 identified companies. Most of these companies would also identify themselves as part of the high technology community. These companies produce computer products, telecom equipment, measurement instruments, control devices, aerospace instrumentation, and many other types of products, along with electronic contract manufacturers. The Computer & Electronic Products sector represents 27% of manufacturers in the region. This appears to be down slightly from 2005 when 32% of manufacturers were identified in the Computer & Electronic Products sector.

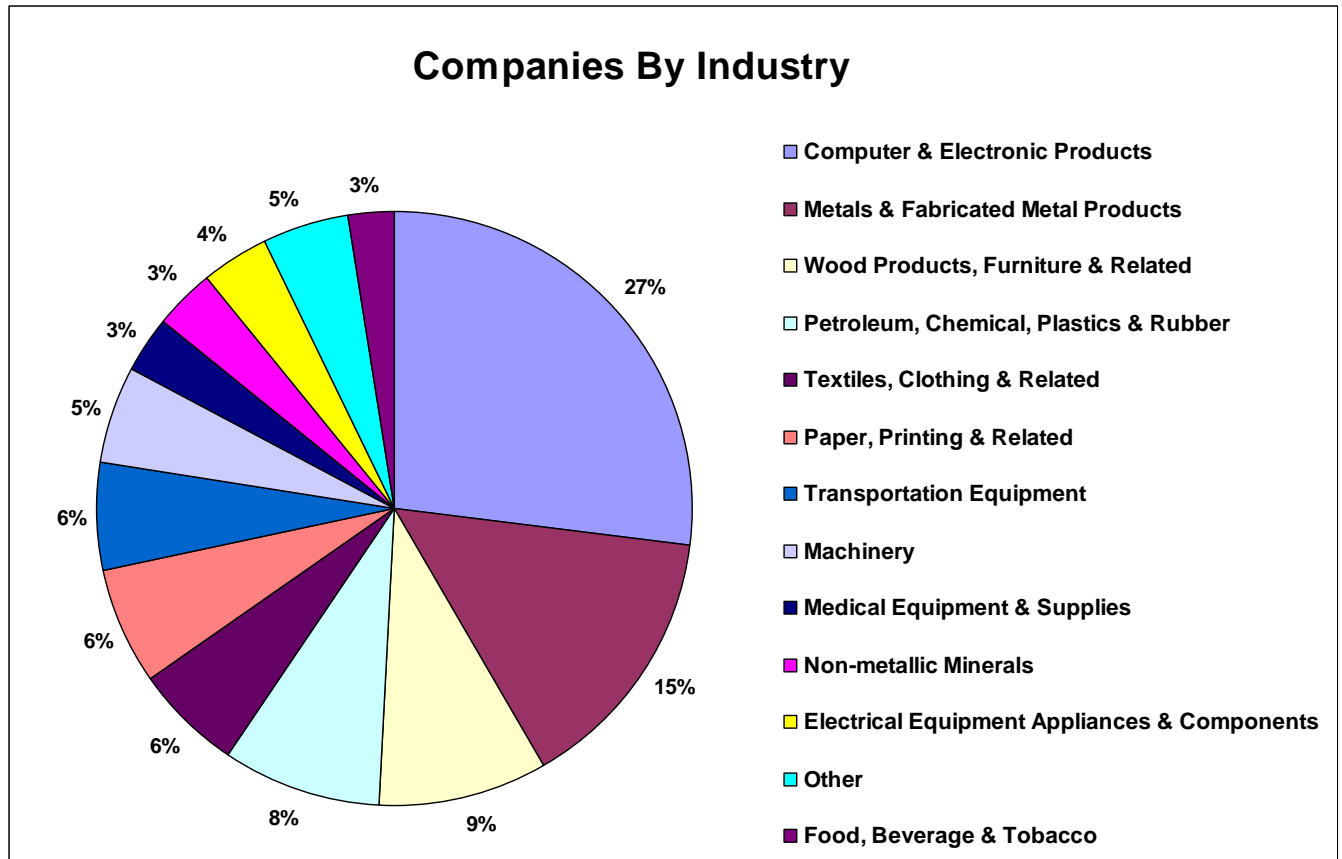
Second as a sector is Metals & Fabricated Metal Products with just over 100 identified companies. This is up from 81 companies in 2005. To illustrate the importance of the Computer & Electronic Products sector, many of these firms supplying fabricated metal products would identify the high technology firms of the region among their major customers. These firms include sheet metal fabricators, machine shops and other firms dealing primarily with metals. This sector represents 15% of manufacturers in the region, up from 9% in 2005.

