Industrie 2030

Manufacturing and Exporting in Canada

Canadian Manufacturers & Exporters

Manufacturiers et Exportateurs du Canada

CMC

Table of Contents

Introduction

The world of manufacturing has undergone dramatic changes over the past several decades. Foremost among them is a fundamental shift in where manufacturing activity takes place – away from "high-cost" western democracies to lower-cost emerging markets. This shift has been described as the "hollowing out" of manufacturing in Canada and other industrialized countries. Some in the media use less charitable terms, saying that manufacturing in Canada is dying or already dead.

As a result, the public perception of Canadian manufacturing bears little resemblance to the reality. Many view the sector as being irrelevant to Canada's current prosperity or our economic future.

Nothing could be further from the truth. Manufacturing is a vital contributor to the Canadian economy and to the living standards of all Canadians. It is in fact the most important economic sector in the country. It is the source of much of our wealth and innovation. It accounts for two thirds of Canada's exports and 42 per cent of all research and development. It also directly employs 1.7 million Canadians and generates close to 11 per cent of GDP nation-wide.

As impressive as they are, these numbers only tell part of the story.

It is, in fact, the lynchpin of the Canadian economy. There is not a single industry in the country that can produce goods or services without using manufactured products to do so. Access to a reliable supply of reasonably-priced, high-quality Canadian-made manufactured goods is therefore critical to the long-term competitiveness of every other industry in the country.

Furthermore, most sectors outside of manufacturing rely directly on manufacturers and their employees, either as a core customer base or key contributor to their success. As such, while the direct economic impact of manufacturing is considerable, the cumulative impact is simply stunning – including all the spinoff activity it generates, about 4.7 million Canadian are employed because of manufacturing and manufacturing stimulates over $530 billion in gross domestic product. In short, manufacturing is responsible for nearly thirty per cent of Canada's total economic activity today.

At the same time, we must not underestimate the challenges the sector has faced. While manufacturing output has remained fairly stable over the past 15 years, the sector has lost roughly 500,000 direct jobs and our share of global manufacturing output has dropped from 2.5 per cent to 1.5 per cent today. Similarly, over the same time period, manufacturing exports have remained strong, yet our trade balance in manufactured goods has ballooned from about even to a massive deficit of $122 billion.

These economic realities and fundamental statistics illustrate why Industrie 2030 is so critical. On the one hand, the sector is directly and indirectly responsible for roughly close to 30 per cent of the Canadian economy. On the other, it is struggling internationally. If we continue along our present path, Canada's manufacturing sector will continue to stagnate or even shrink. This would fundamentally erode Canada's economic wellbeing and the standard of living of all Canadians.

Industrie 2030 proposes an alternative: take bold steps to revitalize manufacturing in Canada and set the country on a path to doubling manufacturing output and value-added exports by 2030.

But in order to understand where we want to go, we must first understand where we are. This paper profiles the manufacturing sector in Canada. It establishes a global context for Canadian manufacturing and examines recent growth trends in output, exports and provincial activity. More importantly, it analyzes the economic impact of manufacturing across Canada, including the indirect and induced spinoff effects in other industries.

Manufacturing in Canada	
Number of companies:	90,082
Contribution to GDP:	$610 billion
Direct employment:	1.7 million
Wages and salaries:	$118 billion
Wage premium:	111.3% of average wage
Share of exports:	67% ($349 billion)
Share of private sector R&D:	42%
Capital investment:	$224 billion

Canadian Manufacturing in a Global Context

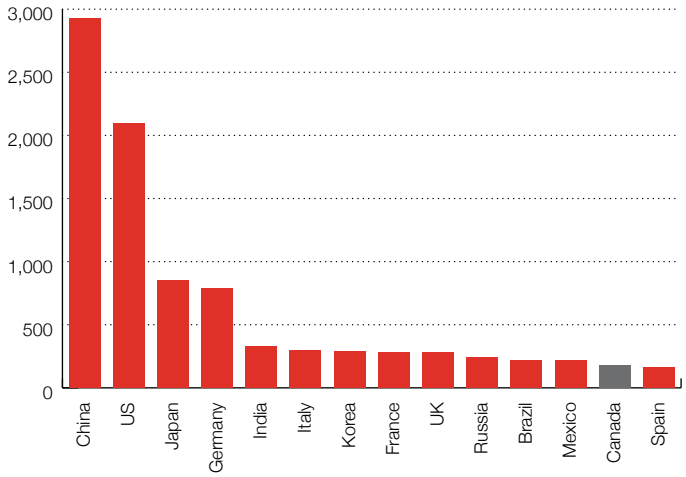
Global manufacturing output is dominated by two countries: China and the United States. Together, they account for close to 42 per cent of all manufactured goods produced around the world. Japan and Germany are the next largest at 7.1 per cent and 6.5 per cent of global production, respectively.

By comparison, Canada is a relatively small player on the global manufacturing stage. Although it is the 14th largest manufacturing country in the world, it accounts for a little less than 1.5 per cent of total production.

Moreover, although manufacturing sales are growing across Canada, we are not keeping pace with other countries. In 1984, Canada was the eighth-largest manufacturing country in the world, producing more than current manufacturing powerhouses like South Korea, Russia, Mexico and India (data for China are not available before 2004). By 2014, Canada was ranked 14th in the world and had been passed by all four of the countries listed above.

Because we are not keeping pace with other countries, Canada's share of global manufacturing output is falling. From the 1970s through the 1990s, Canada consistently accounted for about two per cent of the world's manufactured goods, rising as high as 2.5 per cent in 2000. Since then, however, Canada's manufacturing sector has been falling in importance on a global scale.

MANUFACTURING OUTPUT BY COUNTRY – 2014
(In $US billions)



Global leaders in manufacturing output

Rank	1984	1994	2004	2014
1	US	US	US	China
2	Japan	Japan	Japan	US
3	Frmr USSR	Germany	China	Japan
4	Germany	Italy	Germany	Germany
5	Italy	France	Italy	South Korea
6	France	UK	France	India
7	UK	Brazil	UK	Italy
8	**Canada**	South Korea	South Korea	France
9	Brazil	**Canada**	UK	Spain
10	Mexico	Russia	**Canada**	Russia
11	India	Spain	Mexico	Brazil
12	Spain	Mexico	India	Mexico
13	Australia	India	Brazil	Indonesia
14	Argentina	Switzerland	Russia	**Canada**
15	Poland	Netherlands	Netherlands	Spain

Source: United Nations

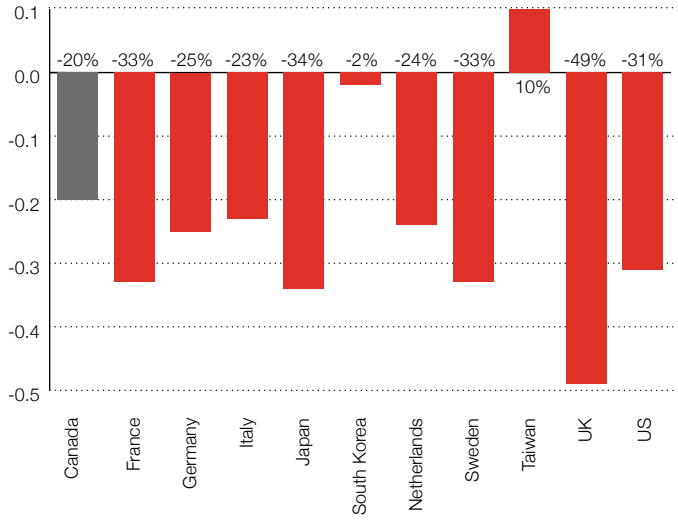
Note: data for China are not available before 2004

To some degree, this relative decline was inevitable. Thirty years ago, China was effectively non-existent on the global manufacturing stage. Today it is the world's largest manufacturing country by a considerable margin. Simple math suggests that every other country will lose ground in a relative sense when a new player emerges.

However, there is far more to it than that. For one thing, the growth in China, Mexico and elsewhere initially took place in low-skill, labour intensive industries where those countries had a natural advantage. Over time, advanced economies like Canada lost many businesses in those industries because they were unable (and unwilling) to compete on labour price or to even contemplate matching the business, tax and regulatory environment in those markets.

Canada's clothing and textile industry and electronics assembly industries, for example, are a fraction of their former size. Moreover, those businesses that remain are very different, operating at the high-value end of the spectrum, focusing on design, quality and customized production.

CHANGE IN MANUFACTURING EMPLOYMENT: 1990-2014



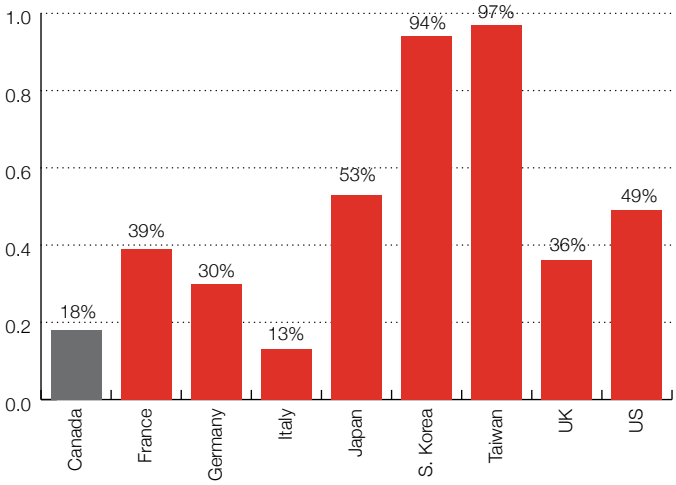
This transformation also speaks to another long-term global trend in manufacturing: slow or negative job growth. Fifteen years ago, there were more than 2.24 million jobs in manufacturing across Canada. Last year there were 1.71 million. However, this trend is not at all unique to Canada. All across the industrialized world, the number of manufacturing jobs is declining. In fact, Canada has fared relatively well compared to other advanced economies, with a reduction of only 20 per cent of our manufacturing workforce between 1990 and 2014. The UK lost close to 50 per cent while Japan, France, Sweden and the US lost roughly one-third each.

While the initial shift in production to low-wage, low tax and regulation environments was to reduce production costs and serve growing customer bases in those markets, rapid changes in production processes over the past several years have again changed how manufacturing operates globally. Automation, specialization and the emergence of new technologies has changed how our goods are manufactured and what it means to work in manufacturing. Traditional assembly-line jobs are fading. Jobs in skilled trades, machinery operation, engineering design and computer programming are on the rise. So too are service jobs as manufacturers shift from simply providing a product to servicing a customer need. While there are fewer of these jobs compared to labour-intensive assembly-line work, they are of far higher quality. They require more education, pay better salaries and add far more value to the economy.

Another factor behind Canada's relative decline in global manufacturing is the fact that global competition continues to become more intense. On top of longstanding issues like trade fairness, illegal dumping and reciprocity, our businesses struggle with the fact that our cost structure is high compared to developing countries, while our rates of technological adoption and productivity growth lag behind other industrialized countries. Effectively, Canada is caught in the middle: too advanced to be a low-cost producer, but not advanced enough to keep up with those at the forefront of technology and innovation.

This, fundamentally, is the challenge we must overcome if we are to see sustained growth in our manufacturing sector. Like other nations, we must recognize the opportunities of globalization and embrace the changes in technology, process and products that will lead to success.

LABOUR PRODUCTIVITY GROWTH IN MANUFACTURING: 2002-2014

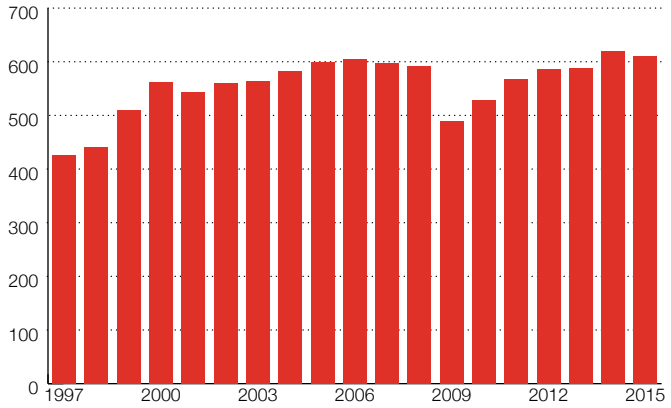


Manufacturing Activity in Canada

Overview

In spite of sluggish growth compared to many other countries, Canada's manufacturing sector is operating at near-record sales levels. Last year, overall output was valued at just under $610 billion. The only better year for sales was 2014, when sales reached $619 billion.

MANUFACTURING SALES IN CANADA
(in $billions)



This growth comes in spite of a seemingly constant stream of challenges and difficulties. In the mid 2000s, rising energy prices and a higher exchange rate changed economic conditions across the sector. Businesses with links to energy sector supply chains prospered as companies poured billions of dollars into new capital projects. Meanwhile, those that relied on a low exchange rate to compete in international markets struggled. As growth in one area offset falling sales in another, the net result was a period of relatively flat manufacturing growth.

That all changed for the worse when the global financial and economic crisis hit in late 2008. As the world plunged into recession, demand for all types of manufactured goods plummeted. Manufacturing sales fell by more than 17 per cent in 2009, reaching an 11-year low of $489 billion.

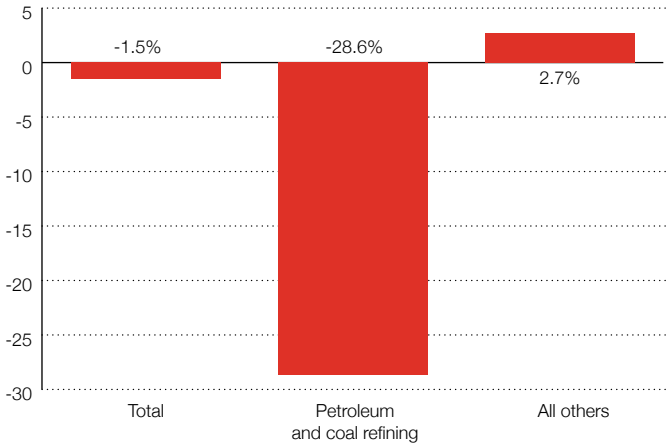
Fortunately, the impact was temporary. Buoyed once again by booming energy sector investment, manufacturing activity snapped back, growing by nearly 20 per cent over the next three years.

However, sales growth slowed thereafter. High costs in some provinces and growing foreign competition from China, Mexico and elsewhere impacted manufacturing investment in Canada. Some industries struggled with plant closures, others with import substitution, and others still with access to foreign market opportunities. Even so, manufacturing activity continued to expand. Buoyed by the impact of rising oil prices, manufacturing sales hit an all-time high of $619 billion in 2014.

Once again, however, economic conditions changed dramatically. As crude oil prices collapsed, manufacturers both upstream and downstream of the energy sector were hit hard. The value of refined petroleum production fell by nearly 30 per cent, and sales of primary metals, fabricated metals and machinery were all lower as well. Meanwhile, conditions were much better for Canada's export-oriented industrial manufacturers, which benefited from a more favourable exchange rate.

All said, overall manufacturing sales fell from $619 billion in 2014 to $610 billion last year. However, that decline was almost entirely concentrated in energy-related manufacturing, especially petroleum refining. That one industry aside, 2015 was a good year for most manufacturers. Non-petroleum manufacturing output rose from $542 billion in 2014 to an all-time high of $555 billion last year.

MANUFACTURING SALES GROWTH – 2015
(in %)



However, while Canada might be at near-record output levels for manufacturing, two unfortunate facts persist. First, manufacturing sales have been largely stagnant over the past 15 years, and have been falling in real-dollar terms. Second, we are not keeping up with our global competitors and Canada thus continues to slip in world output rankings. These realities are deeply concerning given the size and importance of manufacturing to the Canadian economy.

Issues in Measuring the Value of Manufacturing Activity

As the lines between technology, manufacturing and services blur, it is growing increasingly difficult to paint a true picture of manufacturing in Canada.

Statistical agencies typically categorize businesses according to their primary activity, regardless of what else they do. If manufacturing generates the most value-added, then all activities within the business are categorized as manufacturing. Conversely, if another activity such as design, distribution, software development or after-sale service generates the most value-added, then that entire business, including the manufacturing component, will be classified within the services sector. This is true even if those services would not exist without the physical good the company produces.

As noted by the US Congressional Research Service, this approach results in three types of statistical confusion:

• If a manufacturing facility designs and then fabricates a product, the design activities generally count as value added in manufacturing and the workers engaged will be tabulated as manufacturing employees.

• If the design is created within the manufacturing firm but at a location where no physical production occurs, it could conceivably count as either a manufactured product or a service-sector product.

• If the manufacturer purchases the design from a specialist design firm, the value added in the design process will be credited to the service sector, and the workers involved will be considered service-sector employees.

In all three cases, total employment and total value added are identical. The difference is whether or not any of that activity is counted within the manufacturing sector.

As companies become increasingly automated and focus more of their efforts on design, specialization, and product development and commercialization, less and less of their value-added comes from the physical production of a good. Does this mean they are no longer manufacturers? Of course not. But it does point to a growing problem in tracking manufacturing activity and the contribution that manufacturers makes to the economy – not only in Canada, but around the world.

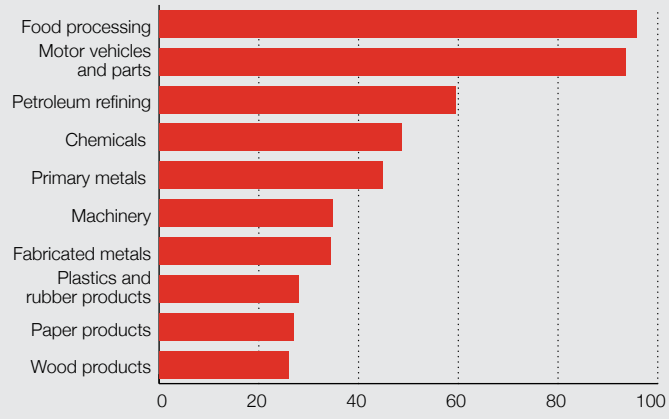
Major Industries

Manufacturing activity in Canada is distributed across a wide range of industries. The two most important sectors in terms of overall sales activity are food processing and motor vehicles and parts production. Food processing output was valued at a record $95.8 billion in 2015, accounting for about 15.7 per cent of total manufacturing activity in Canada that year. Auto sector production was not far behind at $93.5 billion (15.3 per cent of the total).

In spite of the dramatic decline in output values last year, petroleum and coal refining remains Canada's third most important manufacturing industry. At $59.3 billion, petroleum and coal production made up about 9.7 per cent of total manufacturing output in 2015.

Chemicals-producing industries are Canada's next most important manufacturing sub-category, with products ranging from petrochemicals and plastics to fertilizers to pharmaceuticals. All told, those industries made up just under 8.0 per cent of total manufacturing sales last year. Other important industries include primary and fabricated metals, as well as forest products (lumber, pulp and paper).

TOP MANUFACTURING INDUSTRIES IN CANADA – 2015
(Sales value, in $billions)



THE EVOLUTION OF MANUFACTURING IN CANADA

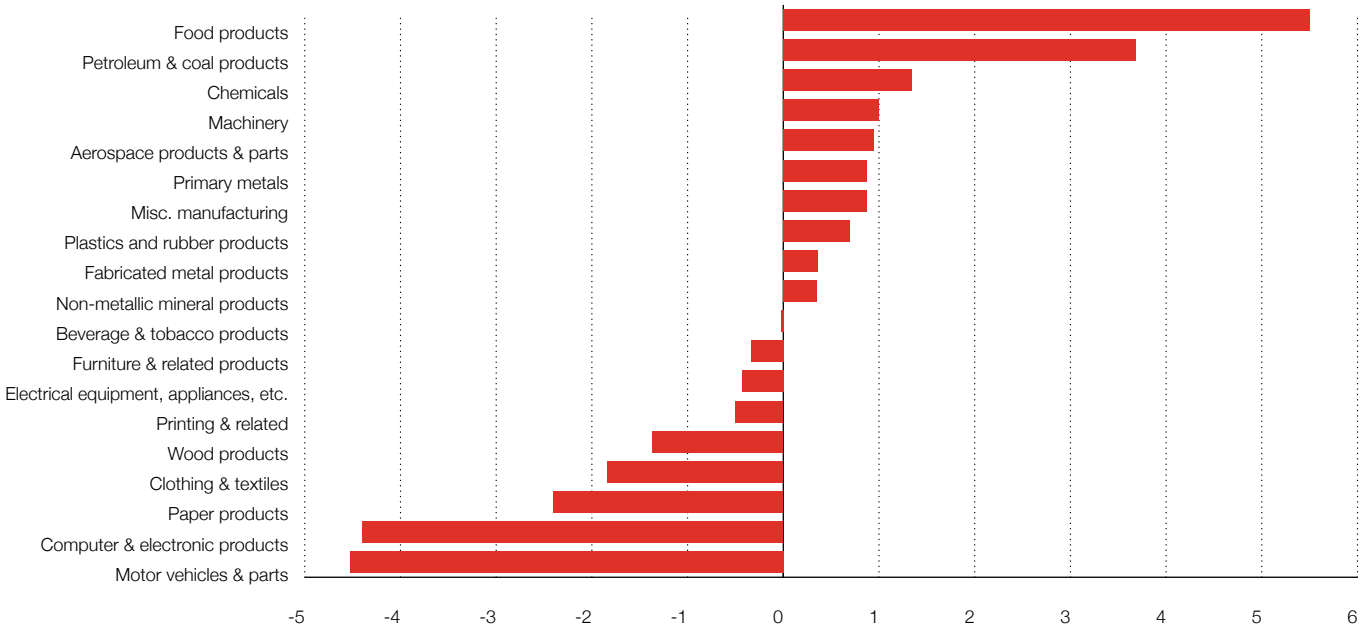
The face of Canadian manufacturing is constantly evolving. In response to changes in technology, consumer demand, market conditions and local competitiveness, some industries are on the rise while others are in decline.

