Canada – A Strategic Choice

Canada as an investment destination
for machinery manufacturing

Canada

Canada's machinery industry

Canada represents a large and growing producer of machinery and equipment, with more than 8,500 machinery manufacturing establishments. Manufacturing shipments topped $30 billion[1] in 2005, an increase of 37% from 1997. Canada's machinery industry employed almost 150,000 workers in 2005, up 13% since 1997.

Canada's machinery and equipment industry is highly export-oriented, with export sales typically accounting for more than 65% of production. Canadian firms have been gaining market share both domestically and internationally. Between 2000 and 2005, Canada's machinery manufacturers more than doubled their share of the Canadian domestic market, from 8.6% to 17.6%. Between 1992 and 2005, Canadian machinery manufacturers almost doubled their share of the US machinery market, from 2.1% to 4.1%.

Competitive strengths and capabilities

Within the global value chain, Canadian machinery firms have developed a range of specializations that are closely tied to other strong sectors of the Canadian economy. These competitive strengths translate into potential opportunities for firms looking to benefit from Canadian capabilities in machinery manufacturing:

- Metalworking machinery manufacturing accounted for one-fifth of machinery industry employment in Canada in 2005. Metalworking machinery manufacturing operations are particularly strong in Central Canada, reflecting strong demand from Canada's automotive and aerospace industries.
- Mining, oil and gas field machinery manufacturing is another key strength for the Canadian machinery industry. One quarter of Canada's largest machinery manufacturing firms are engaged in the production of equipment for the extractive industries.
- Construction machinery manufacturing has been a strongly growing niche for Canada's machinery manufacturers. Growth in this field is due, at least in part, to Canada's booming mining, oil and gas sectors.
- Environmental systems is another major industry segment, including firms specializing in heating, ventilation, air conditioning, refrigeration, water treatment, and waste processing systems.
- Agricultural machinery manufacturing is another area of Canadian industry strength. Much of this segment's manufacturing capability and expertise is located in Canada's prime agricultural regions, in Southwest Ontario, Quebec, and the Canadian Prairies.
- General-purpose machinery manufacturing, which encompasses production of pumps and compressors, material handling equipment, and other manufacturing machinery, also represents a strong capability in Canada. Manufacturers in this category account for one quarter of Canada's machinery output and employment.

While many Canadian machinery manufacturers specialize in one field, the machinery industry in Canada also includes a number of large and highly diversified machinery producers, including Ingersoll-Rand Canada Inc., Siemens Canada Ltd., and Weir Canada Inc.

[1] Statistics Canada. All dollars are expressed in Canadian currency, unless otherwise specified.

Leading machinery firms operating in Canada include:

Alstom Canada Inc.
www.alstom.com

Buhler Versatile Inc.
www.buhler.com

Cimco Refrigeration
www.cimcorefrigeration.com

Crown Energy Technologies Inc.
www.crown-energy.com

Enerflex Systems Ltd.
www.enerflex.com

Flexi-Coil, division of CNH Global
www.flexicoil.com

GE Canada
www.ge.com/canada

Goulds Pumps Canada Inc.
www.gouldspumps.com

Hewitt Equipment Ltd.
www.hewitt.ca

Hitachi Canadian Industries Ltd.
www.hitachi.sk.ca

Husky Injection Molding Systems Ltd.
www.husky.ca

Ingersoll-Rand Canada Inc.
www.irco.com

John Deere
www.deere.com

Pitney Bowes of Canada Ltd.
www.pitneybowes.ca

Siemens Canada Ltd.
www.siemens.ca

Stackpole Limited
www.stackpole.com

Tesco Corporation
www.tescocorp.com

Valiant Machine & Tool Inc.
www.valiantcorp.com

Weir Canada Inc.
www.weirservices.com

Key Canadian clusters

Toronto and Southwest Ontario form the hub of Canada's largest machinery cluster. This region is home to more than half of Canada's largest machinery manufacturers, and accounts for half of all employment in this industry[1].