Third is the Wood Products sector with 64 companies representing 9% of manufacturers. Included in this sector are kitchen cabinets, stairs, and roof trusses.

Fourth is Petroleum, Chemical, Plastics & Rubber Products with 59 companies representing 8% of manufacturers in the region. This sector is diverse with manufacturers of enzymes, injection moulded plastic components, soaps, and other products included.

All manufacturing sectors recognized in the North American Industry Classification System are represented with at least 15 companies in each. This represents a more substantial and diverse manufacturing debate than many would have thought previously.

The following illustrates the distribution of the 700 companies by industry.



Manufacturing Employment by Sector

Many companies found via the CCC data base have published employment figures. For other firms, employment was estimated, in some cases with direct interaction with the companies. It is estimated that the 700 companies represented in this report, directly employ about 41,000 people.

Of this number, the four leading sectors by numbers of companies are more dominant in employment. These four sectors represent 59% of companies, and 73% of employment, as summarized in the table below.

Manufacturing Sector	Percentage of Manufacturing Companies	Percentage of Manufacturing Employment
Computer & Electronic Products	27%	47%
Metals & Fabricated Metal Products	15%	12%
Wood Products	9%	9%
Petroleum, Chemical, Plastics & Rubber Products	8%	5%
Total (Top 4 Sectors)	59%	73%