This process is gradual. Fifteen years ago, motor vehicles and parts were a much larger component of total manufacturing activity, accounting for a little less than 20 per cent of total output, falling to 15.3 per cent in 2015. While there has been strong growth in auto and parts production in the last two years (see below), room for future growth is limited without new investments and production mandates. Meanwhile, food products have grown in importance, rising from 10 per cent of total output in 2000 to 15.7 per cent last year.

Aside from food products, the largest growth in manufacturing activity in Canada over the past fifteen years has been in petroleum and coal products, followed by chemicals, machinery and aerospace. At the other end of the spectrum, there has been a sharp decline in the importance of computers and electronics as production of those goods has largely shifted overseas. In 2000, those products accounted for 6.6 per cent of all manufacturing output in Canada. Today, their share is 2.2 per cent. There have also been relative declines in the importance of forest products, as well as clothing and textiles.

Long-term trends underscore the fact that manufacturing today is not what it was 15 year ago. Similarly, we cannot expect that manufacturing in 2030 will look like it does today. Some industries that have been in decline will recover in a new and innovative form. Others that are seemingly strong could falter. Industrie 2030 is about ensuring that businesses have the best possible chance at success without engineering a specific outcome.

THE CHANGING FACE OF MANUFACTURING IN CANADA
(Growth in market share: 2000-2015, in %)

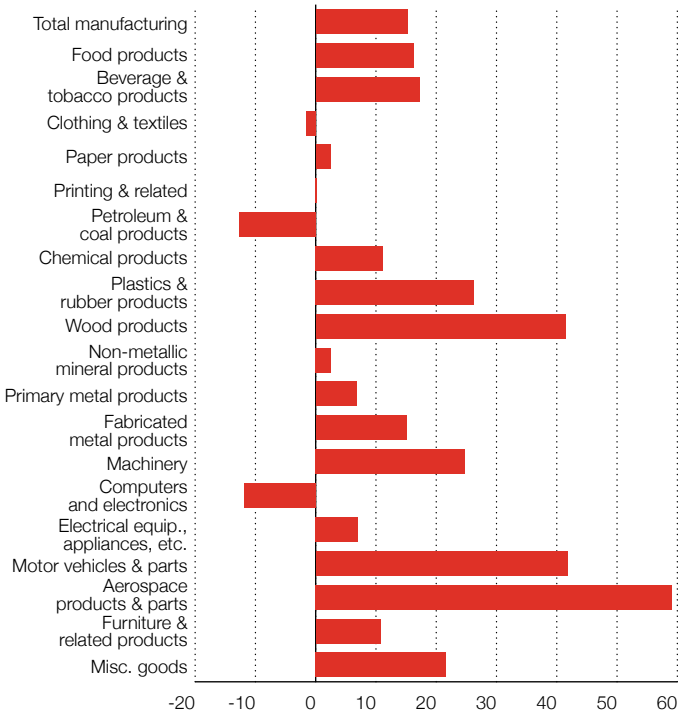


INDUSTRY GROWTH TRENDS

Although there has been a long-term decline in auto production over the last 15 years, that industry has also been a major growth driver in the past few years. Since 2010, motor vehicles and parts production is nearly 42 per cent higher, thanks in part to a surge in output last year. Although a much smaller industry, growth in aerospace production has been even greater, coming in at over 59 per cent over the last 5 years. There has also been a recovery in the wood products sector where, after a steady decline through most of the 2000s, sales have risen by more than 41 per cent.

Indeed, only a small number of industries have seen sales fall over the last five years. For reasons already described above, petroleum and coal refining is down 12.7 per cent compared to 2010, while computers and electronics production is 11.9 per cent lower.

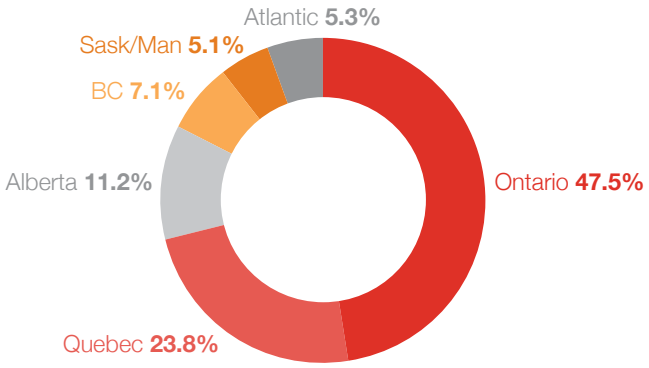
GROWTH IN MANUFACTURING OUTPUT – 2010-2015
(in %)



Manufacturing by Province

For more than a century, Canada's manufacturing strength has been concentrated in the central provinces. While manufacturing in the western provinces has slowly been on the rise, Ontario and Quebec remain far and away Canada's largest manufacturing provinces. At just under $290 billion in sales in 2015, Ontario alone accounts for close to half of all manufacturing output nation-wide. Another 24 per cent of sales ($145 billion in 2015) are generated in Quebec.

DISTRIBUTION OF MANUFACTURING ACTIVITY ACROSS CANADA – 2015

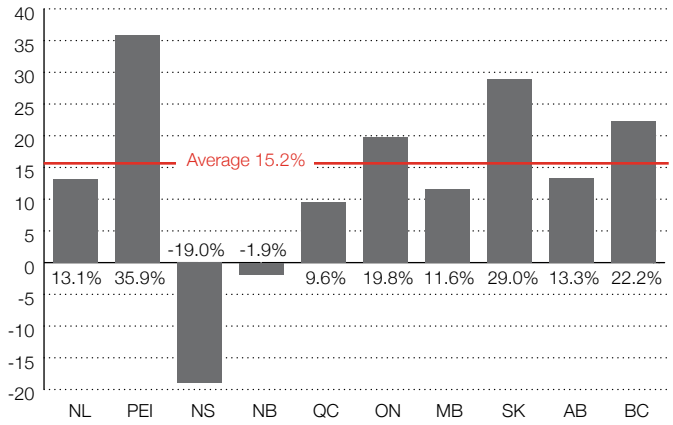


Alberta and BC are Canada's next largest manufacturing provinces, accounting for 11.2 per cent and 7.1 per cent of national output, respectively. About 5.3 per cent of Canadian manufacturing takes place in the Atlantic Provinces, while Manitoba and Saskatchewan together make up 5.1 per cent of the total.

PROVINCIAL GROWTH TRENDS

Over the last five years, manufacturing has expanded all across Canada with eight of the ten provinces registering positive output growth. Leading the way was PEI, where, on the strength of fabricated metals, machinery and aerospace production, manufacturing sales expanded by 35.9 per cent – far and away the fastest growth of any province.

GROWTH IN MANUFACTURING SALES – 2010-2015
(in %)



Notwithstanding recent declines in energy-related manufacturing, the three westernmost provinces have also seen manufacturing production expand rapidly since 2010. In Saskatchewan, expanding food and potash production contributed to a 29.0 per cent increase in manufacturing sales. BC's 22.2 per cent increase was led by expanding wood products sales, but spread across a wide range of industries. For its part, Alberta had been Canada's fastest-growing manufacturing province until 2014, when the crash in oil prices impacted manufacturers both upstream and downstream of the extraction process. Sales are still up 13.3 per cent over the last five years, even after the 13.8 per cent decline last year.

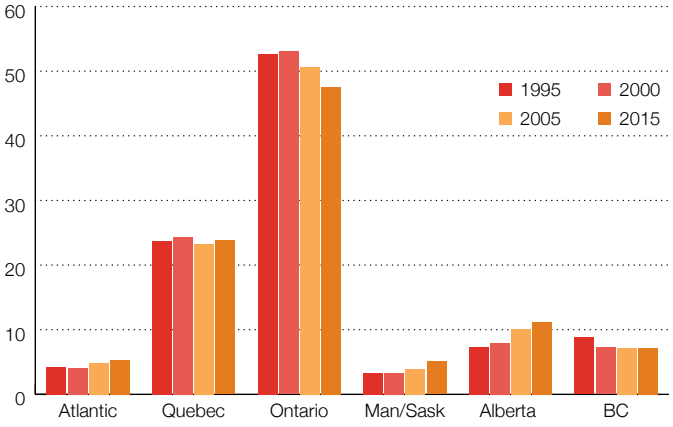
Ontario has also seen steady growth in manufacturing output over the last five years, with sales up 19.8 per cent. Those figures are buoyed by a recent surge in automobile and parts production. In Quebec, growth was significantly lower, coming in at 9.6 per cent. In that province, the impact of surging aerospace activity was dampened by sluggishness in the production of chemicals, computers and electronics, and electrical equipment and related components.

Only two of the ten provinces saw overall sales values fall since 2010 and both were directly related to crude oil. In Nova Scotia, manufacturing output fell by just under 19 per cent from 2010 to 2015, primarily due to the closure of the Dartmouth oil refinery in 2013. In New Brunswick, output fell by 1.8 per cent, largely because of the impact of lower crude oil prices on output values at the Saint John refinery.

LONGER-TERM TRENDS

Although provinces where manufacturing is linked to energy production all suffered sharp declines in sales last year, the recent trend has been towards a gradual diversification of Canada's manufacturing base away from this traditional Ontario-Quebec hub. Fifteen years ago, Ontario and Quebec accounted for 77 per cent of all manufacturing sales in Canada. By 2015, this share had fallen to 71 per cent.

DISTRIBUTION OF MANUFACTURING ACTIVITY ACROSS CANADA
(Share of total output, in %)



Most of the decline in central Canada was in Ontario. In 2000, that province accounted for 53.0 per cent of all manufacturing activity across the country. By 2015, its share had fallen to 47.5 per cent. Meanwhile, the Prairie Provinces along with PEI and Newfoundland and Labrador, have seen their share of national manufacturing output rise. Although Western Canada is now as important to Canadian manufacturing as Quebec, it remains to be seen if that will continue to be the case in the years ahead.

Trade in Manufactured Goods

Overview – Total Exports

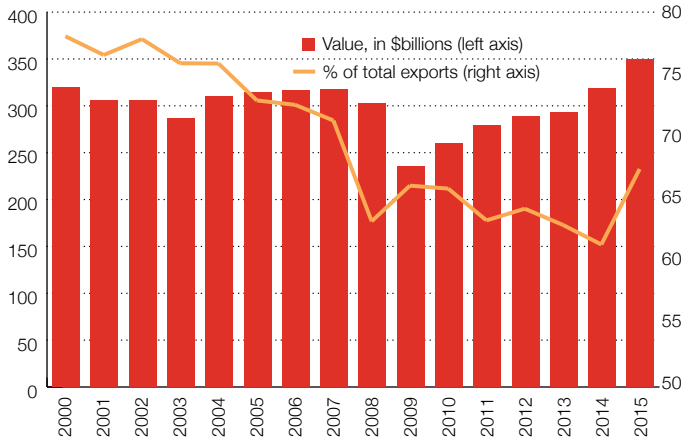
On a global scale, Canada is a relatively small market. Many domestic businesses therefore rely on international sales to boost local production. Last year, Canadian exports were valued at $524.1 billion – down slightly from the previous year's record of $525.0 billion. Exports account for about 28 per cent of all economic activity in Canada.

The decline in exports in 2015 was entirely because of the impact of energy prices. Crude oil and refined petroleum are Canada's largest and fourth-largest exports, respectively. While volumes were largely unaffected, the value of those exports fell in line with global oil prices. Crude oil exports were down 34.2 per cent compared to 2014, while refined petroleum exports were nearly 13 per cent lower. When those products – along with natural gas – are removed, Canada's remaining exports rose by 10.6 per cent last year.

Manufactured Goods Trade

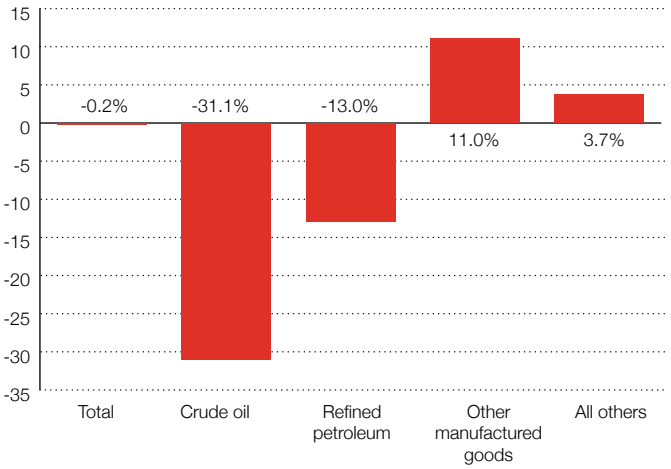
Much of that increase is directly because of strong growth in exports of manufactured goods. Manufacturers account for a full two thirds of Canada's total exports and their total international sales last year reached $349 billion, equivalent to about 57 per cent of all manufacturing output across Canada last year. That total represents the second consecutive record year for manufacturing exports in Canada.

CANADIAN MANUFACTURED GOODS EXPORTS



Although the impact was not immediate when it first began to fall, part of the reason for the recent strength in exports is the lower Canadian dollar. The value of the loonie (especially relative to the US dollar) is closely tied to movements in global crude oil prices. When the dollar began to fall, there was little immediate impact on manufacturing exports as businesses needed time to adjust to exchange rate volatility and their existing currency hedges. As 2015 wore on, however, exports accelerated and by year-end, had risen by 9.8 per cent over 2014 levels. Not including the snap-back effect from the 2009 recession, that represents the fastest growth in manufactured goods exports in fifteen years.

EXPORT GROWTH BY PRODUCT TYPE – 2015

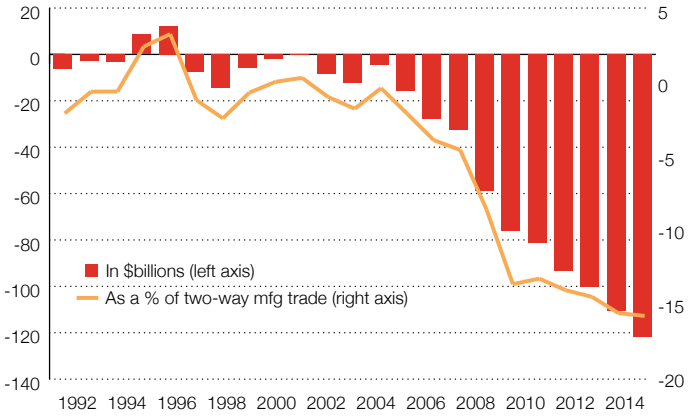


It is also worth noting that 9.8 per cent growth rate includes exports of refined petroleum which, as noted above, fell by nearly 13 per cent last year. Exports of manufactured goods other than refined petroleum were actually 11.0 per cent higher last year.

While exports are higher, imports of manufactured goods into Canada have increased much more quickly. As a result, Canada has developed a large and growing manufacturing trade deficit over the years. Throughout the 1990s and into the early 2000s, the trade balance ranged from a small surplus in some years to a deficit which ran as high as $14.5 billion (in 1998). Even at that total, the imbalance was modest; the trade deficit was only equivalent to about 2.8 per cent of two-way trade in manufactured goods.

Things began to change around 2004. That year, the trade deficit in manufacturing hit $15.9 billion and began to balloon steadily. Last year, even though manufacturing export rose to record levels, the trade deficit hit an all-time high as well: $122 billion. The trade imbalance is now equivalent to nearly 15 per cent of two-way manufacturing trade.

CANADA'S BALLOONING TRADE DEFICIT IN MANUFACTURING



Looking at Canada's major trading partners for manufactured goods, there were two key trends at play that contributed to this growing imbalance. The first of these is manufacturing trade between Canada and the US. From the mid-1990s through to the mid-2000s, Canada's manufacturing trade surplus with the US rose dramatically – from just under $23 billion in 1994 to nearly $75 billion by 2004. In the years that followed, however, the trade surplus began to fall steadily, reaching $15 billion by 2014, before spiking back up to $34 billion last year.

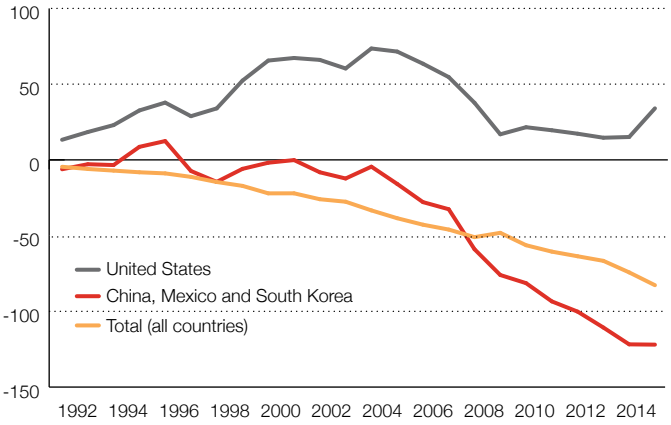
Meanwhile, Canada's trade deficit with certain other countries - notably Mexico, China and South Korea was exploding. In the late 1990s and early 2000s, this impact was hidden by the rising manufacturing trade surplus with the United States. But when that surplus began to decline, it also exposed the trade deficit with those other countries.

Looking at specific products, the growing manufacturing trade deficit was largely driven by a declining trade balance in the auto sector. In 2004, Canada had a trade surplus in autos and parts of about $6.5 billion. Last year, Canada recorded a trade deficit for those goods valued at $18.4 billion. There were also notable declines in the terms of trade for machinery, electrical equipment, computers and electronics, and clothing and textiles.

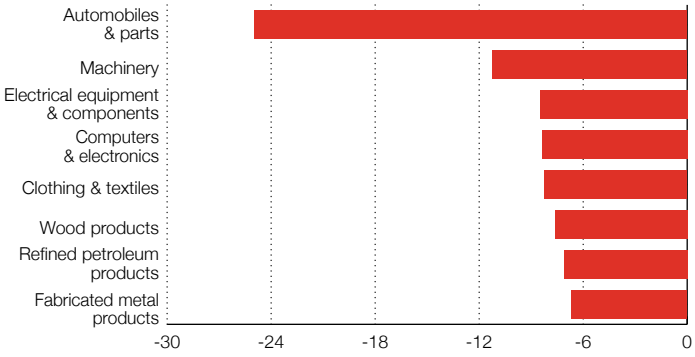
There are many reasons for why this has happened. The rise of low-cost production in China and elsewhere in Asia, the loss of manufacturing capacity and production mandates here at home, globalization and specialization (exports of energy and agriculture have soared over that time) are all contributing factors.

However, a trade deficit of this magnitude and expanding this rapidly is not a healthy sign for the long-term future of manufacturing in Canada. It speaks to several important problems, including: a lack of competitiveness; market access limitations; the need for improved export-readiness programs in Canada; unfair trading practices; and a failure on the part of businesses and government to promote or explore local supply chain opportunities rather than simply import goods based on sticker price.

MANUFACTURING TRADE BALANCE BY SELECTED COUNTRY
($billions)



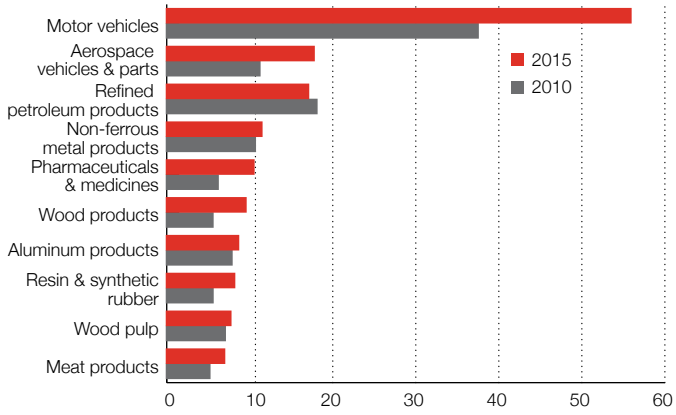
DECREASE IN BALANCE OF TRADE BY INDUSTRY – 2004-2015
($billions)



MAJOR EXPORT PRODUCTS

Motor vehicles and parts are by far Canada's most important manufactured goods exports. Vehicles alone accounted for close to 17 per cent of the total in 2015, while parts added another per cent. Moreover, exports of those products have risen dramatically in recent years, with total growth of nearly 50 per cent since 2010. By comparison, exports of all other manufactured goods are up 31 per cent over that same period.