Metalworking machinery manufacturing is a major strength of the Toronto and Southwest Ontario cluster, due in part to demand from automotive plants (Toyota, Honda, Chrysler, GM, Ford) within the region. Ontario represents 80% of Canada's total employment in the metalworking machinery sector.

Other strengths within the Toronto and Southwest Ontario cluster include rubber and plastics industry machinery, commercial and service industry machinery, material handling equipment, and other general-purpose machinery. Major firms in this region include Alstom Canada, Exco Technologies, GE Canada, Husky Injection Molding Systems, Siemens, Snap On Tools, and Valiant Machine & Tool.

1. Statistics Canada, 1996-2005.

Montréal, Quebec has strong capabilities in sawmill and woodworking machinery (related to Quebec's forestry industry) and engine, turbine and power transmission equipment manufacturing (related to Montréal's aerospace industry). Montréal is host to the Quebec Centre for Industrial Research, a leading source of innovation and expertise in the areas of machinery manufacturing technologies.

Vancouver, British Columbia has core capabilities in sawmill and woodworking machinery (related to the British Columbia forestry industry) and construction machinery manufacturing (related to a strong construction sector). British Columbia's machinery and equipment industry sector has revenues of over $1.5 billion and employs close to 10,000 people.

Winnipeg and Brandon, Manitoba are significant agribusiness manufacturing and technology centres, with manufacturing shipments exceeding $1 billion annually. Comprising over 250 firms, this diverse yet integrated industry sector employs an estimated 5,800 people. Key capabilities include equipment maufacturing for all aspects of crop and livestock production. Original Equipment Manufacturers (OEMs) are supported by a large and diverse network of suppliers producing components, sub-assemblies, and precision parts. Major firms in this cluster include Agri-Tec International, Behlen Industries, MacDon Industries Ltd, Monarch Industries Limited, Vansco Electronics and Westeel Limited.

Calgary and Edmonton, Alberta represent the core of Canada's oil and gas machinery equipment cluster, which has been fuelled in recent years by the major oilsands projects in Northern Alberta.

The Calgary-Edmonton cluster accounts for nearly three-quarters of mid-to-large sized Canadian firms in the oil and gas equipment sector. Inclusive of agricultural, mining, oil and gas machinery, cluster employment totalled more than 7,500 in 2005, having grown by more than 50% since 2000.

The Calgary-Edmonton cluster also has strong capabilities in the related fields including compressor/pump manufacturing and other engines/transmission sectors.

In addition to serving domestic markets, the Alberta cluster is also a rapidly growing exporter of machinery and equipment. Alberta's share of Canadian machinery exports has more than doubled since 1997.

Major firms operating in the Calgary-Edmonton machinery cluster include Crown Energy, Enerflex, National Oilwell Varco, Prudential Steel, Simmons Group, and Tesco.

Saskatoon and Regina, Saskatchewan have significant core capabilities in agricultural equipment. This cluster also has strong capabilities in engine, turbine and power transmission equipment manufacturing.

The Saskatoon-Regina cluster has seen rapid growth in recent years. Employment for Saskatchewan in the broader agricultural, mining, oil and gas machinery sector increased by 27% between 2001 and 2005, and the values of Saskatchewan machine exports increased by 8% between 1997 and 2006.

Major firms in the Saskatoon-Regina machinery cluster include Flexi-Coil (CNH Global), Hitachi Canadian Industries, Morris Industries, and Water Group (Culligan).

Machinery investment location drivers

To understand the main investment location drivers for the machinery industry, KPMG LLP (Canada) completed a series of in-depth confidential interviews with senior executives from leading machinery manufacturers operating in North American and international jurisdictions. In these interviews, machinery executives identified and ranked the most important location drivers considered by their firms when choosing among potential investment locations. Individual responses were then analyzed by MMK Consulting Inc., to determine and rank the top location drivers, as detailed below.