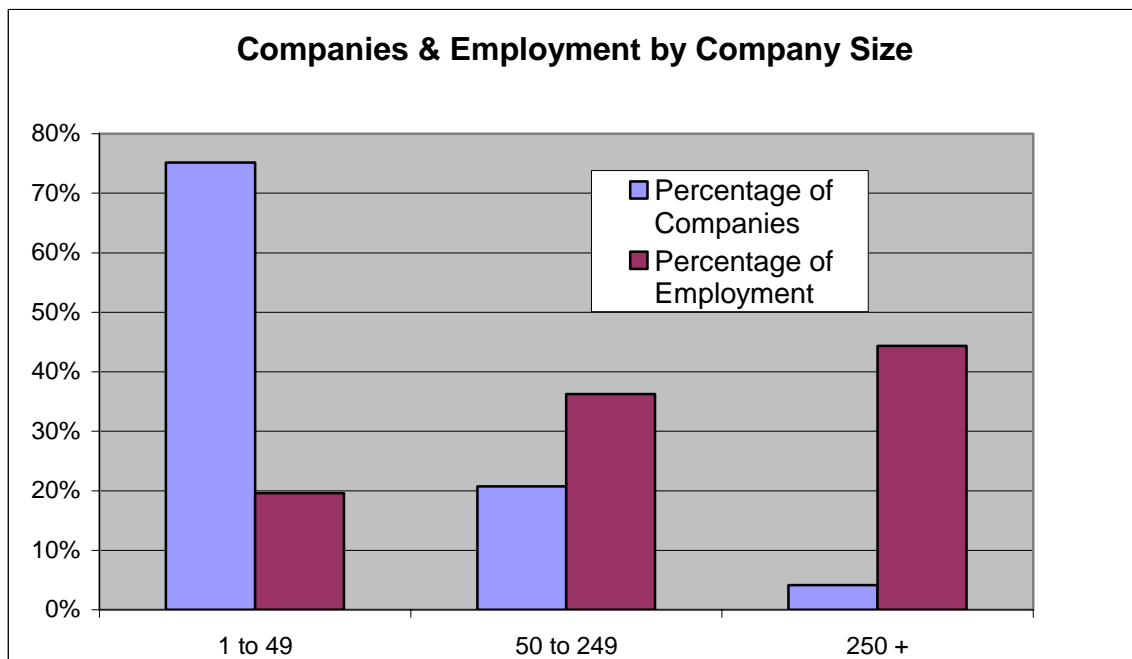
Manufacturing Company Size

Larger firms dominate the total manufacturing employment in the region. To be more specific, companies employing 250 people or more represent approximately 4% of the companies in this report, but 44% of the employment.

On the other extreme, companies employing fewer than 50 people represent 75% of companies, but only 20% of employment. This is not to imply that these companies are not important. Many of the small firms provide manufacturing services that enable the larger firms to succeed, and yet others are destined to grow into moderate and large firms that will then be substantial consumers of local goods and services.

The mid sized companies, with 50 to 249 employees represent 21% of companies and 36% of employment in the manufacturing community.

This distribution of company size is almost identical to that observed in the 2005 report. This is summarized in the graph shown below.



What Regional Manufacturers are Saying

The Ottawa Manufacturers' Network hosted its 3rd Industry Roundtable in May 2006, involving the areas most influential manufacturing leaders. As in previous years, the purpose of this meeting was to openly discuss the challenges facing them, and the kinds of programs and services that the OMN could provide to help with those challenges.

The following were some themes that were identified as representing the major challenges facing manufacturers in the region. These have been used to help shape the 2006-07 Ottawa Manufacturers' Network program. The list below is not prioritized and is not orchestrated to ensure mutual exclusivity.ⁱ

- Cost competitiveness when compared to other areas of the world in light of our Canadian currency appreciation, and a perceived lack of cost competitiveness that is sometimes more extreme than reality.
- Aging workforce with an accompanying lack of skilled labour (trades) to replace retiring workers and a lack of adequate leadership and mentorship skills also brought on by the massive retirements in our manufacturing community over the coming years.
- The need for better emergency preparedness in the face of a potential global pandemic or other widespread or local emergency.
- The need to develop more co-operative business relationships within region and improve the awareness of manufacturing in the community.
- Costs and challenges associated with compliance with environmental legislation such as ROHS, WEE, and others.
- New product introduction – as product lifecycles continue to reduce and the pressure on time to profitability for a new product intensifies, Companies need to get better at introducing and scaling new products.
- The need to continue to learn and improve techniques in the area of lean manufacturing, and in fact the broader lean enterprise.

Manufacturing in Canada

Overview facts regarding Manufacturing in Canada, according to the Canadian Manufacturers and Exportersⁱⁱ:

- Directly, manufacturing accounts for 21% of Canada's economic activity but when spin-offs are included, such as the purchase of goods and services in Canada, manufacturers drive 55% of the economy.
- Manufacturing employs 2.2 million Canadians directly and another 2.5 million depend on the sector for their livelihood.

- Nearly 70% of all goods manufactured in Canada are exported, up from 25% in 1980
- Manufacturers perform 75% of private sector R&D in Canada and 30% of business investment in non-residential construction, machinery, and equipment

The facts above illustrate the importance and sheer magnitude of Canada's manufacturing base. Ontario's picture is similar, with well recognized dependence on manufacturing as the key economic engine. The Government of Ontario reports that Ontario is North America's largest motor vehicle assembler, after Michigan, and that Ontario produces almost 60% of manufactured goods exported from Canada.ⁱⁱⁱ

With little debate about the importance of manufacturing in our economy, some including the CME describe the situation facing Canadian manufacturers as the 'Perfect Storm'.