TOP MANUFACTURED GOODS EXPORTS
($billions)



Aerospace vehicles and parts were Canada's second most important manufactured goods exports. Refined petroleum products were in third position, even though exports were down 16 per cent last year because of the impact of lower crude oil prices.

MAJOR EXPORT DESTINATIONS

Most Canadian manufacturers that sell into foreign markets export to the United States. Over 80 per cent of manufactured goods exports went to that country in 2015. However, that share has actually come down over the last 15 years; in the early 2000s, the US accounted for as much as 88 per cent of the total.

A range of factors contributed to this decline. Notable among them were the rising Canadian dollar and the thickening of the Canada-US border post-9/11. From 87.6 per cent in 2000, the share of manufacturing exports fell to 76.8 per cent by 2011 before recovering slightly to 80.1 per cent.

Although still small compared to the US, China has emerged as an important trading partner for Canadian manufacturers. In the late 1990s, China accounted for only 0.5 per cent of Canada's total manufactured goods exports. Today, China is the country's second most important destination for those products, with record sales of $11.7 billion last year.

Top Export Destinations for Manufactured Goods

Country	2010		2015		Growth: 2010-2015
	$billions	% of total	$billions	% of total	
US	200.3	77.2	280.6	80.5	40.0
China	8.0	3.1	11.7	3.4	46.4
UK	5.7	2.2	5.6	1.6	-3.2
Mexico	3.9	1.5	5.4	1.5	39.2
Japan	4.5	1.7	5.0	1.4	10.3
Germany	2.5	1.0	2.8	0.8	9.3
Netherlands	2.6	1.0	2.5	0.7	-3.1
France	1.9	0.7	2.3	0.7	19.0
S. Korea	1.9	0.7	1.9	0.5	0.6
Norway	2.5	1.0	1.8	0.5	-28.4
All Others	25.7	9.9	29.0	8.3	13.0
Total	259.5	100.0	348.4	100.0	34.2

Contribution to the Canadian Economy

Manufacturing makes a significant contribution to the Canadian economy. Last year, manufacturers directly added $174 billion to national GDP, accounting for close to 11 per cent of all economic activity in the country.

However, that total represents only the direct impact of the output and profits generated by Canadian manufacturers. The total impact runs far deeper. To produce their goods, manufacturers need raw materials, intermediate inputs, machinery and equipment, and a wide range of business services. The demand for these inputs generates additional business and creates jobs all across the Canadian economy. This is known as the "indirect impact" of manufacturing. It includes the entire chain reaction of output up the production stream since each product purchased will, in turn, require the production of various other inputs along the way.

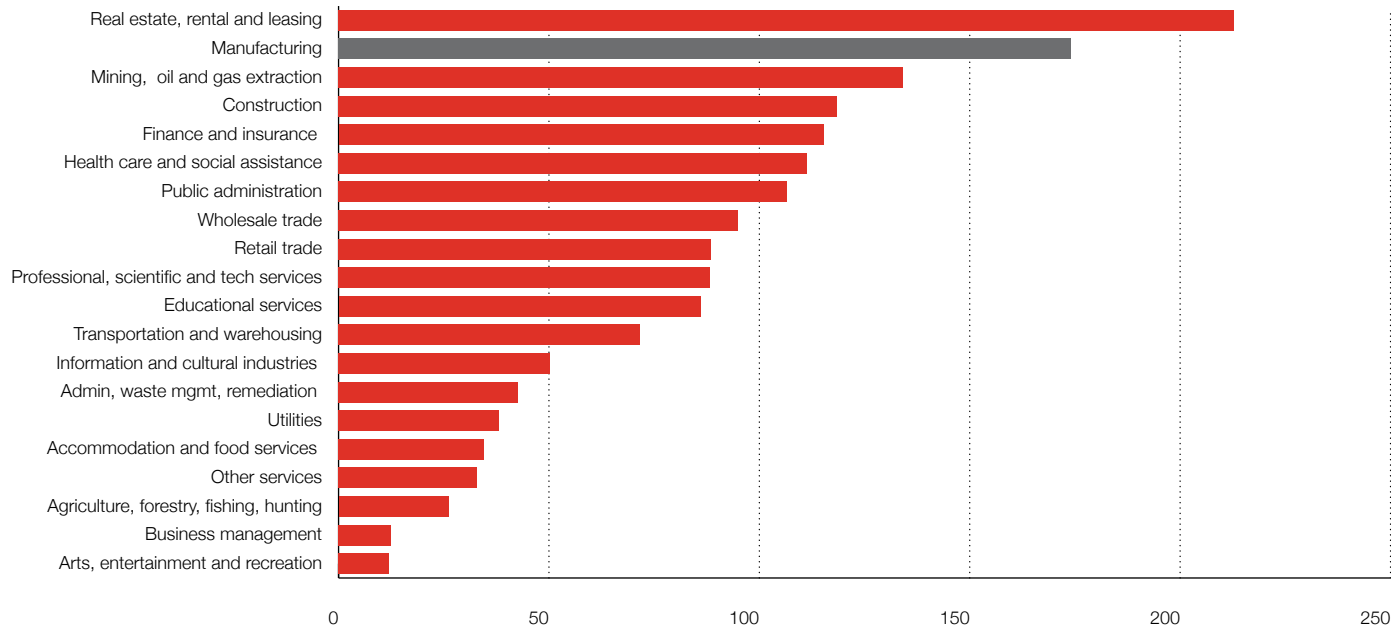
On top of that, the income earned by households in this process also generates economic benefits. Existing jobs in manufacturing, and the spinoff jobs they create elsewhere, fuel consumer spending across Canada. That spending creates demand for additional goods and services. These are known as the "induced impacts" of manufacturing.

Direct Impacts

COMPARISON TO OTHER INDUSTRIES

Manufacturing has a larger direct impact on Canadian GDP than almost any other industry. Of the 20 major industrial categories in the Canadian economy, the only one to generate more value-added was real estate, rental and leasing services, at $213 billion in 2015. Manufacturing makes a bigger direct economic contribution than oil and gas extraction, construction and finance.

GDP BY INDUSTRY
(in $billions)

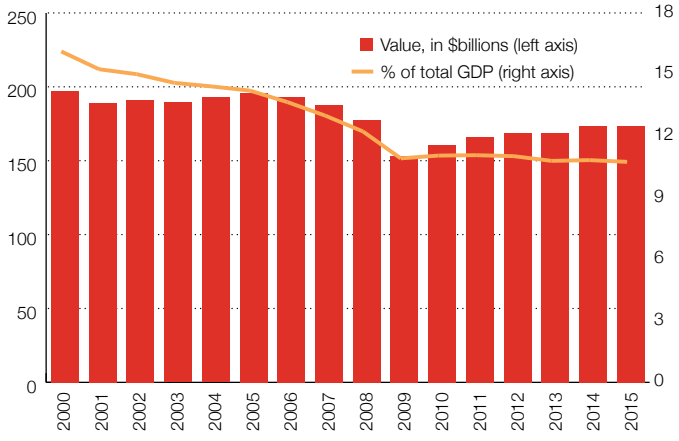


In addition, it is important to note that much of the value generated in real estate services is a direct function of inflated housing prices in Canada, not of new output or additional value being created. Rapid growth in the price of the average home – especially in markets like Toronto and Vancouver – has inflated the value of real estate services in the country. Higher prices mean higher commissions. As a result, GDP in real estate and leasing has risen by 33.7 per cent over the past 10 years – more than any other industry.

RECENT TRENDS

Although there is little that rivals the direct importance of manufacturing, it is declining as a share of the Canadian economy. Manufacturing GDP was steady through most of the 2000s, but fell dramatically in the wake of the global economic and financial crisis. By the end of 2009, manufacturing GDP was down 18.4 per cent compared to two years earlier. Since that time, it has been recovering, growing by 13.6 per cent from 2009 to 2015, but remains below its pre-recession levels.

MANUFACTURING GDP IN CANADA

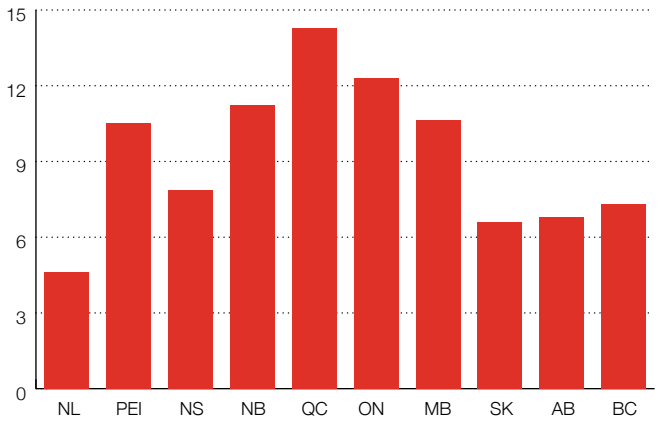


This recovery has not quite been enough to keep pace with growth in the overall economy. In the post-recession years, the Canadian economy has grown by an average of 2.4 per cent per year, while manufacturing GDP has risen by 2.1 per cent per year. As a result, manufacturing's overall contribution to the economy has continued to decline, albeit marginally. In 2000, manufacturing businesses generated close to 16 per cent of all economic activity across the country. By 2009, that share had fallen to 10.7 per cent and stands at 10.5 per cent today.

Importance by Province

Although Ontario has the largest manufacturing sector in Canada, it is in Quebec where manufacturing makes the biggest contribution to the provincial economy. In 2015, manufacturing directly accounted for 14.3 per cent of total GDP in Quebec. Ontario was next at 12.3 per cent. Manufacturing is relatively less important in Newfoundland and Labrador, Alberta and Saskatchewan, mostly because of the relative size of the oil and gas sector in those provinces.

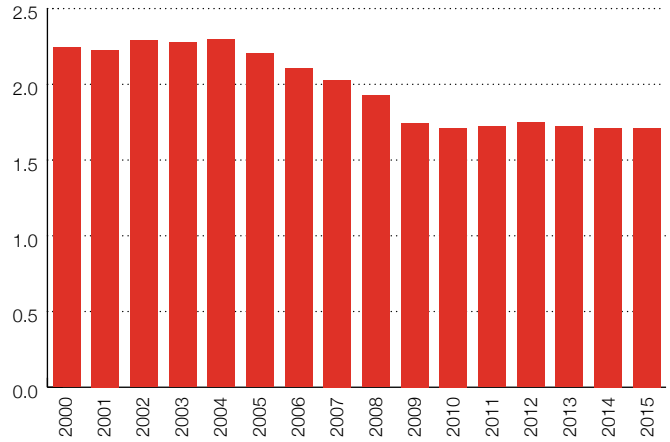
IMPORTANCE OF MANUFACTURING ACROSS CANADA
(% of GDP, 2015)



Manufacturing Employment

Manufacturers employed 1.7 million Canadians in 2015, about 10 per cent of total employment nation-wide. The number of manufacturing jobs in the country has remained essentially unchanged since 2009 as the industry continues to automate and the use of new technologies.

MANUFACTURING EMPLOYMENT
(Millions of jobs)



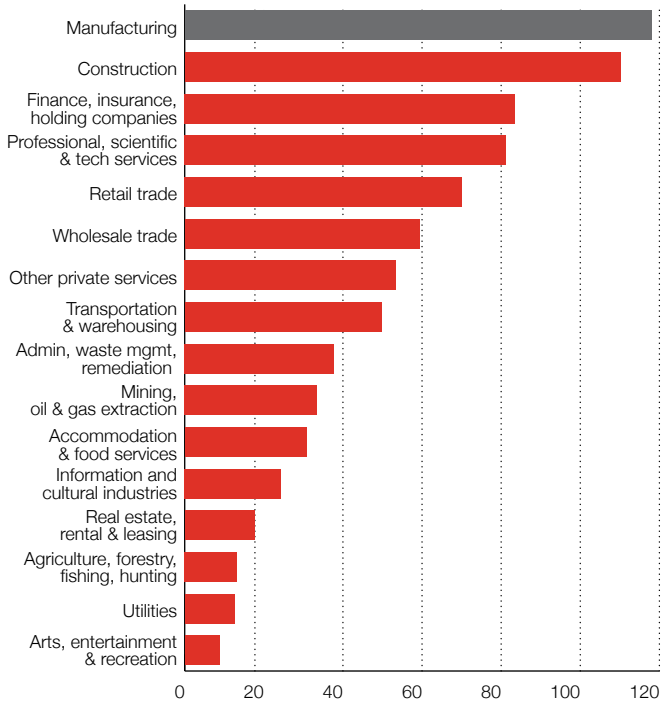
As manufacturing becomes less labour-intensive, the number of jobs in the sector will not grow as rapidly as will output and exports. This is not a major cause for concern, however; it simply reflects the changing nature of what it means to be a manufacturer. For one, as noted above, present-day manufacturing jobs are of much higher quality than in decades past. Moreover, the productivity gains implied in increasing output per worker are vital to making Canada a more attractive place in which to invest. That investment in new facilities is what will drive future manufacturing employment growth.

Wages and Salaries

Manufacturing jobs are a major source of income for Canadian households. In 2015, those jobs generated over $118 billion in wages and salaries across the country – more than any other private-sector industry by a comfortable margin. The next most important industry in terms of generating disposable income is construction, which paid just over $110 billion in direct compensation last year.

The $118 billion in manufacturing wages and salaries translated into an average annual salary of just under $73,000 per worker in 2015 – 24 per cent above the national average. These relatively high wages are also critical to supporting governments across the country. Since tax rates rise with income, the relatively high wages paid by manufacturing businesses translate into greater per capita revenues for the federal and provincial governments compared to most other industries. In other words, every job created in manufacturing boosts governments' ability to provide social programs and other services to all Canadians.

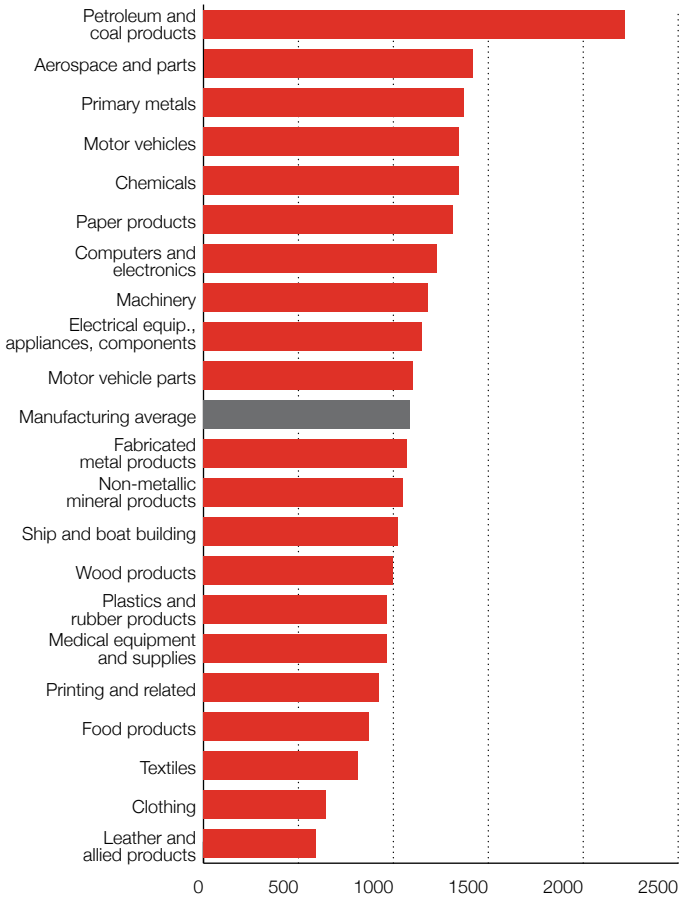
TOTAL COMPENSATION BY INDUSTRY – 2015
(in $billions)



Although wages are high for manufacturing as a whole, there is considerable variation within the sector itself. By far the highest-paying is petroleum and coal refining where average earnings are just under $2,219 per week through the first five months of 2016 so far through 2016, compared to $1,085 for manufacturing as a whole. Other relatively high-paying industries include petrochemicals and other chemical manufacturing, primary metals, aerospace and motor vehicles production. In general, manufacturing wages tend to be higher in capital-intensive and automated industries.

At the other end of the spectrum, the lowest manufacturing wages are in those industries which are relatively labour-intensive. These include clothing and textiles production, as well as some food processing industries like seafood, confectionery and meat product manufacturing.

AVERAGE WEEKLY EARNINGS IN MANUFACTURING
(January-May 2016, in $)



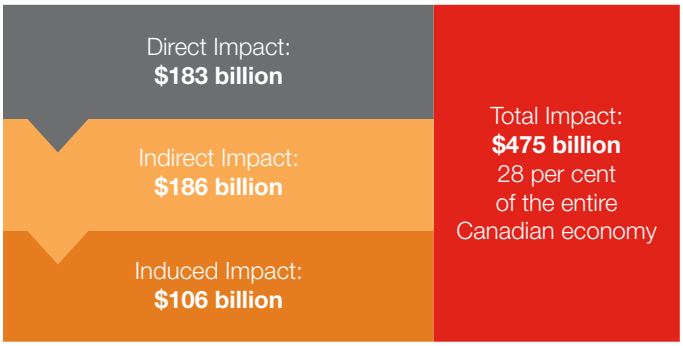
Economic Spinoffs from Manufacturing

The impact of manufacturing on the Canadian economy extends well beyond the direct production, employment and value-added contributions the sector makes. Every manufactured good produced in Canada creates demand for raw materials, semi-finished inputs, transportation and a host of other goods and services. That demand, in turn, sparks additional purchases all the way up the production stream.

Along the way, jobs are created, income is generated, and taxes are collected. The wages and salaries that Canadians earn from these direct and indirect effects are then spent on other goods and services, generating another round of induced effects. All these impacts can be measured using Statistics Canada's Input-Output model of the Canadian economy.

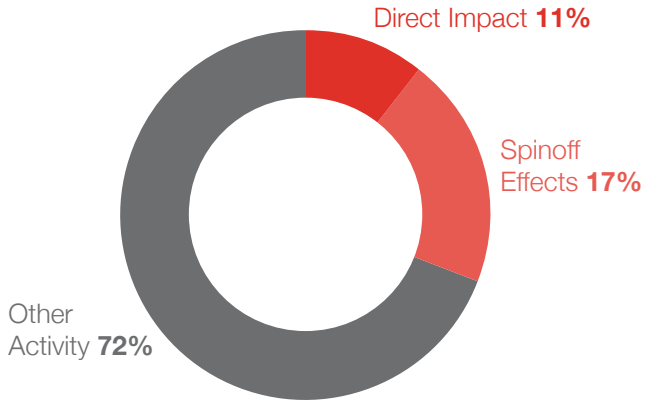
Overall Spinoff Impacts

The manufacturing sector is a major driver of economic activity in Canada. According to the Input-Output (I/O) model, manufacturing directly adds $183 billion to annual GDP.* As noted earlier, that represents about 10-11 per cent of total value-added production in Canada. However, that total captures only the direct impact. It does not account for the additional demand for goods and services that manufacturers generate. Nor does it reflect the impact of consumer spending from the jobs and income that are created by all this activity.



These indirect and induced spinoff effects create an additional $292 billion in value-added output in Canada. The total impact on GDP – $475 billion – is equivalent to 28 per cent of the entire size of the Canadian economy. In other words, nearly three of every 10 dollars in wealth created in Canada can be traced back to the manufacturing sector.

IMPACT OF MANUFACTURING ON THE CANADIAN ECONOMY
(Contribution to GDP)

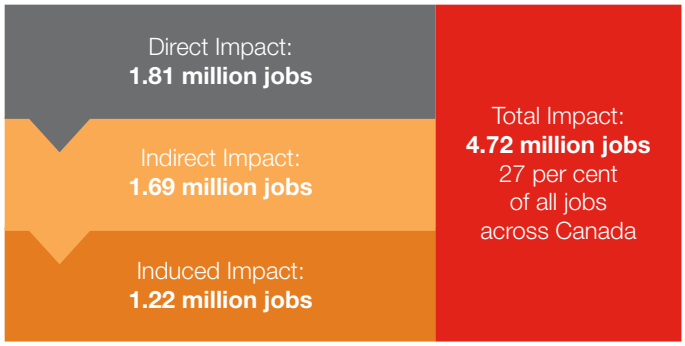


* This figure varies from the $174 billion figure cited earlier because of methodological differences and the fact that it does not account for inflation.

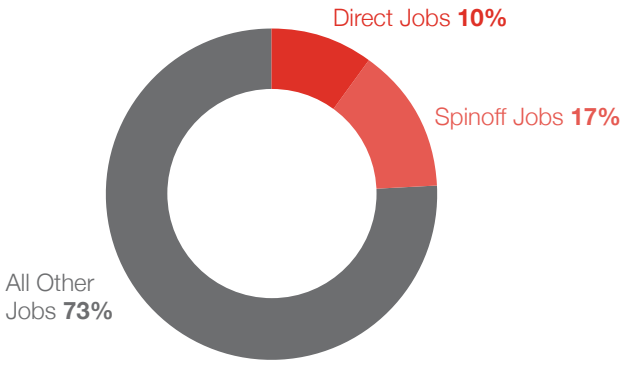
The impact on employment is nearly as significant. Manufacturing business directly employ about 1.81 million Canadians – about 10 per cent of the total employed labour force.* The spinoff effects create an additional 2.9 million jobs, bringing total employment attributable to manufacturing up to 4.7 million – about 27 per cent of all jobs across the country.