Top-ranked Investment Location Drivers	Canada's Value Proposition	Investor Benefits
1. Labour costs	• Very competitive labour costs relative to leading US and overseas machinery clusters • Lower costs of providing employee benefits	• Significant labour cost savings relative to US machinery manufacturing clusters.
2. Availability of skilled labour	• Existing skilled machine industry workforce of 150,000 • Canadian universities graduate 16,000 engineers annually	• Ability to recruit both experienced and entry-level workers
3. Proximity to major markets	• Economies oriented towards key customer industries (agriculture, mining, manufacturing, etc.) • US access under the North American Free Trade Agreement (NAFTA)	• Strong regional Canadian markets • Good access to US markets
4. Highway accessibility	• Coast-to-coast major highway network serving all major clusters • Direct integration to US Interstate system at border crossings	• Flexible road freight options for movement of parts and products
5. Tax incentives and exemptions	• Federal tax incentives including new accelerated depreciation rules • Provincial tax incentives for manufacturing and R&D	• Lower effective tax rates for machinery manufacturers • Customer incentives to purchase new machinery
6. Corporate tax rates	• Corporate income tax rates that are generally lower than the US	• Low effective corporate income tax rate • Improved net profit after tax
7. Proximity to suppliers	• Existing suppliers with wide range of capabilities and specializations • Skilled base of service providers	• Easy to source a wide range of commercial components • Skilled base of suppliers to work with on design and production of custom components
8. Accessibility to a major airport	• International airports exist in all major Canadian machinery clusters • Canadian airports offer three times higher proportion of international flights than US airports	• Reduced travel time and costs • Convenient direct access to international locations

Canada as an investment destination

The strong growth of Canada's machinery sector in recent years is proof of Canada's global attractiveness as a location for machinery manufacturing investment. What value proposition does Canada provide to global investors in the machinery industry?

The following sections present Canada's value proposition for machinery firms by comparing Canada's leading machinery clusters – Toronto, Southwest Ontario, Calgary-Edmonton, and Saskatoon-Regina – to leading US clusters located in Chicago, Illinois, and Greenville-Spartanburg, South Carolina, as well as key European clusters in Rhône-Alpes, France, and Emilia-Romagna, Italy.

1. Labour costs

In a recent survey, machinery industry executives ranked labour costs as the most important consideration in locating machinery manufacturing operations.

Canada offers a very competitive labour cost environment for machinery and equipment manufacturers (see chart at right). A KPMG analysis of international manufacturing costs has found that labour costs in Saskatoon-Regina, Calgary-Edmonton, and Southwest Ontario are lower than those in other leading international machinery clusters, including Emilia-Romagna (Italy), Rhône-Alpes (France), Greenville-Spartanburg, SC, and Chicago, IL. Labour cost advantages in the Canadian clusters range from 5% up to 20%.

Labour costs in Toronto are somewhat higher than in other Canadian regions, but are still 13% lower than in Chicago.

A significant component of Canada's cost advantage relative to the United States is the lower cost of providing employee benefits in Canada, due mainly to Canada's publicly funded healthcare system.