On November 7, 2006 the Canadian Manufacturing Coalition sent a letter to Prime Minister Stephen Harper outlining the challenges facing Canadian manufacturers and recommending actions and policies that can help manufacturers across the country.

Examples of the challenges highlighted in this letter^{iv}:

- Appreciation of the Canadian dollar
- Soaring energy and commodity costs
- Widespread labour shortages in the West
- Looming shortages of skilled labour across the country
- Weakening demand in the United States market

According to Statistics Canada reported in October 2006 widespread dissatisfaction with the level of orders that factories are getting, marking the eighth straight quarter in which manufacturers have been expecting flat or reduced production in the coming quarter. The Ontario Federation of Labour convened a summit in late October 2006 to deal with the loss of over 100,000 manufacturing job in Ontario (over an undefined but recent period).^v

Canadian manufacturers are not sitting still. Companies are embracing LEAN, exploiting healthy new markets, investing in technology and innovation, and generally working to improve productivity across manufacturing sectors.

Likewise, organizations that represent the interests of manufacturers such as the Canadian Manufacturers and Exporters, and locally in grass-roots fashion, the Ottawa Manufacturers' Network, are pushing to create an environment for success in these challenging times.

Discussion and Conclusions

Manufacturing Stress in Canada – The Perfect Storm?

As addressed in the section on Manufacturing in Canada, there are a number of serious pressures facing manufacturers across the country including appreciation of the Canadian dollar, soaring energy and commodity costs, widespread labour shortages, and weakening demand in the U.S. market. All of these are factors that are unlikely to improve in the short term, indicating that manufacturers in Canada are facing a challenging few years.

It is therefore imperative that manufacturers in Canada, and in our own region, work together to become stronger and more well suited to face these challenges. To this end the Ottawa Manufacturers' Network designs their programs & services to facilitate networking and manufacturing education. Of equal importance, government and other industry associations must do their part to foster an appropriate environment. The Canadian Manufacturers and Exporters have numerous initiatives underway based on the Manufacturing 20/20 initiative launched in 2004.

Stable Numbers of Companies and Employment – Bucking the Trend

Our region has over 700 manufacturing companies, directly employing over 41,000 people. Given the multiplier effect traditionally assigned to manufacturing, this would represent a total of 80,000 to 100,000 jobs (direct & indirect).

Perhaps most importantly, the numbers of companies and employees are stable when compared to November 2005. This is a success story, when compared to the manufacturing trends in Canada and Ontario where job loss and economic stress dominate the headlines. "Despite significant challenges for manufacturers in Canada and Ontario, Ottawa manufacturers have remained relatively stable - a testament to the leadership and quality of these companies," says Gail Logan, President - Ottawa Chamber of Commerce.

Why is this region bucking the national trend? There are several reasons. The region is tied adequately to products that we are somewhat disconnected from the general trends in consumer markets. Ottawa and its manufacturing base were more affected by the meltdown in telecom equipment sales in 2001 than they have been during recent manufacturing / economic pressures. Also the fact that many locally produced products are more innovative and technologically advanced than would be true of typical Canadian manufactured goods reduces, but certainly does not eliminate, competitive pressures and the short to medium term probability of offshore sourcing.

"As a high-mix contract manufacturer, we see a cross-section of manufacturing -- from communications products to medical, industrial, and consumer devices. The one constant we see is continued innovation emerging from this region. While we provide the skills and expertise necessary to help get those products to market, we continue to be impressed by the creativity that emerges from Canadian minds." says Michel Jullian, President – OCM Manufacturing.

The Ottawa region has numerous and recent examples that are consistent with the national trends – business closures and manufacturing layoffs, but there are adequate numbers of success stories to provide a net effect of stability. One visual demonstration of the good news stories is in the construction flurry of manufacturing facilities on Palladium Drive and Iber Road, soon to be connected in the city's west end.