Some other summary impacts of manufacturing in Canada include the following:

- $285 billion in total labour income across Canada
- $46 billion in federal and provincial personal income taxes
- $42 billion in other federal, provincial and municipal taxes (not including corporate income tax)**
- Every dollar in manufacturing GDP creates $2.89 in total GDP across the Canadian economy.
- Every job in manufacturing supports a total of 2.78 jobs across Canada.
- Every million dollars of manufacturing output creates or sustains 7.6 jobs.



JOBS SUPPORTED BY MANUFACTURING IN CANADA
(% of total employment)



* Labour force data suggests that manufacturing employment totalled 1.7 million in 2015. This higher figure (1.81 million) is taken directly from the results of the input-output model which is based on2012 data and calculated using different methodology.

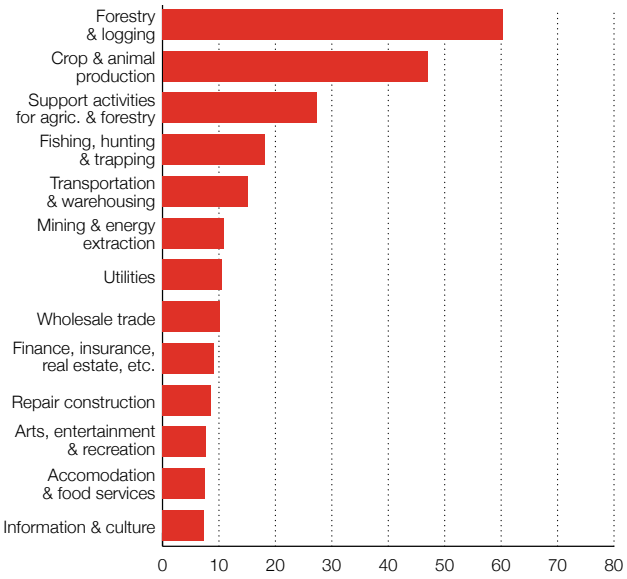
** Because of the complexity and variability in corporate tax levels from one year to the next, CIT impacts are not available for this exercise.

Impacts by Industry

Manufacturing production in Canada supports economic activity and jobs across a wide range of industries. From oil and gas extraction to insurance to real estate to non-profit arts and entertainment, the impact of manufacturing can be felt everywhere.

These impacts are especially pronounced for Canada's goods-producing industries. Forestry, agriculture, fishing, and mining and energy – these industries rely on Canadian manufacturers to buy their goods as inputs and raw materials in their production processes. The relationship between resource-producers and manufacturers in Canada is tremendously close. Nowhere is this truer than in forestry and logging, where a full 60 per cent of resource production feeds directly into Canadian manufacturing. Without those manufacturers to turn logs into paper, lumber, furniture and other goods, Canada would either lose most of its forestry industry, or simply export raw logs out of the country.

HOW MUCH DO OTHER INDUSTRIES RELY ON MANUFACTURING?
(Share of industrial output linked to manufacturing in Canada, in %)



Other resource-producers depend heavily on Canadian manufacturing as well. Close to half of all crop and animal production in the country is used in domestic manufacturing. About 20 per cent of fishing, hunting and trapping output relies on manufacturing, and about 11 per cent of oil and gas production.

It is important to note that these figures only refer to the industrial inputs used in manufacturing activities (and in associated spinoff activities). A complete picture of the interconnection between manufacturing and resource production would also take into the demand flows that go in the opposite direction: resource-producers' need for manufactured goods in their own operations. From tractors and combines to pulp mills to fishing equipment to drill bits and pipelines, the linkages between Canadian manufacturing and our resource sector cannot be overstated. Unfortunately, tracking these impacts is a tremendously complicated exercise and is beyond the scope of this present analysis.

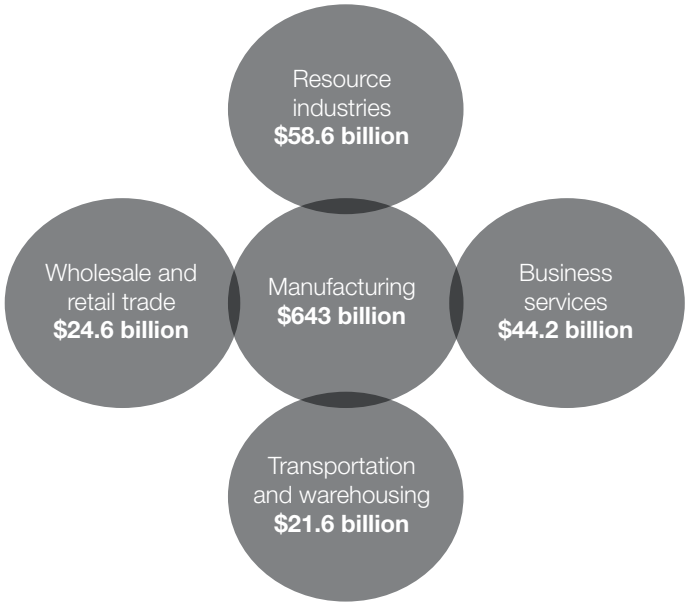
The linkages with the services sector are less direct, but still significant. In particular, over 15 per cent of all transportation and warehousing activity in Canada is the result of demand from manufacturers. The same is true of 10 per cent of all wholesale trade output. Finance, insurance and real estate companies get about the same share of their business from manufacturing. Even in the arts, entertainment and recreation sector, about 7.7 per cent of all output is through demand generated by manufacturing and its associated spinoff effects.

Without manufacturing, all that output and economic activity would be lost.

Turning to the actual spinoff impacts generated by manufacturing in Canada, the largest (in terms of the dollar-value of industrial output) are in crop and animal production, as well as mining and energy. In total, manufacturing generates $58.6 billion in output in Canada's resource-producing sectors. Manufacturing output generates $52 billion in additional output in oil and gas extraction, as well as another $19.3 billion in electrical power generation, transmission and distribution. There are also significant impacts on wholesale ($15.0 billion) and retail trade ($9.6 billion), transportation and warehousing services ($21.6 billion) and a wide range of financial, scientific and technical services.

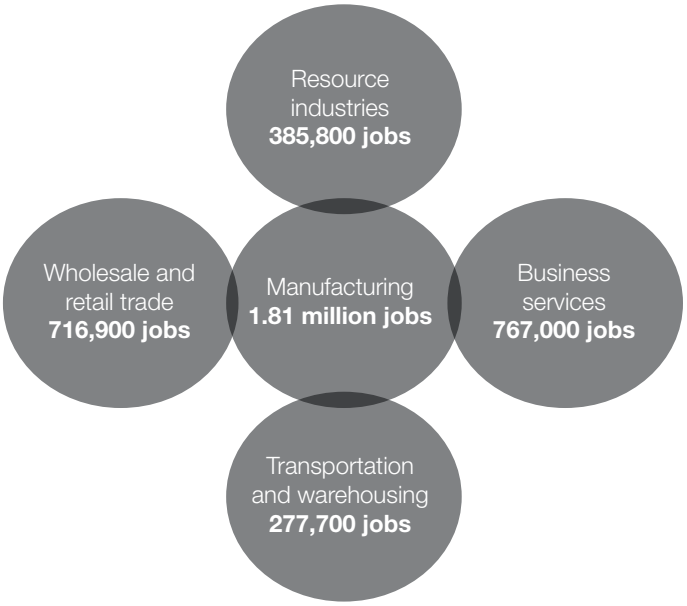
Compared to industrial output, the employment spinoffs from manufacturing in Canada are more heavily concentrated in a few key industries, mostly in the services sector. Leading the way are retail and wholesale trade, where nearly 717,000 jobs depend on manufacturing. In fact, those two industries account for a full quarter of all employment spinoff impacts. Resource sector production is also closely tied to manufacturing, with 386,000 jobs linked to the sector, as are a range of business and professional services.

MANUFACTURING IMPACT ON SECTOR OUTPUT



All other industries **$119.4 billion**
Total impacts **$268.4 billion**

MANUFACTURING IMPACT ON EMPLOYMENT

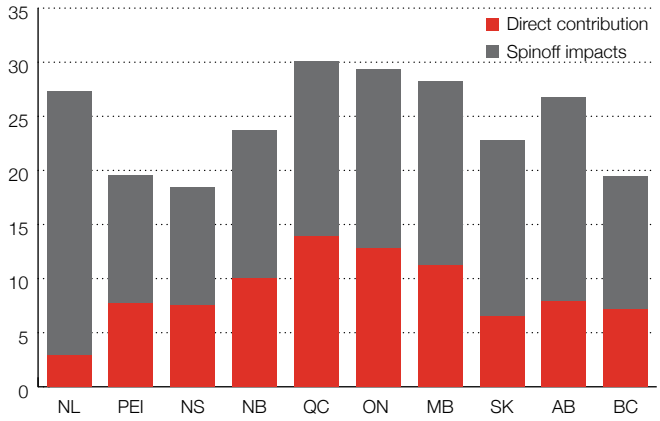


All other industries **765,000 jobs**
Total impacts **2,912,400 jobs**

Provincial Impacts

Manufacturing generates significant economic spinoff effects in every province. In terms of the dollar-value impact, Ontario is the largest beneficiary. Manufacturing spinoffs add $105 billion to the provincial economy on top of the estimated $81 billion in direct impacts. Perhaps surprisingly, the next largest dollar-value impact is in Alberta, where manufacturing adds $57.1 billion in indirect and induced effects.

MANUFACTURING CONTRIBUTION TO PROVINCIAL GDP
(in %)

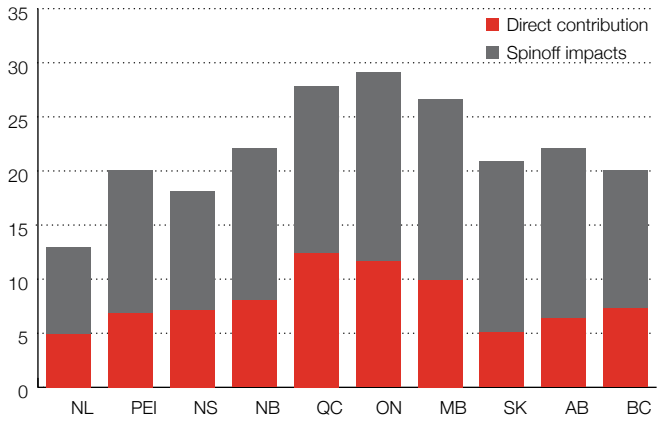


However, nowhere is manufacturing more important to the provincial economy than in Quebec. In that province, manufacturing directly accounts for about 14 per cent of GDP. However, when the indirect and induced impacts are considered, that share rises to 30 per cent. The story is similar in Ontario, where 29.4 per cent of the economy is tied to the manufacturing sector.

It is worth noting that the indirect and induced effects of manufacturing are strongest in provinces with a well-developed resource sector. While manufacturing makes a relatively small contribution to economic activity in Alberta, Saskatchewan and Newfoundland and Labrador, those provinces enjoy much larger spinoff benefits. This reinforces the fact that manufacturing and resource development in Canada are not at odds with one another, but are self-reinforcing, creating benefits across the country.

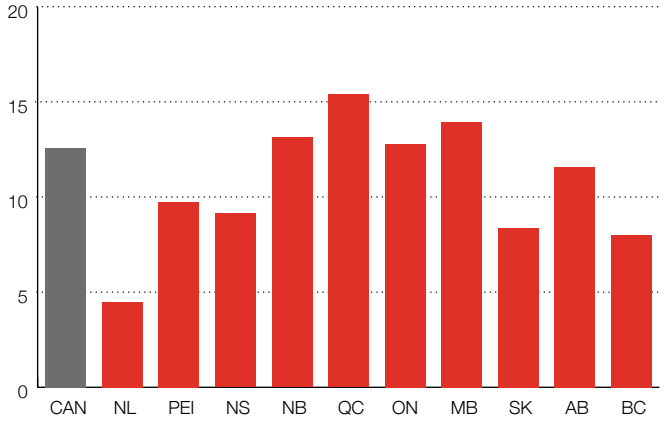
Similarly, Ontario captures the largest share of employment spinoff effects. Nearly 1.2 million jobs in the province are tied to manufacturing activity. Manufacturing also supports 615,800 jobs in other industries in Quebec – slightly less than in BC and Alberta combined.

MANUFACTURING CONTRIBUTION TO PROVINCIAL EMPLOYMENT
(in %)



In terms of the importance to provincial labour markets, Ontario relies the most on manufacturing spinoffs. About 11.6 per cent of jobs in the province are directly in manufacturing, but another 17.5 per cent of jobs exist because of the manufacturing sector. In Quebec, manufacturing businesses employ or maintain 27.8 per cent of all jobs in the province. In fact, Newfoundland and Nova Scotia are the only two provinces where manufacturing and associated spinoffs are responsible for less than 20 per cent of total provincial employment.

MANUFACTURING CONTRIBUTION TO GOVERNMENT OWN-SOURCE REVENUES
(Direct and spinoffs, in %)



These spinoffs also generate significant revenue for the federal and provincial governments – money that is used to finance education, health care, infrastructure and other spending priorities that improve our standard of living. Here, however, information is somewhat more limited. While data are available (or can be estimated) for a range of taxes, no information is available on the contribution to corporate income tax (CIT) revenue. This is largely because for any company, business taxes owed can vary significantly from one year to the next depending on profitability, available deductions and carried-over tax credits. These impacts cannot be properly modeled.

Even without including CIT revenues, manufacturing and its related spinoff impacts make an important contribution to fiscal sustainability in Canada. In Quebec, over 15 per cent of all provincial government own-source revenues come from these impacts. In New Brunswick, manufacturing and spinoff activities produce 13.1 per cent of own-source revenues. Even in Alberta, where resource royalties have been a major source of government income, manufacturing and spinoff activities account for 11.6 per cent of provincial government revenues. And as already stated, none of those figures include CIT revenues.

Conclusion

Manufacturing plays a vital role in the Canadian economy. It directly accounts for more than 10 per cent of total economic production and employs one of every ten Canadians. It accounts for two thirds of our exports and pays 11.3 per cent more than the average wage across Canada.

As impressive as these numbers are, they only tell part of the story. In fact, we run the risk of grossly underestimating the importance of manufacturing if we focus on the headline numbers. The fact of the matter is, manufacturing drives activity and creates jobs all across the Canadian economy.

Consider the services sector. Canada is widely viewed as a services-based economy; those industries account for about 71 per cent of total economic output nation-wide. However, services are built on a foundation of manufacturing. There is no services industry that does not rely on manufactured goods to function. Teachers need desks and paper and pens. Fire fighters need trucks, hoses and protective clothing. Baristas need roasted coffee, paper cups and espresso machines. Public servants need computers, office furniture and printers. Artists need paints, brushes and canvasses. The list goes on and on.

Similarly, these sectors rely directly on a healthy manufacturing sector as their core clients. Manufacturers and their employees purchase a wide range of services to run their businesses and their households, including finance, insurance, real estate, transportation to name but a few.

The same is true of Canada's resource industries. Manufacturers purchase raw materials from the resource sector, including bitumen to make fuel, trees to make pulp and paper, iron ore to make steel, or barley to make beer. In return, manufacturers create technologies that assist in the extraction and delivery of these raw materials.

Indeed, every business in Canada needs manufactured goods to operate. This makes a healthy and competitive manufacturing sector central to the effective functioning of the entire Canadian economy.

It is also what makes Industrie 2030 so important. If we can succeed at our goal of doubling manufacturing output and exports by 2030, the entire Canadian economy will be set on a path of growth and prosperity.

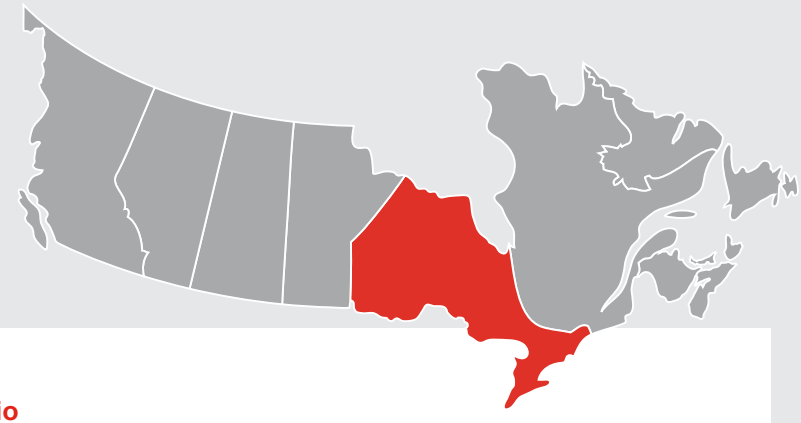
Industrie 2030

Appendix
Provincial Summaries

Canadian Manufacturers & Exporters
Manufacturiers et Exportateurs du Canada

CMC

Ontario



Economic Impact of Manufacturing in Ontario

Manufacturing directly accounts for 12.3 per cent of provincial GDP and makes up 81% of Ontario's total exports. Manufacturing employs 743,400 Ontarians, generating about $54.3 billion in wages and salaries.

The economic spinoffs from manufacturing in Canada add:

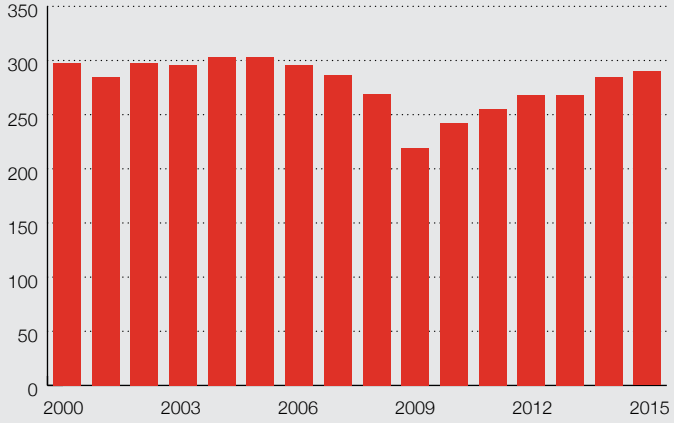
- An additional $105 billion in GDP to the provincial economy
- 1.2 million jobs in Ontario outside of manufacturing
- $18 billion in government revenues, not including income taxes
- An estimated $126 billion in total wages and salaries in Ontario
- $181 billion in additional output in other Ontario industries

Manufacturing Activity in Ontario

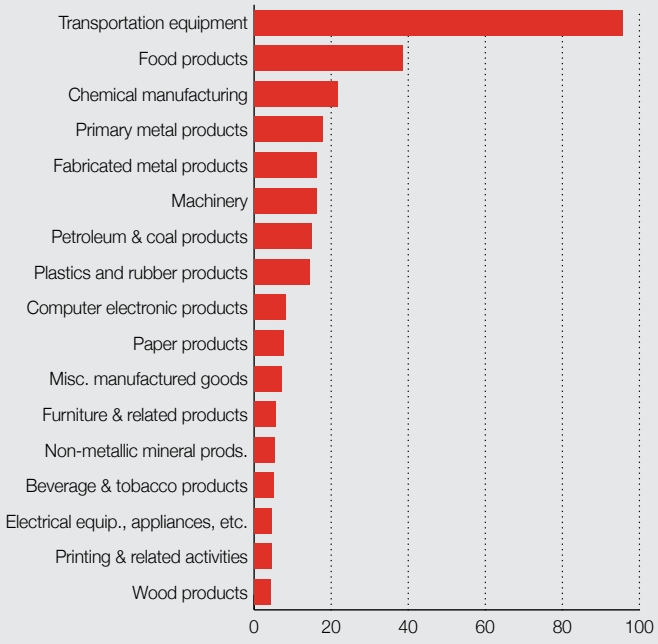
Ontario is by far Canada's most important manufacturing province. However, it has underperformed since the early 2000s and total sales remain below levels seen 15 years ago. While growth has been relatively strong in 2016, concerns linger about business costs in the province and the lack of significant new investments in major industries.

With the exception of the auto sector, manufacturing activity in Ontario is spread across a wide range of industries. Motor vehicles and parts production accounted for 30 per cent of total output in 2015. Food production is the next largest sector at 13.3% per cent.