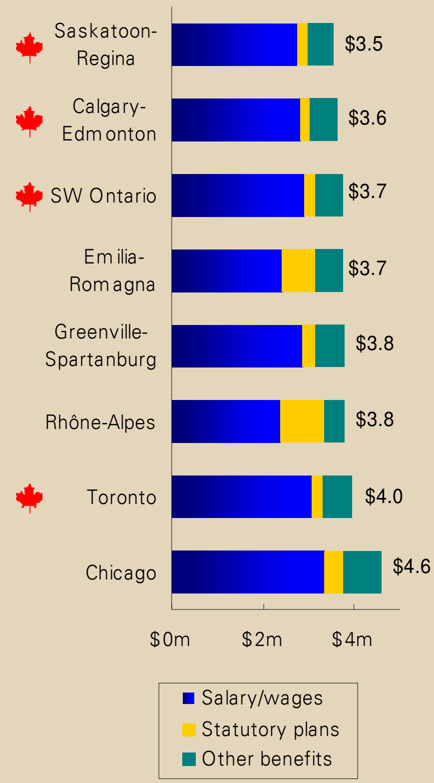
2. Availability of skilled labour

Canada has an existing skilled machinery industry workforce of nearly 150,000. This deep talent pool provides machinery firms with excellent opportunities for recruitment of experienced workers. This labour force is highly concentrated within Canada's main machinery and equipment clusters. More than 73,000 machinery workers are located in the Ontario cluster alone.

Canada also graduates approximately 16,000 engineers annually – more per capita than the United States. In addition, machinery-oriented technical courses are offered by numerous colleges across Canada, and produce thousands of graduates each year at the certificate level. For example, Ontario has 24 technical colleges that offer machinery-oriented courses. These educational and training institutions ensure a steady supply of well-qualified and productive new entrants into the Canadian machinery industry workforce.

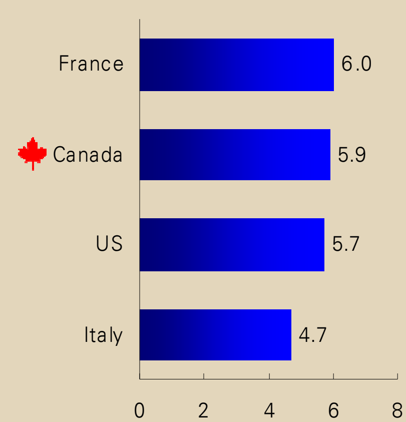
The World Economic Forum's 2005-2006 *Global Competitiveness Report* also recognizes Canada's availability of skilled labour, ranking Canada in 8th place globally for the availability of engineers and scientists (see chart at right), ahead of both the United States (13th) and Italy (54th).

Precision manufacturing Annual labour costs, US$m[1,2]



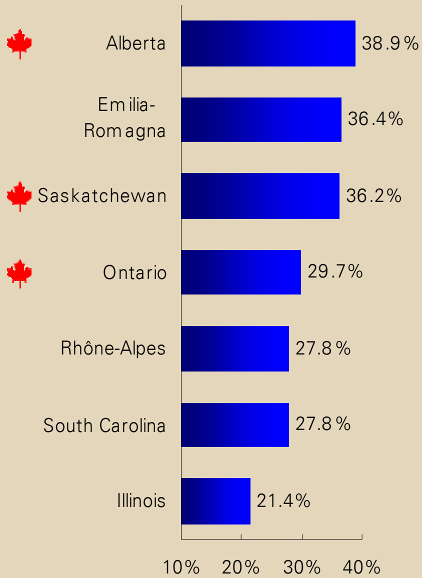
1: *Competitive Alternatives*, KPMG LLP, 2006. Figures represent total annual labour costs for a precision manufacturing plant of 70 employees.
2: Data for Southwest Ontario is an average of five cities in that region. Data for Florence is used as a proxy for Emilia-Romagna. Data for Lyon is used as a proxy for Rhône-Alpes.

Availability of engineers and scientists[1]



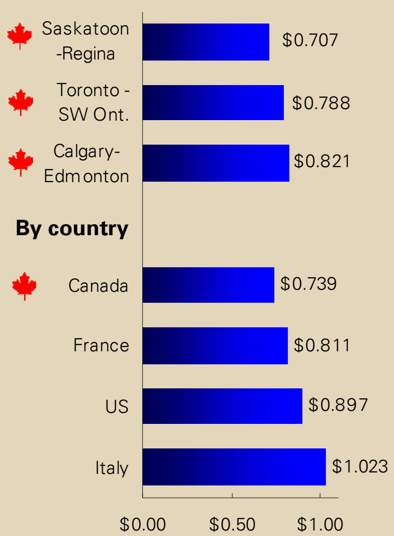
1: *Global Competitiveness Report 2005-06*, World Economic Forum. Scientists and engineers in your country are: 1 = nonexistent or rare, 7 = widely available.