Importance of Larger Manufacturers

Given that the largest 4% of manufacturing companies in the region are responsible for 44% of manufacturing employment, it is critical to the local economy that these larger firms remain, and that an environment in which medium sized companies can grow and remain active in the region is created.

Strength in Computer & Electronic Products

With Computer & Electronic Products representing 27% of manufacturing companies and 47% of manufacturing employment in the region, its importance is not in dispute. Further to those

numbers, a substantial portion of the activity in areas such as fabricated metal products and plastic component production is tied to the production of computer & electronic products in the region.

This strength has sustainability due to the tremendous intellectual property and innovation potential of the region. It was big news earlier in November when Dell announced a substantial expansion of their support center in Ottawa. Could this happen in personal computer manufacturing? No. That is not realistic. Commodity electronics including personal computers are produced heavily in low cost labour markets, with at most, configuration close to the end markets. There remains substantial opportunity for Ottawa to be home to early to moderate volume production of newer technologies and innovative products. Competitiveness efforts such as lean can stretch and defer the point in a product's lifecycle at which lower cost labour is justified.

Surprising Diversity of Products

Despite the focus on computer and electronic products noted above, all manufacturing sectors are represented in the region. The diversity of products produced in our region continues to surprise many. Key manufacturing sectors are noted in Appendix 1 with example products highlighted to demonstrate this diversity. For further information on representative companies, please contact the Ottawa Manufacturers' Network.

Computer & Electronic Product Examples

- Metro / regional optical networking products
- Broadband wireless mesh products
- Electronics manufacturing services
- Interactive electronic whiteboards
- Vision systems for inspection of food products
- Networking systems for video surveillance products

Metals & Fabricated Metal Product Examples

- Railroad heaters & related products
- Steel roofing systems
- Sheet metal products and contract manufacturing
- Coins and commemorative metal products

Wood Products, Furniture & Related Examples

- Custom manufactured stair systems
- Windows and doors
- Hardwood flooring products
- Custom kitchen and related cabinets

Petroleum, Chemical, Plastics & Rubber Examples

- Custom injection moulded plastic components
- Tape products
- Enzymes for the textiles industry
- Biofuels

Textiles Clothing & Related Examples

- Felt products
- Braided rope
- Specialty garments for humans and pets
- Personal protective clothing

Medical Equipment & Supplies Examples

- DNA collection products
- Sleep monitoring devices
- Medical isotopes and radiotherapeutics systems
- Medical equipment for safe independent living
- Blood based diagnostic products

Other Examples

- Remote military aircraft
- Currency and bank notes
- Air conditioning systems
- Solar energy systems
- Woodworking tools
- Concrete products
- Family games
- Cheese & dairy products
- Chocolate products
- Security laminates
- Industrial camera and imaging systems
- Fiberglass insulation

Working Together

The manufacturers in our region are stronger when they work together. This is not to overlook the existence of direct competitors, but efforts to collectively strengthen the region are critical.

That is what the OMN fosters – companies working together to learn from each other, to bring expertise to the table that would be otherwise less affordable, and to plant the seeds of new ideas with each other.

The 2nd annual Manufacturing Week, November 20-24 2006, is an attempt to elevate the profile of manufacturing in the region. Manufacturing in Ottawa will continue to fight misconception, and will continue to play a significant but quiet role, behind the more evident force of governments and “high tech”.

As introduced in the executive summary, it is unlikely that the manufacturing base in our region will expand dramatically beyond the current levels, but stability or modest growth in manufacturing activity is a real possibility.

ⁱ Industry Roundtable 2006 - Ottawa Manufacturers Network, 26 June, 2006

ⁱⁱ <http://www.cme-mec.ca>, 13 November, 2006

ⁱⁱⁱ <http://www.gov.on.ca>, 13 November, 2006

^{iv} Canadian Manufacturing Coalition, c/c Canadian Manufacturers & Exporters, 7 November, 2006

^v <http://ofl.ca>, 13 November, 2006