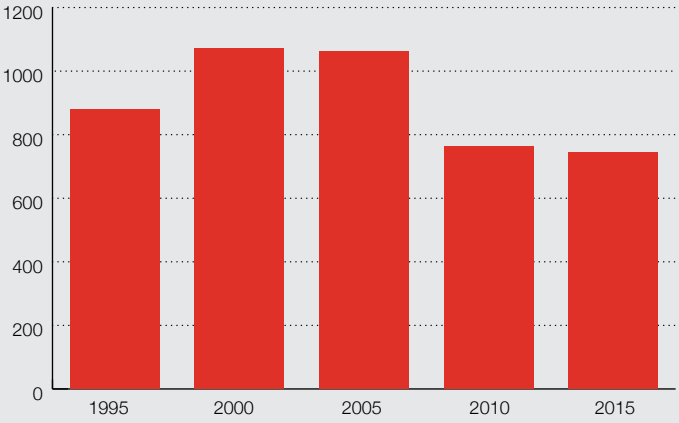
ONTARIO MANUFACTURING SALES
(in $billions)



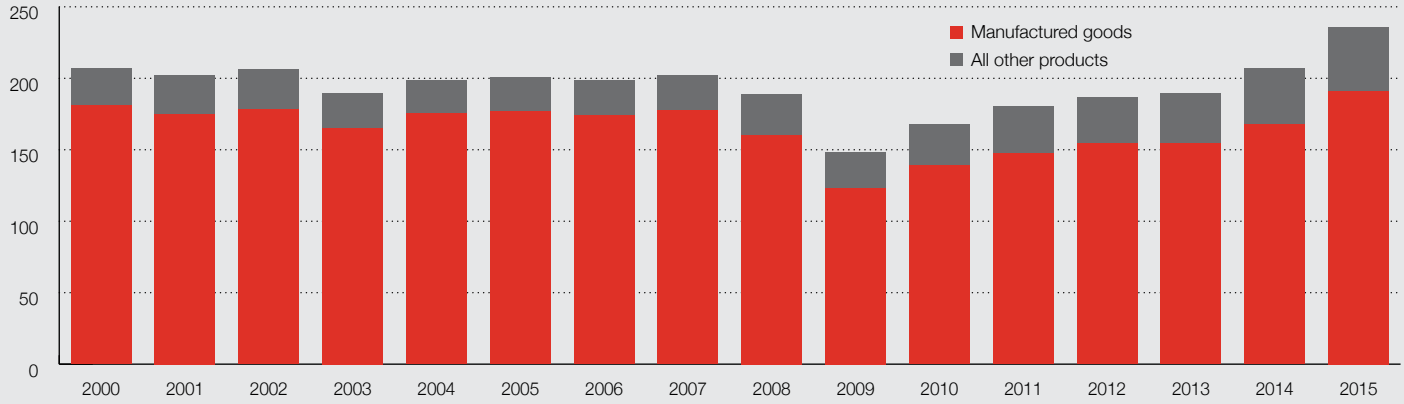
ONTARIO MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)



MANUFACTURING EMPLOYMENT IN ONTARIO
(000's of jobs)



ONTARIO EXPORTS
(in $billions)

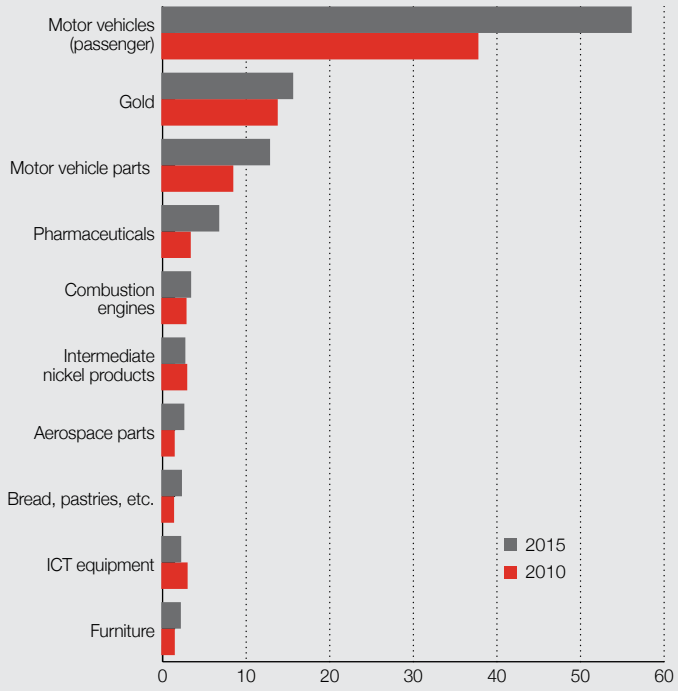


Export Activity in Ontario

Exports are vital to the Ontario economy and foreign markets are a critical destination for manufactured goods. Merchandise exports from Ontario totaled $235 billion in 2015, of which 81 per cent was manufactured goods. Exports have risen by more than 24 per cent in the past two years.

The United States is Ontario's largest trading partner, thanks in large part to a high degree of intra-firm trade and the cross-border integration of the auto sector. Motor vehicles and parts are by far Ontario's most important export product and have grown rapidly in recent years.

TOP 10 EXPORTS FROM ONTARIO
(In $billions)



Ontario's Top Ten Export Destinations

Country	Value ($billions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	134.2	194.2	79.8	82.5	44.7
United Kingdom	11.7	12.8	7.0	5.4	9.1
Mexico	2.3	3.0	1.4	1.3	26.7
Hong Kong	1.0	2.7	0.6	1.2	178.3
China	1.7	2.7	1.0	1.1	56.1
Germany	1.4	1.6	0.8	0.7	15.3
Japan	1.1	1.5	0.7	0.6	30.5
Norway	2.2	1.5	1.3	0.6	-33.6
France	0.8	1.0	0.5	0.4	23.0
Italy	0.4	1.0	0.3	0.4	135.2

Quebec

Economic Impact of Manufacturing in Quebec

Manufacturing directly accounts for 14.3 per cent of provincial GDP and makes up 89% of Quebec's total exports. Manufacturing employs 488,400 Quebecers, generating about $30.9 billion in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

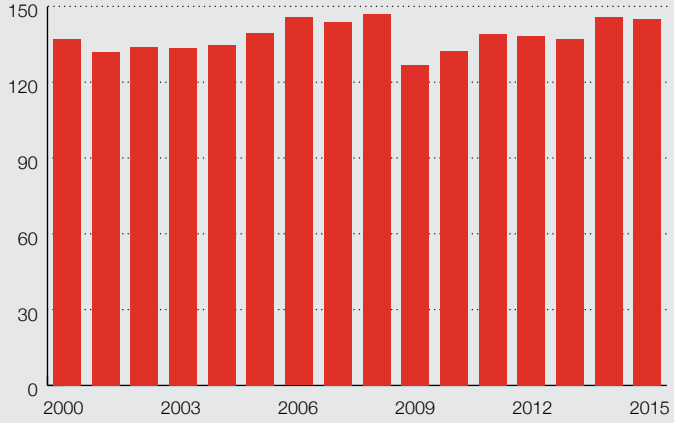
- An additional $52.8 billion in GDP to the provincial economy
- 616,000 jobs in Quebec outside of manufacturing
- $9.5 billion in government revenues, not including income taxes
- An estimated $62 billion in total wages and salaries in Quebec
- $88.6 billion in additional output in other Quebec industries

Manufacturing Activity in Quebec

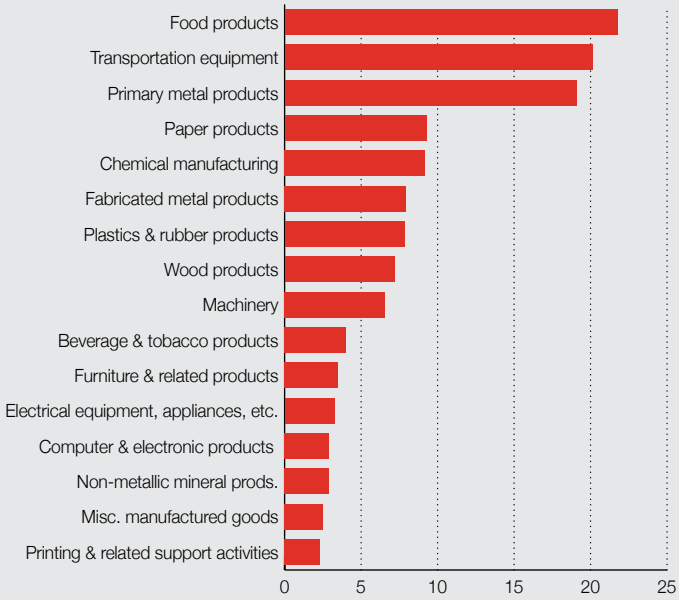
Manufacturing is more important to Quebec than any other province, directly accounting for 14.3 per cent of provincial GDP in 2015. Production has been somewhat uneven in recent years. In spite of strong growth in 2014, total sales remain below pre-recession levels.

Quebec is known for its aerospace production, but food processing is the province's most important manufacturing industry, accounting for 15 per cent of total output. Aerospace makes up 9.4 per cent of total production, while primary metals industries are also important to the province.

QUEBEC MANUFACTURING SALES
(in $billions)

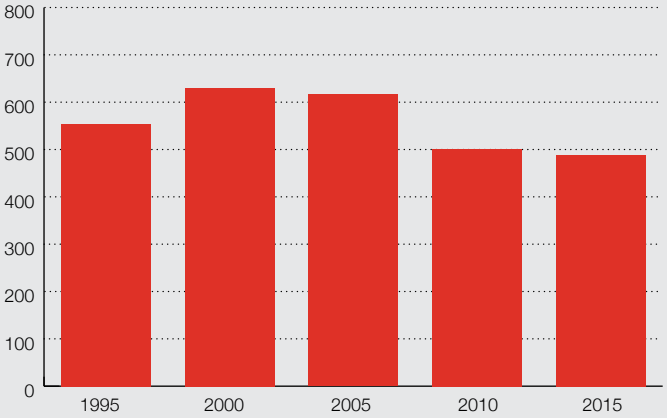


QUEBEC MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

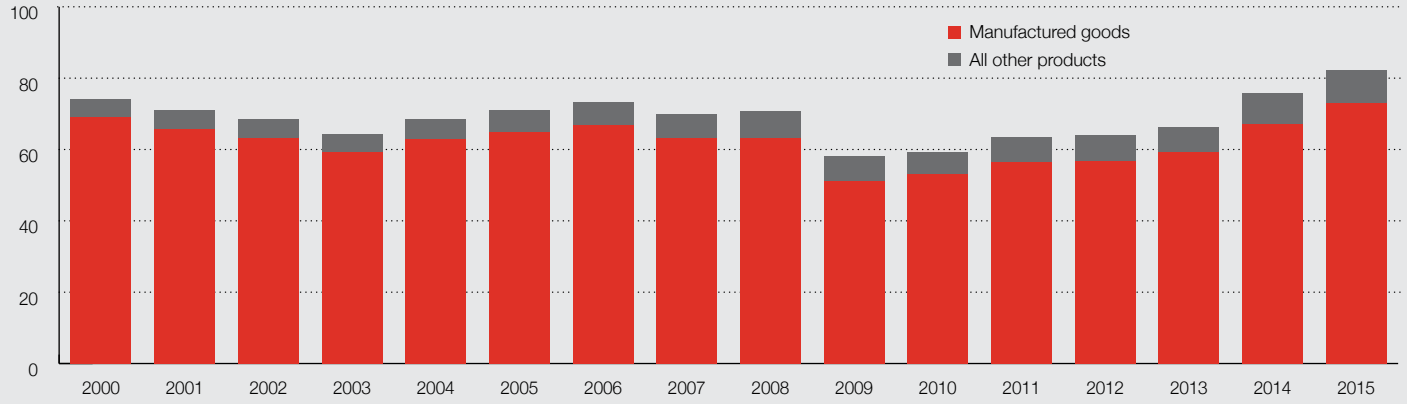


NOTE: Data not available for petroleum refining

MANUFACTURING EMPLOYMENT IN QUEBEC
(000's of jobs)



QUEBEC EXPORTS
(in $billions)

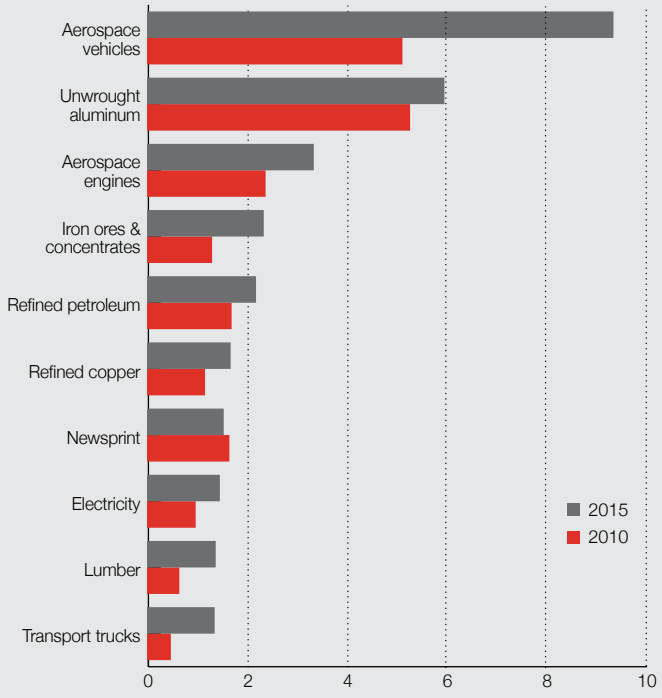


Export Activity in Quebec

Quebec has Canada's most export-oriented manufacturing sector. Manufactured goods make up 89 per cent of provincial exports – a higher share than any other province. Total exports from Quebec reached a record $82 billion in 2015 and have risen by over 24 per cent in the last two years.

The aerospace and parts industry is by far Quebec's largest exporter, and foreign sales have expanded considerably over the last five years. Aside from aerospace products, Quebec is a large exporter of metals and energy. Most of those goods are sold in the United States.

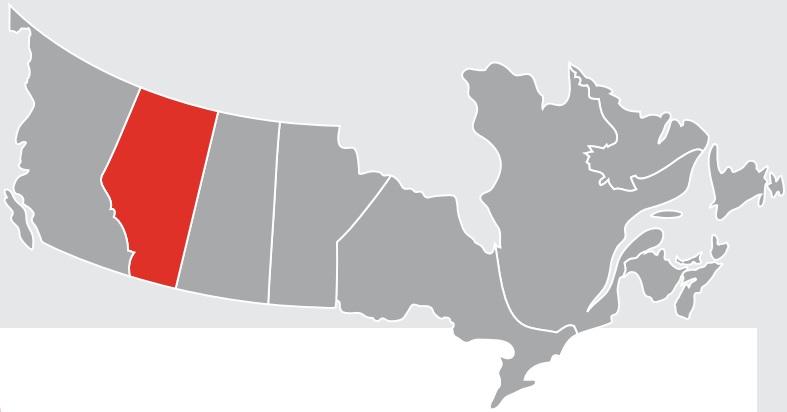
TOP 10 EXPORTS FROM QUEBEC
(In $billions)



Quebec's Top Ten Export Destinations

Country	Value ($billions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	40.2	59.4	67.9	72.4	47.8
China	1.7	2.7	2.8	3.3	59.2
France	1.1	1.5	1.9	1.9	36.5
United Kingdom	2.0	1.4	3.4	1.8	-28.5
Mexico	0.8	1.3	1.3	1.6	68.2
Germany	1.3	1.2	2.1	1.4	-7.5
Japan	0.8	1.1	1.4	1.4	39.3
Netherlands	1.0	1.0	1.7	1.3	1.1
Malta	0.1	0.9	0.2	1.2	865.4
India	0.4	0.7	0.7	0.8	52.4

Alberta



Economic Impact of Manufacturing in Alberta

Manufacturing directly accounts for 6.8 per cent of provincial GDP and makes up 28% of Alberta's total exports. Manufacturing employs 149,000 Albertans, generating about $11.3 billion in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

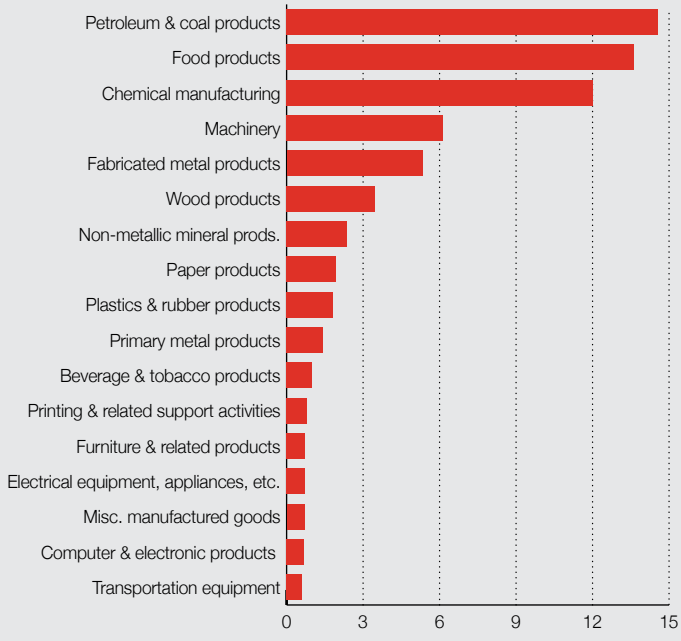
- An additional $57.1 billion in GDP to the provincial economy
- 342,000 jobs in Alberta outside of manufacturing
- $4.3 billion in government revenues, not including income taxes
- An estimated $37 billion in total wages and salaries in Alberta
- $96.7 billion in additional output in other Alberta industries

Manufacturing Activity in Alberta

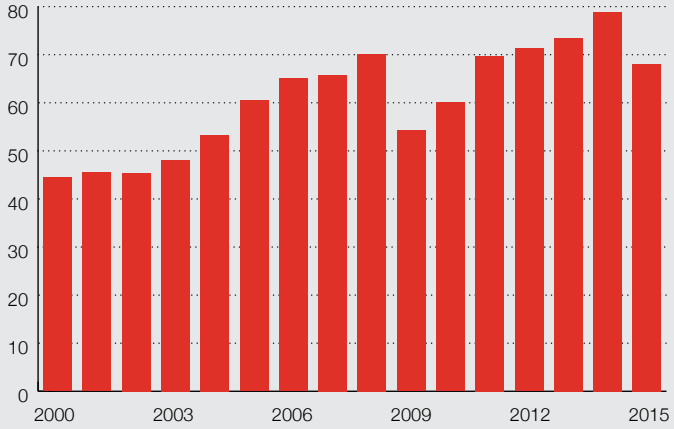
Alberta is Canada's third largest manufacturing province, generating $68 billion in sales in 2015. Manufacturing in Alberta is closely linked to the energy sector and, until late 2014, had enjoyed tremendous growth. That trend has reversed since the crash in oil prices. Labour costs remain a major challenge for Alberta manufacturers.

While the value of output has fallen significantly since 2014, petroleum refining is still Alberta's most important manufacturing industry. Petrochemicals, fabricated metals and machinery – all tied to energy – also have a large presence. Outside of energy, food processing dominates manufacturing in the province.