Relative AMUCM[1]
Share of total GDP, 2004[2]



1: AMUCM = agriculture + mining + utilities + construction + manufacturing.
2: MMK Consulting, adapted from StatsCan table 379-0025, US BEA GDP by State, Eurostat table e2vabp95. European figures represent % share of regional Gross Value Added (GVA).

After-tax cost of R&D
B-index[1]



1: The OECD-standard B-index measure represents the present value of before-tax income that a firm needs to generate to cover a $1 (after tax) investment in R&D activities. B-index of less than 1.00 indicates that the tax system is subsidizing the cost of R&D. Rates shown are applicable to large corporations. *Canada's R&D Tax Advantages, An International Comparison,* JPW Innovation Associates Inc., 2007.

3. Proximity to major markets

Regional markets

Canadian machinery manufacturing clusters are located in regional economies that are highly oriented towards machinery-intensive industries – agriculture, mining, utilities, construction and manufacturing (AMUCM).

In Alberta, these five key machinery-intensive sectors represent a greater share of the economy than in well recognized industrial regions such as Emilia-Romagna in Italy and South Carolina in the United States (see chart at left). Other Canadian clusters also compare favourably, with Saskatchewan and Ontario both ranking ahead of Rhône-Alpes, South Carolina, and Illinois.

Export markets

In addition to these strong regional markets in the Canadian cluster jurisdictions, Canadian locations also offer seamless access to US machinery markets under the North American Free Trade Agreement (NAFTA). As a result, Canadian machinery manufacturers have been able to almost double their share of the US machinery market since the early 1990's.

4. Highway accessibility

Canada's coast-to-coast major highway network serves all of the country's main machinery clusters with a combination of freeways and multi-lane highways.

This highway network provides direct integration to the US Interstate highway system at Canada/US border crossings. Joint Canada-US border clearance and security programs, including FAST (Free and Secure Trade, for the movement of goods) and NEXUS (for frequent travellers), are designed to minimize cross-border costs to businesses. Collectively, these systems provide firms with flexible road options for movement of parts, products and personnel.

5. Tax incentives and exemptions

Tax incentives and exemptions also figure highly in machinery investment decisions. Canada's competitive tax environment is complemented by a number of relevant incentives for R&D and manufacturing investment.

Research and development incentives

Canada has a long-established tax credit program for research and development activities that is among the most generous in the world (see chart at left). In addition to federal incentives, provincial R&D tax credits also apply in most Canadian jurisdictions.

Overall, the after-tax cost of R&D in Canada is well below that of the US and Italy, and in key Canadian clusters is also lower than in France. To the extent that a machinery firm is undertaking R&D expenditures, the available R&D tax credits significantly reduce the effective corporate income tax rate in Canada.

Manufacturing tax incentives

Canada's 2007 federal budget also included a number of new tax incentives that will benefit machinery production firms:

- The rate of depreciation allowed on manufacturing buildings has been increased from 4% to 10% – a significant benefit for machinery manufacturers.
- The rate of depreciation allowed on manufacturing equipment has been accelerated from 30% to 50% for new machinery and equipment purchased before 2009. This directly assists machinery manufacturers when investing in new machinery for their own plants, and also stimulates demand from all manufacturing sectors for new machinery and equipment.