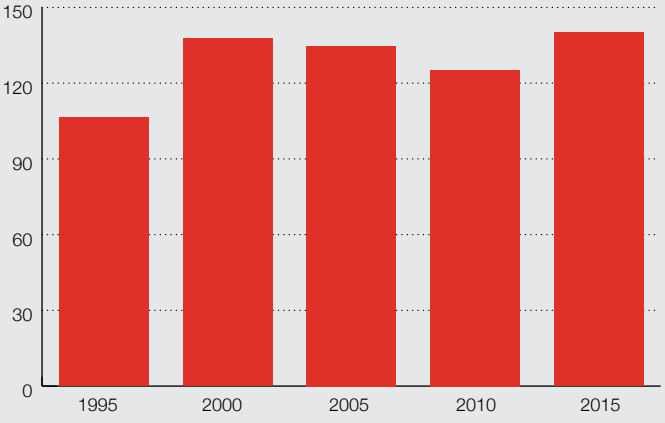
ALBERTA MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)



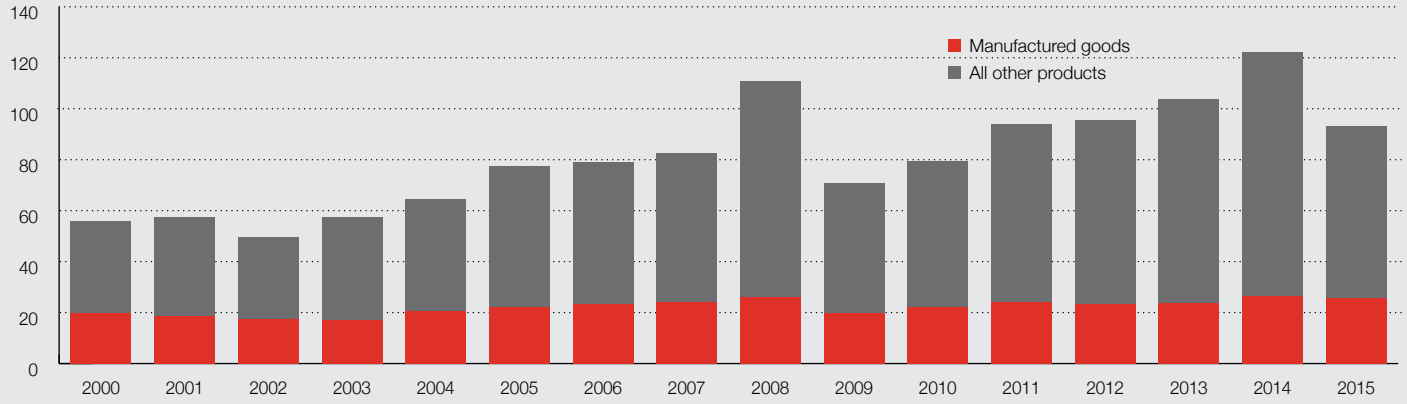
ALBERTA MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN ALBERTA
(000's of jobs)



ALBERTA EXPORTS
(in $billions)

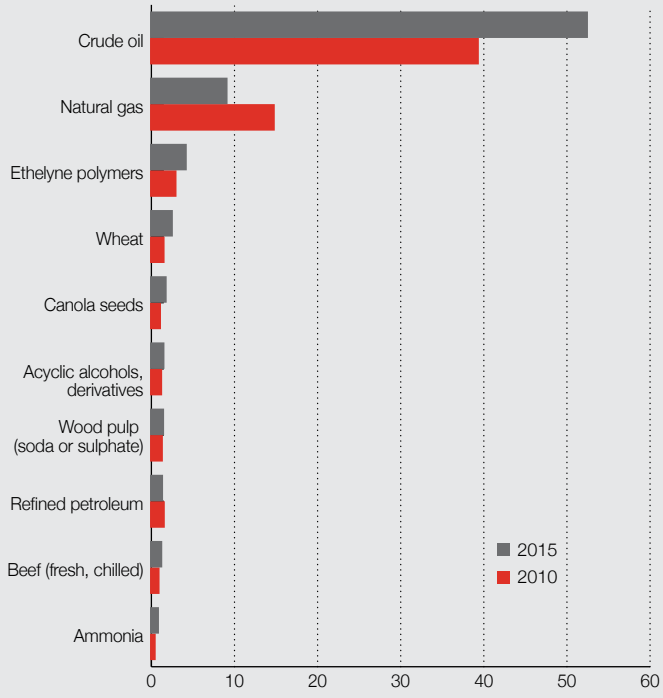


Export Activity in Alberta

Crude oil dominates Alberta's exports. As a result, the province is Canada's second largest exporter, selling $93 billion abroad last year. Unlike most other provinces, however, exports have fallen in the past two years because of the drop in oil prices. The lack of tidewater access means that nearly 100 per cent of Alberta's energy exports go to the United States. Only New Brunswick is more reliant on the US market.

Even aside from crude oil, most of Alberta's major export products are linked to natural resources, whether they be energy, petrochemicals, agriculture or forest products.

TOP 10 EXPORTS FROM ALBERTA
(In $billions)



Alberta's Top Ten Export Destinations

Country	Value ($billions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	68.3	80.5	86.1	86.6	18.0
China	2.9	3.4	3.7	3.6	15.9
Japan	1.5	1.6	1.9	1.7	9.3
Mexico	0.8	1.0	1.0	1.1	33.1
South Korea	0.6	0.5	0.7	0.6	-6.1
Netherlands	0.4	0.4	0.6	0.4	-10.0
South Korea	0.2	0.3	0.3	0.4	54.1
Indonesia	0.1	0.3	0.2	0.3	72.1
Australia	0.3	0.2	0.4	0.2	-20.9
United Kingdom	0.2	0.2	0.2	0.2	23.6

British Columbia

Economic Impact of Manufacturing in British Columbia

Manufacturing directly accounts for 7.3 per cent of provincial GDP and makes up 68% of BC's total exports.
Manufacturing employs 172,800 British Columbians, generating $10.8 billion in wages and salaries

The economic spinoffs from manufacturing across Canada add:

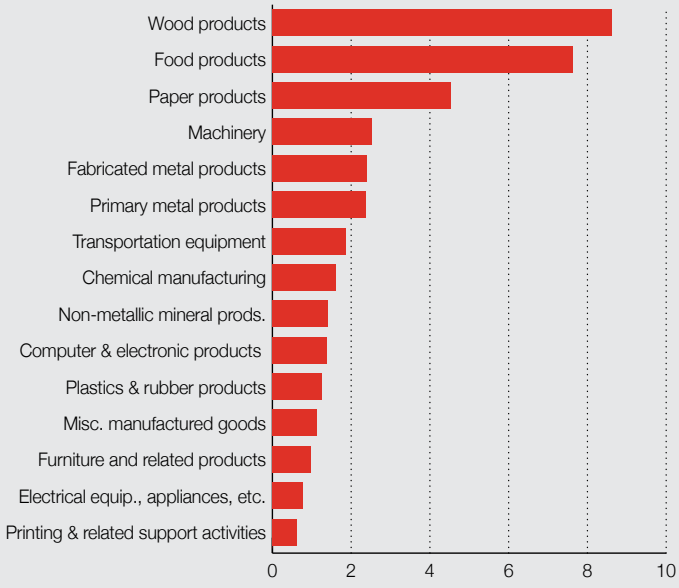
- An additional $25.1 billion in GDP to the provincial economy
- 290,000 jobs in BC outside of manufacturing
- $3.7 billion in government revenues, not including income taxes
- An estimated $25 billion in total wages and salaries in BC
- $44.2 billion in additional output in other BC industries

Manufacturing Activity in British Columbia

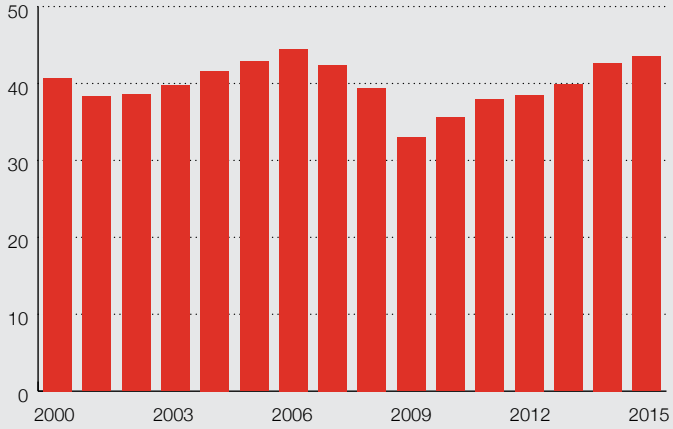
BC is Canada's fourth largest manufacturing province, generating $43.5 billion in sales in 2015. Although manufacturing sales have been rising steadily since the 2008-2009 recession, they have yet to surpass their 2006 peak of $44.5 billion.

Manufacturing in BC is closely tied to the province's strengths in natural resources. Food products and forest products dominate manufacturing output, accounting for nearly 48 per cent of total sales in 2015. Intense foreign competition and, until recently, a weak US housing market have dampened growth in output of wood products.

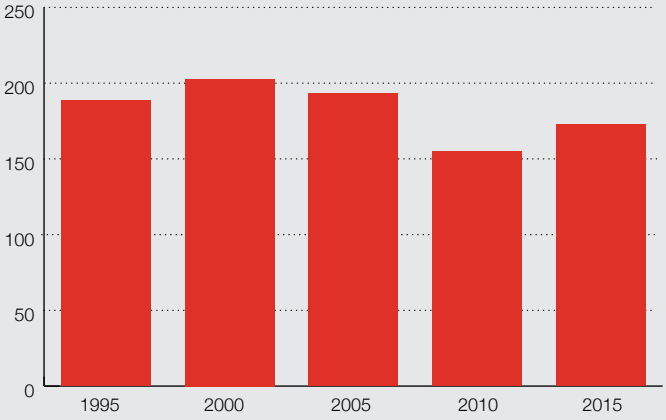
BC MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)



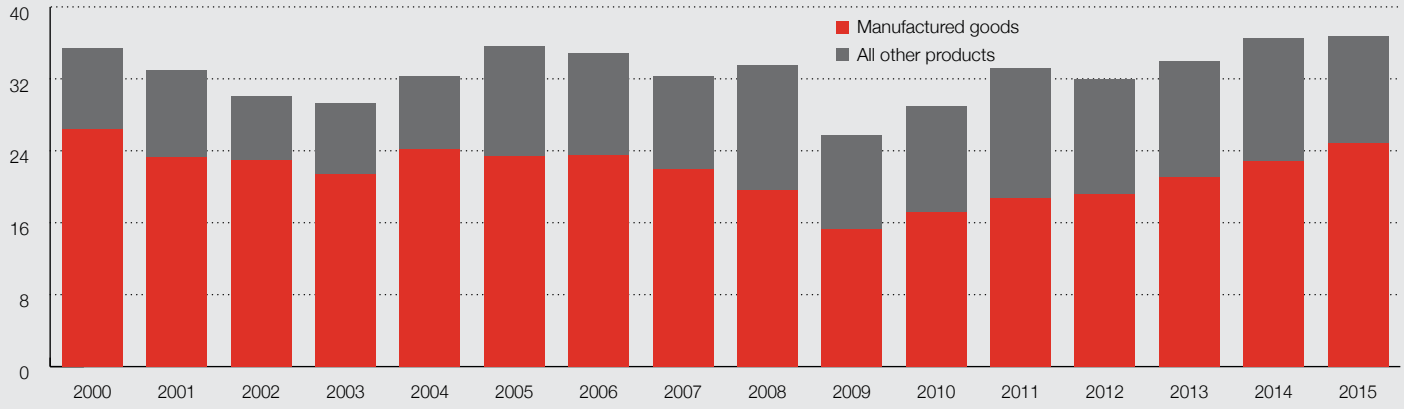
BC MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN BC
(000's of jobs)



BC EXPORTS
(in $billions)

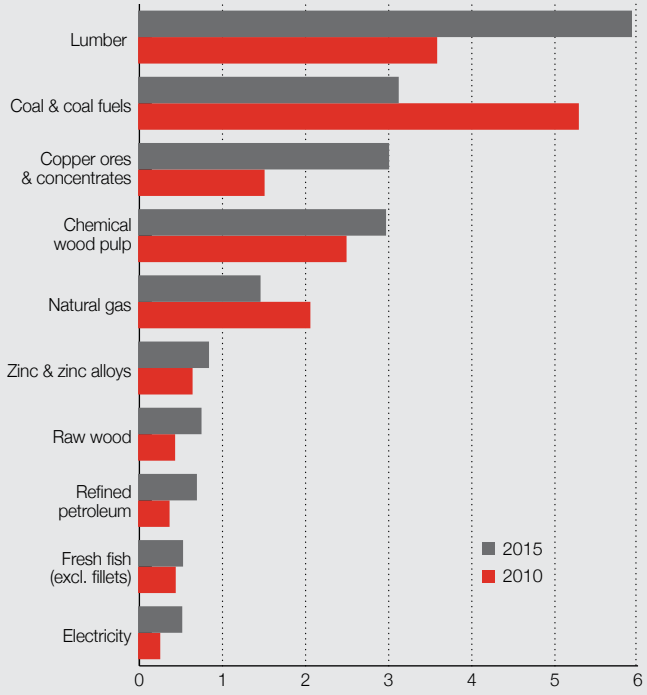


Export Activity in British Columbia

BC exported a record $24.8 billion in goods in 2015, over two thirds of which were manufactured goods. Provincial exports are very closely linked to the province's natural resource base, consisting largely of forest products, energy and metals.

BC is by far the least dependent of any province on the US market for its exports. Just over half of the province's exports went south of the border in 2015, while 37 per cent went to China, Japan, India and South Korea. BC exports more to China than any other province.

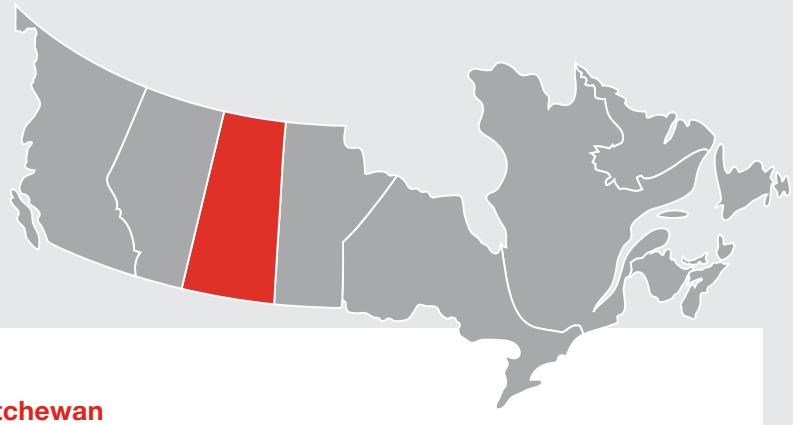
TOP 10 EXPORTS FROM BC
(In $billions)



British Columbia's Top Ten Export Destinations

Country	Value ($billions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	13.3	18.7	45.7	51.0	41.4
China	3.9	6.2	13.4	16.8	58.8
Japan	4.2	3.7	14.6	10.0	-13.4
South Korea	1.9	1.9	6.6	5.1	-1.3
India	0.1	0.6	0.5	1.7	339.3
Taiwan	0.5	0.6	1.7	1.6	15.4
South Korea	0.3	0.5	1.1	1.3	46.4
Australia	0.2	0.4	0.8	1.0	50.8
Netherlands	0.5	0.3	1.6	0.8	-33.7
Germany	0.4	0.3	1.3	0.8	-23. 0

Saskatchewan



Economic Impact of Manufacturing in Saskatchewan

Manufacturing directly accounts for 6.6 per cent of provincial GDP and makes up 18% of total exports.
Manufacturing employs 26,200 residents, generating $1.9 billion in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

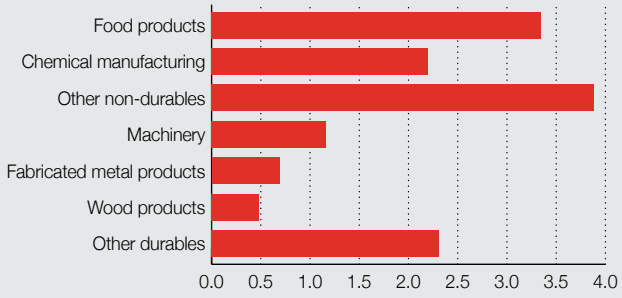
- An additional $12.0 billion in GDP to the provincial economy
- 86,900 jobs in Saskatchewan outside of manufacturing
- $1.3 billion in government revenues, not including income taxes
- An estimated $6.1 billion in total wages and salaries in Saskatchewan
- $21.6 billion in additional output in other Saskatchewan industries

Manufacturing Activity in Saskatchewan

Until 2014, Saskatchewan was home to Canada's fastest-growing manufacturing sector, buoyed by the surging value of refined petroleum and fertilizer output. From 2006 to 2014, manufacturing output rose by 61 per cent, compared to 2.2 per cent nationally. Last year, however, slumping oil and potash prices contributed to an 11.6 per cent decline in sales. Only Alberta suffered a sharper drop in sales last year.

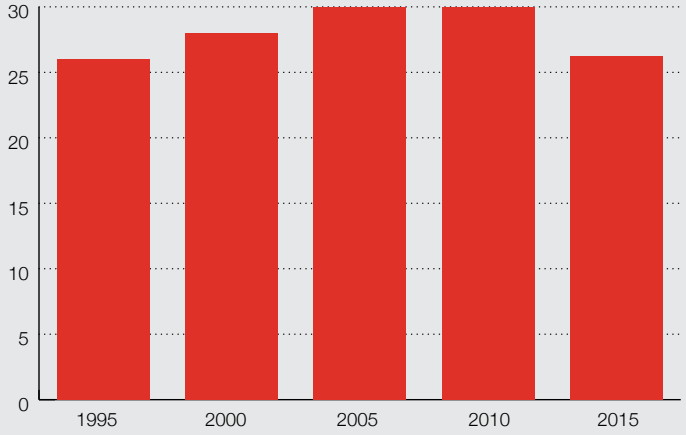
Data on industrial activity in Saskatchewan is somewhat limited. However, the province's largest manufacturing industries are clearly tied to its resource strengths in energy, potash and agriculture.

SASKATCHEWAN MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

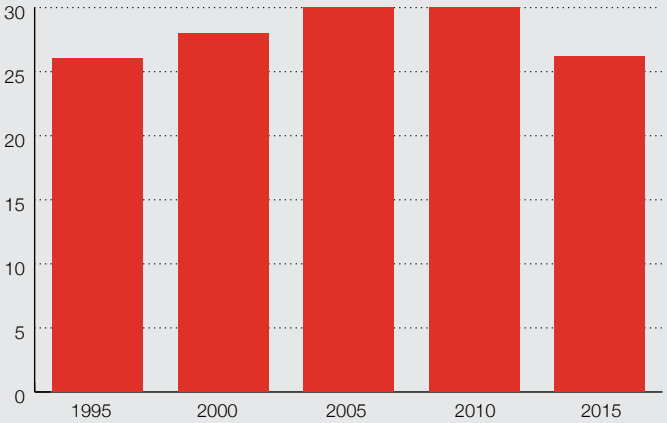


NOTES: Provincial data not available for most industries
Other non-durable goods includes refined petroleum

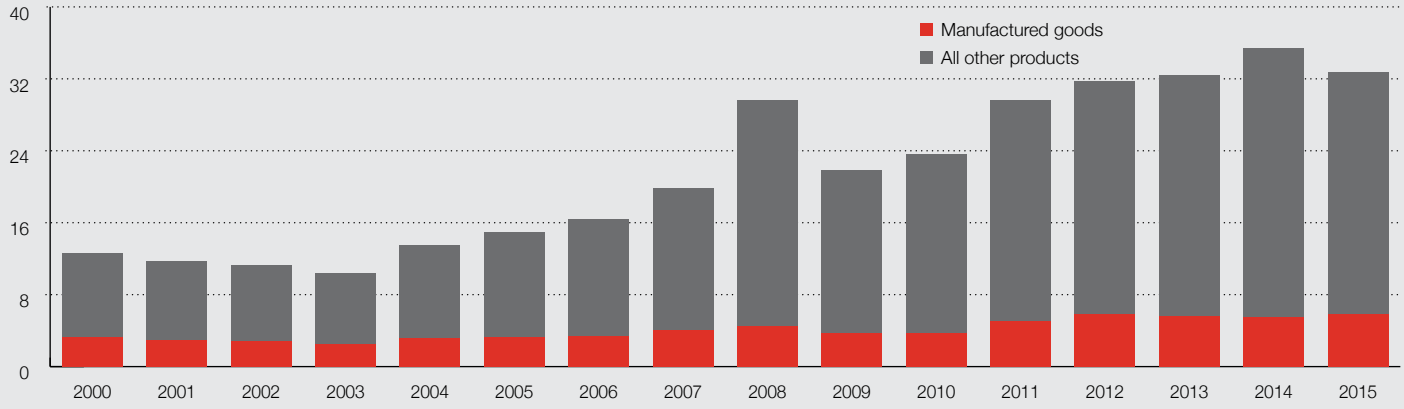
SASKATCHEWAN MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN SASKATCHEWAN
(000's of jobs)



SASKATCHEWAN EXPORTS
(in $billions)

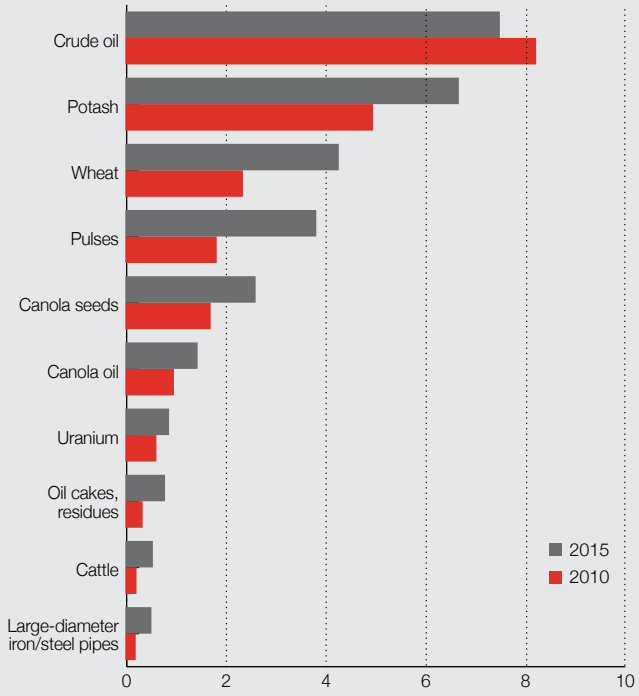


Export Activity in Saskatchewan

In 2015, Saskatchewan's exports fell by 7.4 per cent to $32.7 billion. However, prior to that year, Saskatchewan was Canada's runaway leader in export growth. In the ten years up to 2014, provincial exports rose 163 per cent compared to 27.3 per cent for Canada as a whole.

Saskatchewan has a relatively diversified export market, with only 54 per cent of foreign sales destined for the United States. The province sells more to India than any other province and is second only to BC in shipments to China.

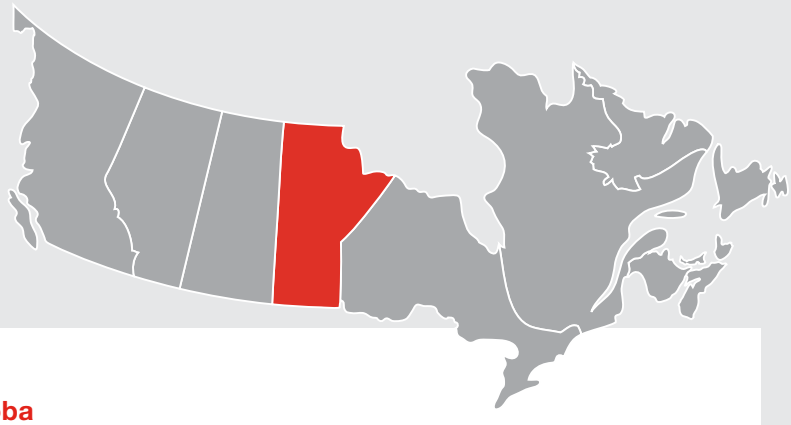
TOP 10 EXPORTS FROM SASKATCHEWAN
(In $billions)



Saskatchewan's Top Ten Export Destinations

Country	Value ($billions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	14.8	17.7	62.4	54.1	20.1
China	1.5	3.4	6.2	10.3	129.0
India	0.7	1.9	3.1	5.7	154.7
Japan	0.7	0.9	3.1	2.7	22.0
Brazil	0.4	0.8	1.7	2.6	105.7
Indonesia	0.5	0.8	2.1	2.3	56.1
Mexico	0.5	0.6	2.2	2.0	26.1
Bangladesh	0.3	0.5	1.3	1.5	63.0
Italy	0.2	0.5	0.9	1.4	125.2
Turkey	0.2	0.4	0.8	1.3	135.1

Manitoba



Economic Impact of Manufacturing in Manitoba

Manufacturing directly accounts for 10.6 per cent of provincial GDP and makes up 65% of total exports.
Manufacturing employs 64,800 Manitobans, generating $4.0 billion in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

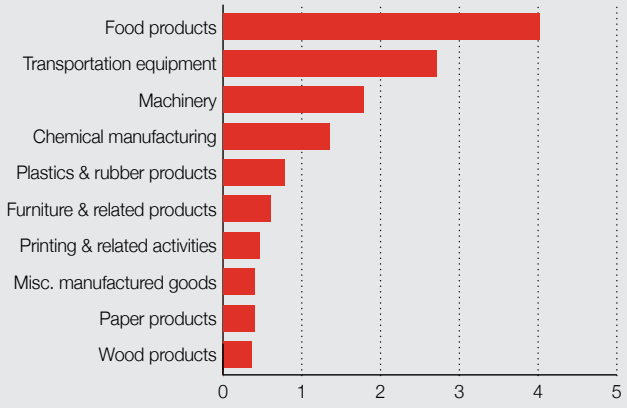
- An additional $9.5 billion in GDP to the provincial economy
- 104,000 jobs in Manitoba outside of manufacturing
- $1.4 billion in government revenues, not including income taxes
- An estimated $8.7 billion in total wages and salaries in Manitoba
- $16.8 billion in additional output in other Manitoba industries

Manufacturing Activity in Manitoba

Manitoba has a well-diversified manufacturing base that has grown slowly but steadily over the past fifteen years. Although production values dipped slightly in 2015 (to $16.9 billion), Manitoba is one of only two provinces where current manufacturing sales are above their pre-recession peak.

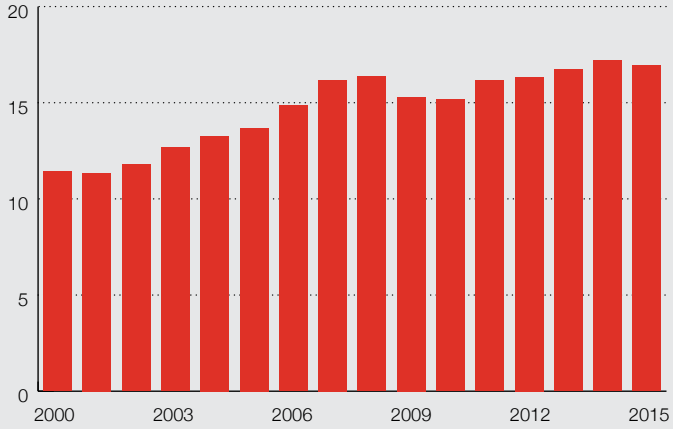
Unlike the three provinces to the west, Manitoba's manufacturing sector is not tightly linked to its resource base. While food processing is the most important manufacturing industry in Manitoba, the province is home to a wide range of other businesses, including those in aerospace, machinery and pharmaceuticals.

MANITOBA MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

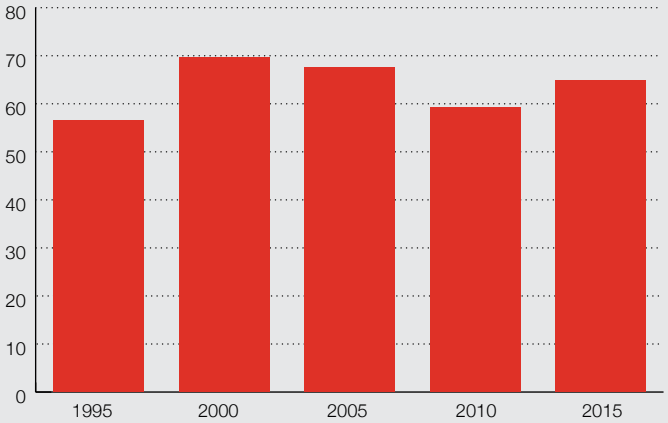


NOTE: Provincial data not available for most industries

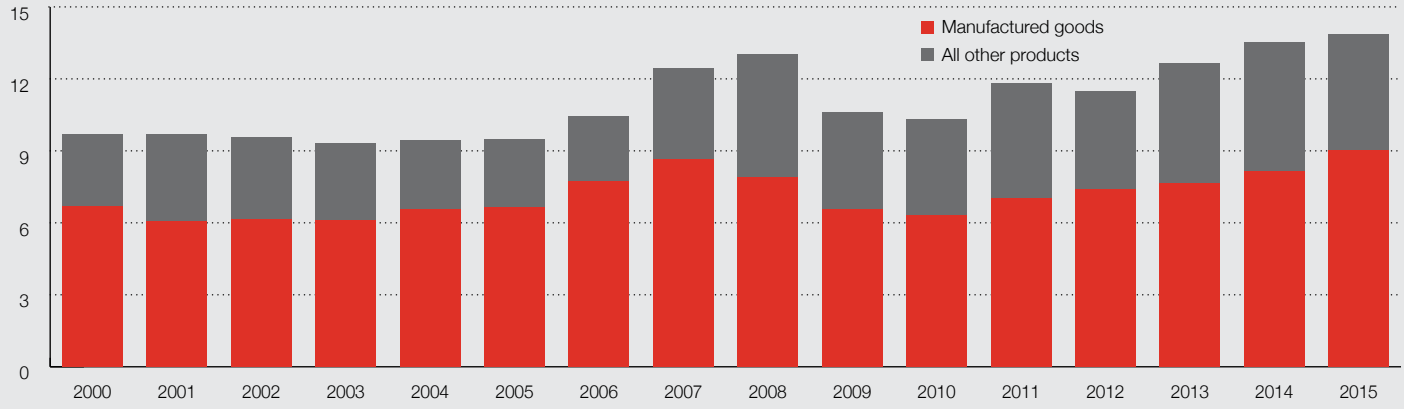
MANITOBA MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN MANITOBA
(000's of jobs)



MANITOBA EXPORTS
(in $billions)

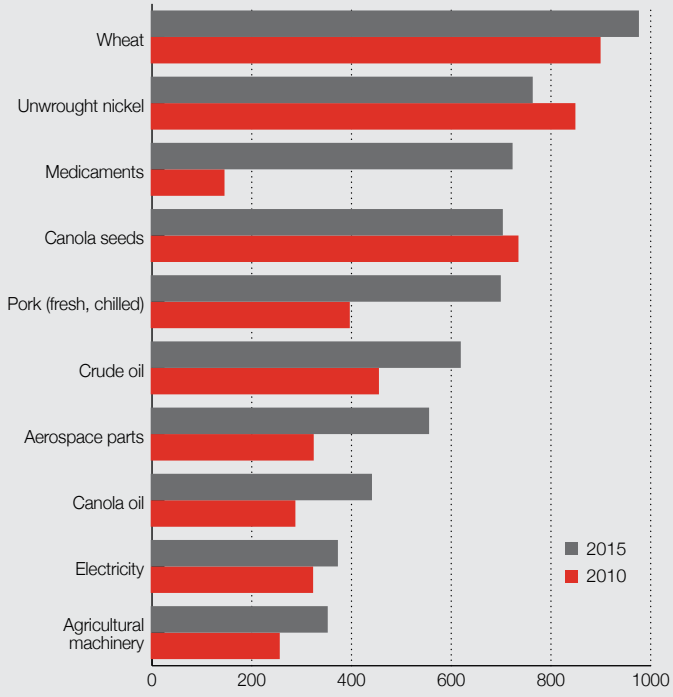


Export Activity in Manitoba

Manitoba businesses exported a record $13.8 billion in goods in 2015 – the second consecutive all-time high. Nearly two thirds of that total was made up of manufactured goods. Through steady growth, Manitoba has been Canada's second-fastest growing exporter over the past decade, behind only Saskatchewan.

Manitoba's export products are as diversified as its manufacturing base. While agricultural products are well-represented, the province also exports energy, aerospace parts, medicines and metals. Medicines, in particular, have emerged as a major export product in recent years.

TOP 10 EXPORTS FROM MANITOBA
(In $billions)



Manitoba's Top Ten Export Destinations

Country	Value ($billions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	6.5	9.5	63.5	68.9	45.6
China	0.7	1.0	6.6	7.0	44.4
Japan	0.6	0.6	5.6	4.6	9.8
Mexico	0.3	0.3	3.3	2.5	-0.1
Hong Kong	0.2	0.2	2.0	1.5	2.2
Germany	0.0	0.2	0.3	1.4	494.1
Indonesia	0.1	0.1	0.5	0.7	93.9
United Kingdom	0.1	0.1	0.9	0.7	5.4
Australia	0.1	0.1	0.8	0.7	10.8
Taiwan	0.1	0.1	1.0	0.7	-6.9

New Brunswick

Economic Impact of Manufacturing in New Brunswick

Manufacturing directly accounts for 11.2 per cent of provincial GDP and makes up 88% of total exports.
Manufacturing employs 29,800 residents, generating $1.6 billion in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

- An additional $4.0 billion in GDP to the provincial economy
- 49,700 jobs in New Brunswick outside of manufacturing
- $670 million in government revenues, not including income taxes
- An estimated $4.1 billion in total wages and salaries in New Brunswick
- $7.4 billion in additional output in other New Brunswick industries

Manufacturing Activity in New Brunswick

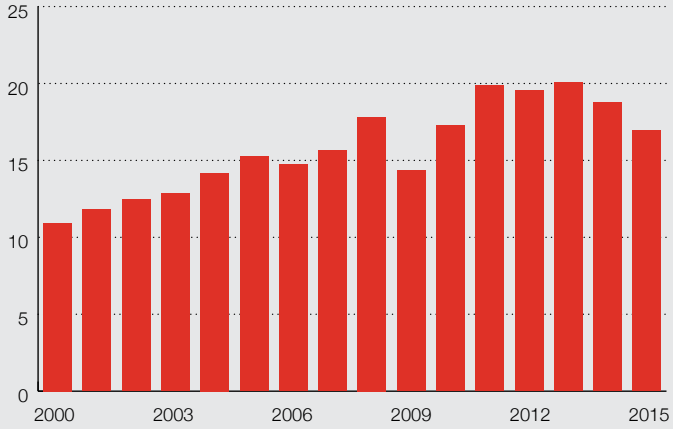
New Brunswick is Atlantic Canada's largest manufacturing province, with more total sales ($17.0 billion in 2015) than the other three provinces combined. While industry-level data for New Brunswick is limited, the vast majority of manufacturing output comes from the Irving oil refinery in Saint John. As a result, the recent decline in oil prices has had a significant impact on manufacturing sales in the province, which fell by 16 per cent from 2013 to 2015.

Aside from oil refining, the province also has an important seafood products industry, and is a major producer of frozen potatoes products.

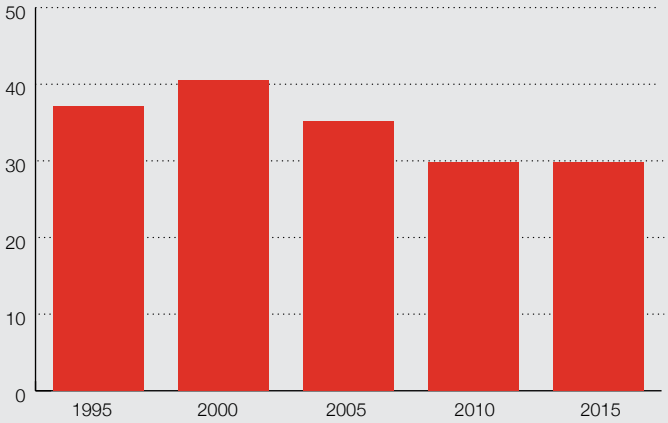
NEW BRUNSWICK MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

NOTES: Provincial data not available for most industries
Other non-durable goods includes refined petroleum

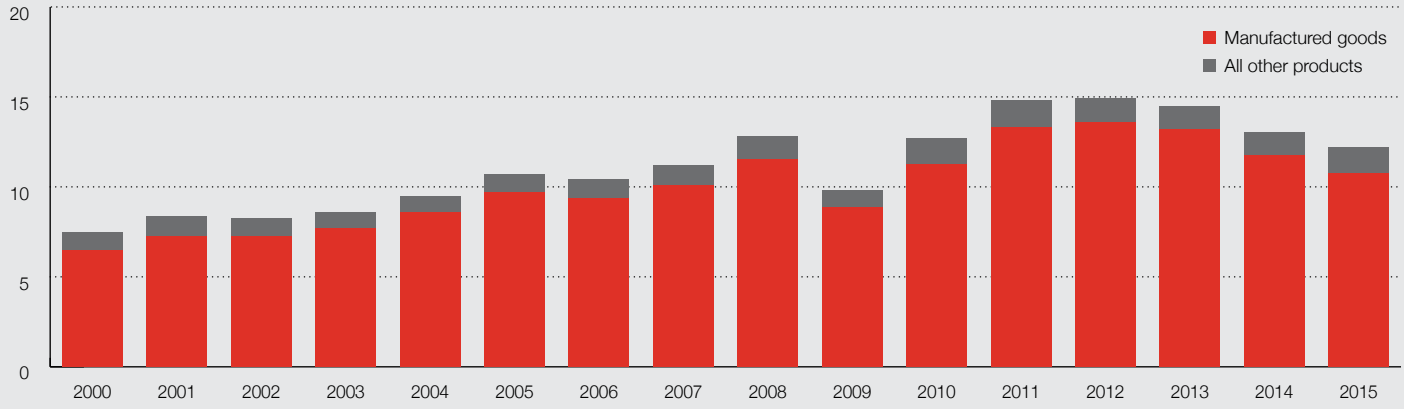
NEW BRUNSWICK MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN NEW BRUNSWICK
(000's of jobs)



NEW BRUNSWICK EXPORTS
(in $billions)

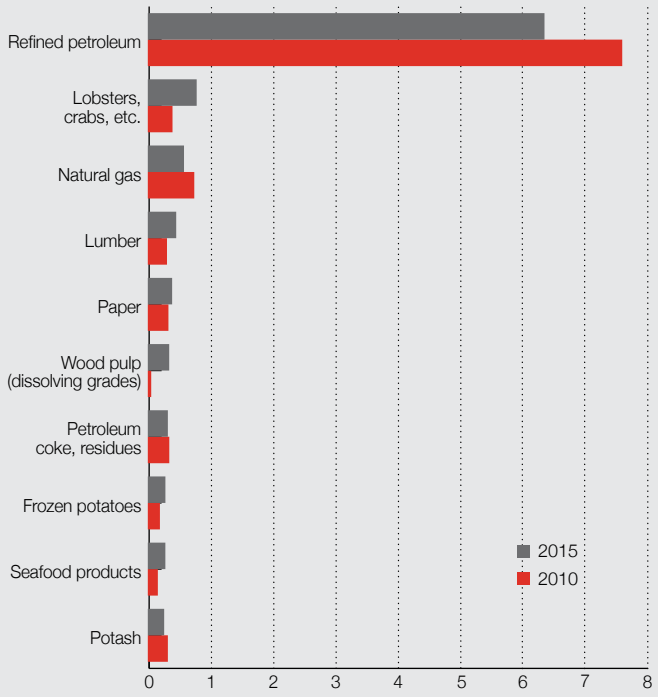


Export Activity in New Brunswick

At $12.2 billion, New Brunswick is Atlantic Canada's largest exporter. However, exports have been falling steadily for the last three years, losing 18 per cent of their value over that time. At 90 per cent of total exports, New Brunswick is also the most reliant of any province on the US market.

Refined petroleum dominates provincial exports, accounting for over half of total exports in 2015. The drop in oil prices, combined with recent refinery shutdowns for refurbishment, is a major driver behind New Brunswick's overall export decline since 2012.

TOP 10 EXPORTS FROM NEW BRUNSWICK
(In $billions)



New Brunswick's Top Ten Export Destinations

Country	Value ($millions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	11098.5	11051.1	87.4	90.4	-0.4
India	95.4	109.3	0.8	0.9	14.6
China	101.2	87.1	0.8	0.7	-14.0
Brazil	133.0	76.0	1.0	0.6	-42.8
Indonesia	88.6	72.2	0.7	0.6	-18.5
Japan	58.3	71.3	0.5	0.6	22.4
Thailand	66.6	66.9	0.5	0.5	0.4
Turkey	7.6	57.6	0.1	0.5	661.5
Colombia	37.1	52.0	0.3	0.4	40.2
Dominican Rep.	43.1	43.3	0.3	0.4	0.5

Nova Scotia

Economic Impact of Manufacturing in Nova Scotia

Manufacturing directly accounts for 7.9 per cent of provincial GDP and makes up 73% of total exports.
Manufacturing employs 28,700 Nova Scotians, generating $2.0 billion in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

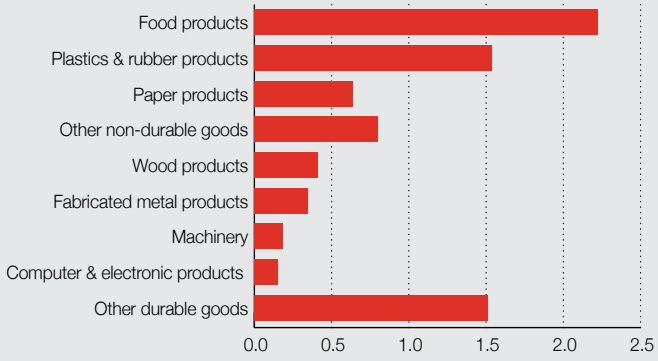
- An additional $3.7 billion in GDP to the provincial economy
- 50,200 jobs in Nova Scotia outside of manufacturing
- $623 million in government revenues, not including income taxes
- An estimated $4.3 billion in total wages and salaries in Nova Scotia
- $6.5 billion in additional output in other Nova Scotia industries

Manufacturing Activity in Nova Scotia

Manufacturing activity in Nova Scotia fell sharply in 2013 and 2014 with the closure of the Dartmouth oil refinery. Last year, however, the sector rebounded sharply, with sales increasing by 6.7 per cent (to reach $7.8 billion) – the fastest growth of any province.

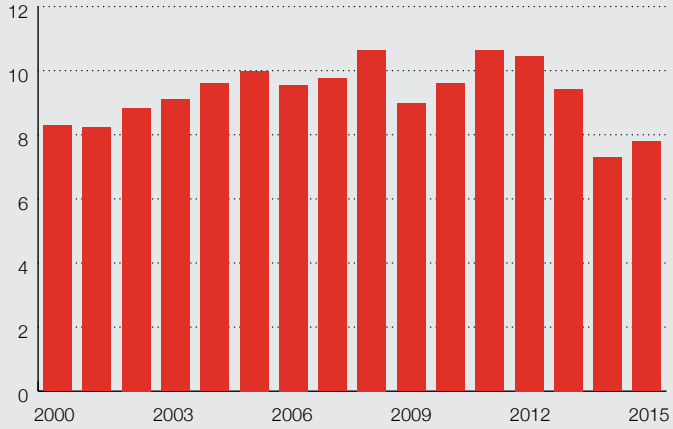
While data on specific manufacturing industries in Nova Scotia is somewhat limited, two are clearly of vital importance. Food processing, including seafood products as well as fruit and vegetable products, is the province's largest manufacturing industry. Second is plastics and rubber production coming out of the province's three tire plants.