6. Corporate tax rates

National tax rates

Canada offers very competitive corporate tax rates to machinery manufacturers. Progressive reductions in both federal and provincial tax rates over the last decade mean that Canadian corporate tax rates are now lower than equivalent rates in most regions of the United States. KPMG's estimates of average nominal 2006 corporate income tax rates are:

- France 33.3%
- Italy 37.3%
- Canada 36.1%
- United States 40.0%

Effective tax rates for cluster cities

At the city level, Canada's major machinery clusters have very competitive corporate tax rates relative to comparable international and US clusters, according to a KPMG analysis of precision manufacturing costs (see chart at top right). Saskatoon-Regina offers the lowest effective corporate income tax rate of the eight clusters compared, offering savings of between 4.3 and 21.3 percentage points. All Canadian clusters examined offer lower corporate income tax rates than either Chicago or Emilia Romagna (Italy).

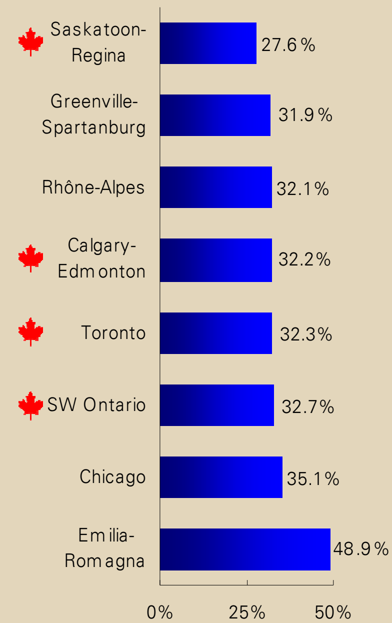
7. Proximity to suppliers

Canada's major industrial clusters include many suppliers to the machinery manufacturing industry, offering a wide range of capabilities and specializations, making it easy to source a wide range of commercial "off the shelf" components and to find suppliers to design and produce custom components. In addition, a large and skilled base of service providers also supports the machinery industry in each of the Canadian clusters.

8. Accessibility to a major airport

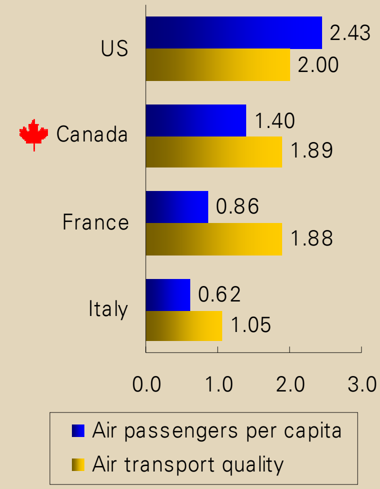
All major Canadian machinery clusters are located close to international airports that offer frequent and quality air service, facilitating both the movement of personnel and time-sensitive parts. Based on statistics from IMD 2007 World Competitiveness Online (refer chart at right), Canada ranks ahead of both France and Italy in terms of both the density of air traffic (number of air passengers per capita), and the quality of air transportation for business purposes.

Precision manufacturing
Effective corporate income tax rate[1,2]



1: *Competitive Alternatives,* KPMG LLP, 2006. Figures represent combined federal/regional/local taxes as % of pre-tax income.
2: Data for Southwest Ontario is an average of five cities in that region. Data for Florence is used as a proxy for Emilia-Romagna. Data for Lyon is used as a proxy for Rhône-Alpes.

Air transportation
Quantity and quality[1]



1: Air passengers per capita = Number of passengers carried by main companies (IMD World Competitiveness Online, 2005, and ICAO) divided by national population (World Bank, 2005).
Air transport quality = Executive survey rating of "Quality of air transportation encourages business development" (IMD World Competitiveness Online, 2007) rescaled to an index scale of 0 (very poor) to 2.5 (very good).

Take advantage of the Canadian opportunities today

To reach an investment officer in your market, please go to:
www.investincanada.gc.ca/globalnetwork

You can also contact the Invest in Canada Bureau at:

Foreign Affairs and International Trade Canada
Invest in Canada Bureau
111 Sussex Drive
Ottawa, ON Canada K1A OG2
E-mail: investincanada@international.gc.ca

www.investincanada.gc.ca

Canada