NOVA SCOTIA MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

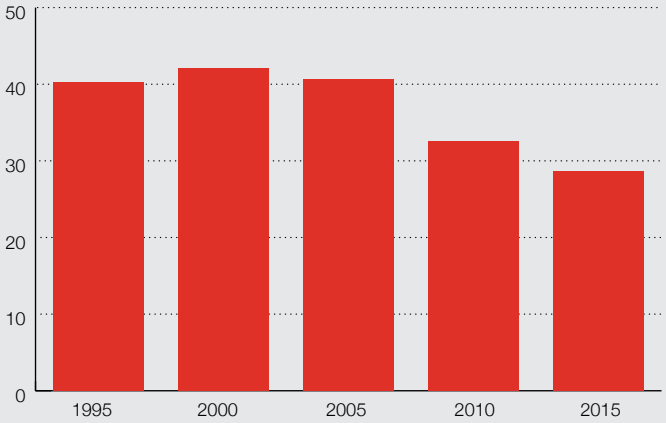


NOTE: Provincial data not available for most industries

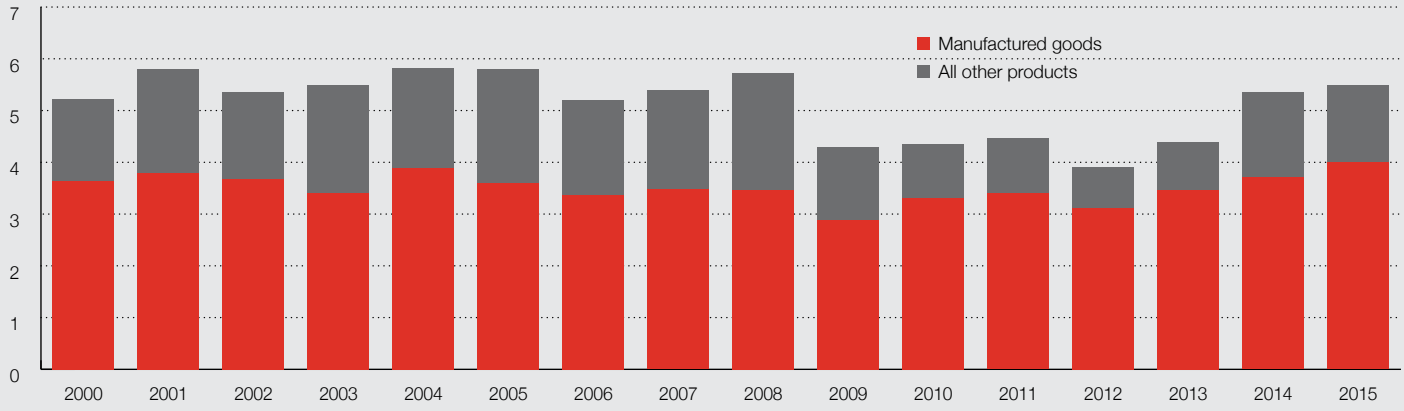
NOVA SCOTIA MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN NOVA SCOTIA
(000's of jobs)



NOVA SCOTIA EXPORTS
(in $billions)

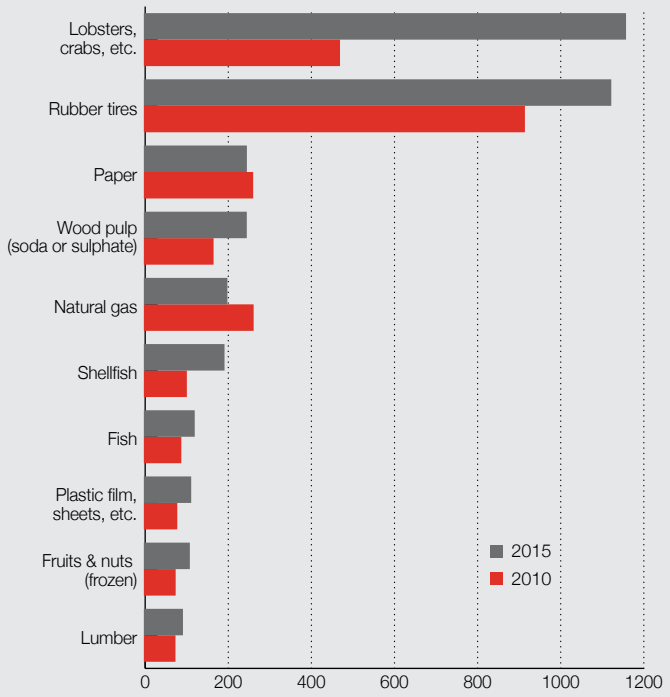


Export Activity in Nova Scotia

Nova Scotia businesses exported $5.5 billion in goods last year – the most since 2008. While exports remain below pre-recession levels, there is reason to be optimistic; in the past two years, exports have risen by more than 25 per cent. Only PEI has recorded faster export growth since 2013.

Two products dominate Nova Scotia exports – lobsters and other crustaceans, and tires for buses and passenger vehicles. Together, those products make up over 41 per cent of total foreign sales. While most exports go to the US, sales to China have risen by a factor of six since 2010.

TOP 10 EXPORTS FROM NOVA SCOTIA
(In $billions)



Nova Scotia's Top Ten Export Destinations

Country	Value ($millions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	3305.7	3833.1	76.2	69.8	16.0
China	69.2	421.9	1.6	7.7	509.4
United Kingdom	133.5	121.4	3.1	2.2	-9.1
France	79.5	88.3	1.8	1.6	11.1
Netherlands	69.8	84.1	1.6	1.5	20.5
Japan	59.0	78.4	1.4	1.4	32.8
Turkey	4.9	68.1	0.1	1.2	1292.8
Mexico	23.5	66.3	0.5	1.2	182.1
South Korea	21.2	66.1	0.5	1.2	211.9
Hong Kong	39.4	59.3	0.9	1.1	50.5

Prince Edward Island

Economic Impact of Manufacturing in Prince Edward Island

Manufacturing directly accounts for 7.9 per cent of provincial GDP and makes up 73% of total exports.
Manufacturing employs 6,000 Islanders, generating $277 million in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

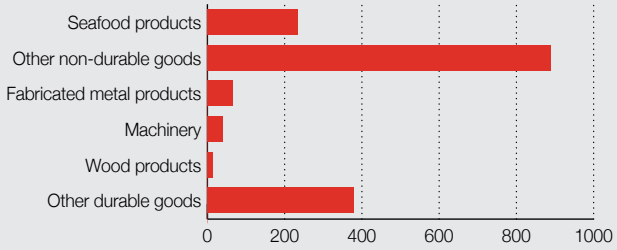
- An additional $598 million in GDP to the provincial economy
- 9,700 jobs in PEI outside of manufacturing
- $93 million in government revenues, not including income taxes
- An estimated $578 million in total wages and salaries in PEI
- $1.1 billion in additional output in other PEI industries

Manufacturing Activity in Prince Edward Island

PEI is Canada's smallest manufacturing province, with sales totalling $1.6 billion in 2015. However, the province has posted some of the strongest growth across Canada in recent years, with record sales in each of the last three years.

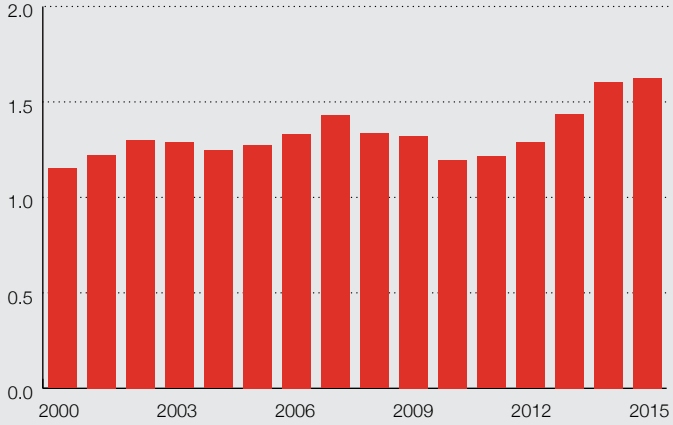
Like the other Atlantic Provinces, data on output in individual manufacturing industries is limited. Even so, the province has three important contributors to its manufacturing strength. Two of these are in food processing – seafood and potato products – while the third is in aerospace parts and other specialized equipment and parts.

PRINCE EDWARD ISLAND MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

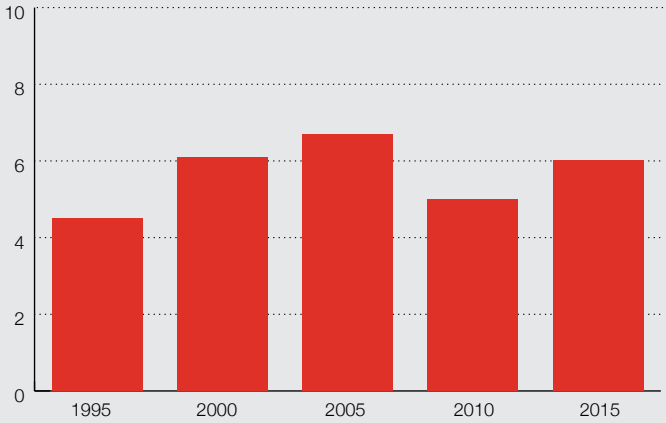


NOTES: Provincial data not available for most industries
Other non-durable goods includes refined petroleum

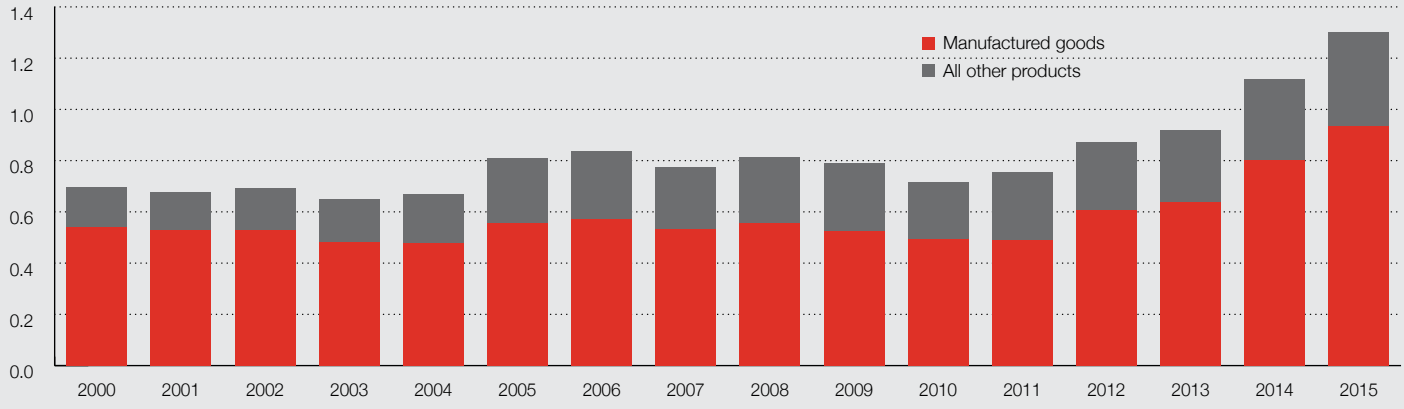
PRINCE EDWARD ISLAND MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN PRINCE EDWARD ISLAND
(000's of jobs)



PRINCE EDWARD ISLAND EXPORTS
(in $billions)

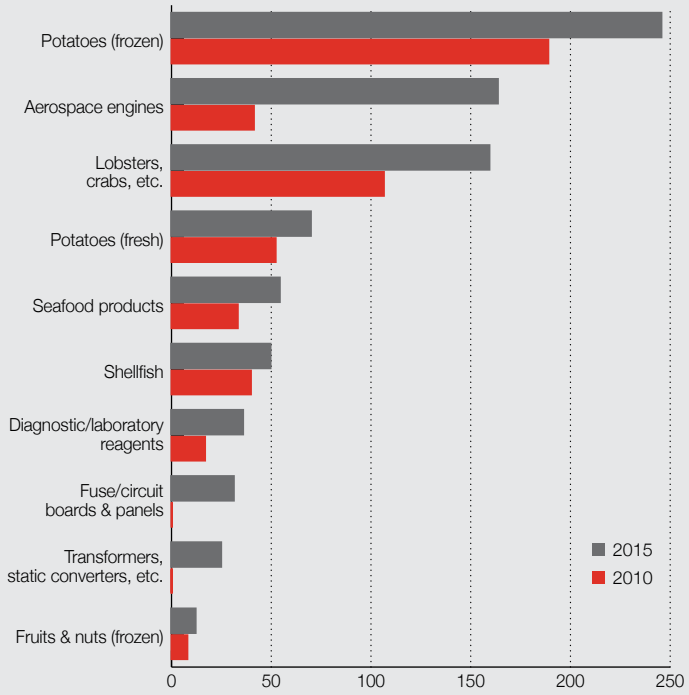


Export Activity in Prince Edward Island

PEI's exporters have enjoyed remarkable success in penetrating international market in recent years. The province has posted four consecutive years of record exports. From 2012 to 2015, exports have risen by nearly 50 per cent, by far the fastest rate of growth of any province.

Much of that growth has come in sales to Asia and Europe. The US share of PEI's exports has fallen from 72 per cent to 62 per cent over the last five years because of tremendous growth in sales to South Korea, France, Germany and a number of other destinations.

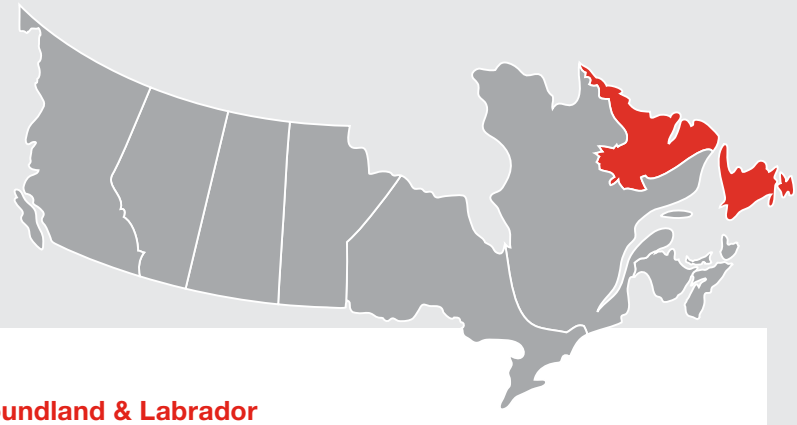
TOP 10 EXPORTS FROM PRINCE EDWARD ISLAND
(In $billions)



Prince Edward Island's Top Ten Export Destinations

Country	Value ($millions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	512.9	804.0	71.7	61.7	56.8
South Korea	5.4	76.0	0.8	5.8	1301.5
France	9.2	40.7	1.3	3.1	340.3
Germany	10.1	35.1	1.4	2.7	247.6
Japan	18.3	31.8	2.6	2.4	73.2
Australia	7.1	29.6	1.0	2.3	317.4
United Kingdom	26.5	25.6	3.7	2.0	-3.3
Papua N. Guinea	2.7	22.2	0.4	1.7	730.7
Switzerland	1.3	17.7	0.2	1.4	1257.5
Netherlands	5.9	13.6	0.8	1.0	128.7

Newfoundland & Labrador



Economic Impact of Manufacturing in Newfoundland & Labrador

Manufacturing directly accounts for 4.6 per cent of provincial GDP and makes up 43% of total exports.
Manufacturing employs 11,300 residents, generating $840 million in wages and salaries.

The economic spinoffs from manufacturing across Canada add:

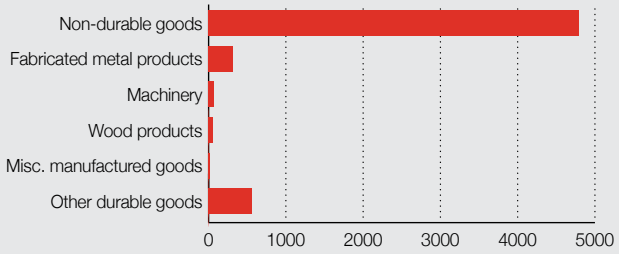
- An additional $7.3 billion in GDP to the provincial economy
- 19,200 jobs in Newfoundland & Labrador outside of manufacturing
- $346 million in government revenues, not including income taxes
- An estimated $1.9 billion in total wages and salaries in Newfoundland & Labrador
- $9.6 billion in additional output in other provincial industries

Manufacturing Activity in Newfoundland & Labrador

Manufacturing activity in Newfoundland is dominated by oil refining. As such, the recent drop in oil prices has contributed to an overall decline in manufacturing sales, which fell by 6.6 per cent over the last two years, hitting $5.8 billion in 2015. Even with the recent decline, however, Newfoundland's manufacturing sector is well over twice the size it was in the early 2000s.

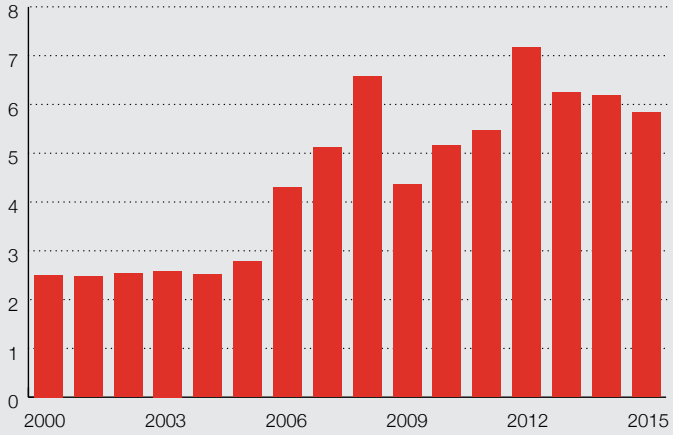
Data on specific manufacturing industries in the province are scarce. In addition to oil refining, the province is home to seafood production as well as some fabricated metals and machinery output.

NEWFOUNDLAND & LABRADOR MANUFACTURING SALES BY INDUSTRY – 2015
(in $billions)

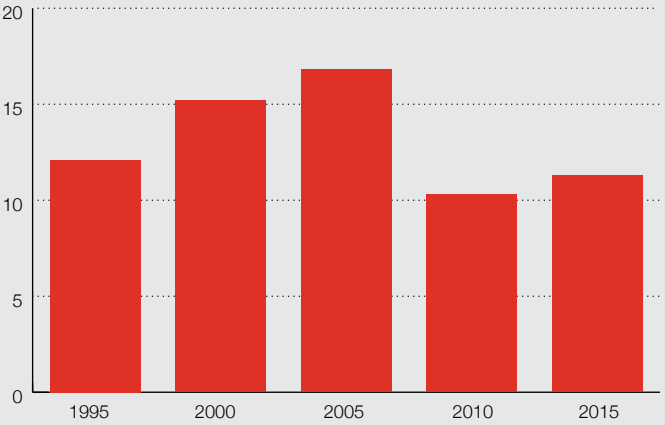


NOTES: Provincial data not available for most industries
Other non-durable goods includes refined petroleum

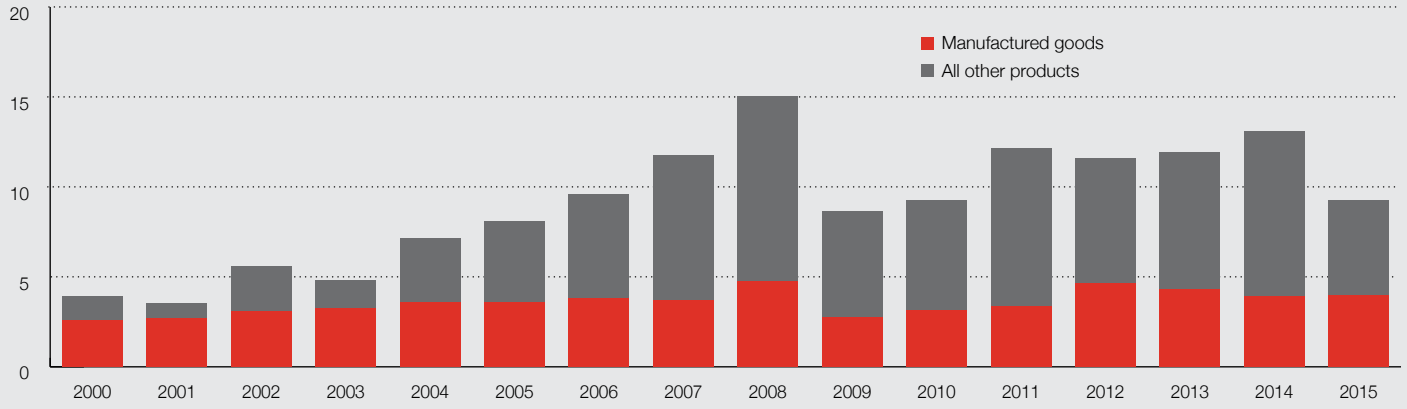
NEWFOUNDLAND & LABRADOR MANUFACTURING SALES
(in $billions)



MANUFACTURING EMPLOYMENT IN NEWFOUNDLAND & LABRADOR
(000's of jobs)



NEWFOUNDLAND & LABRADOR EXPORTS
(in $billions)

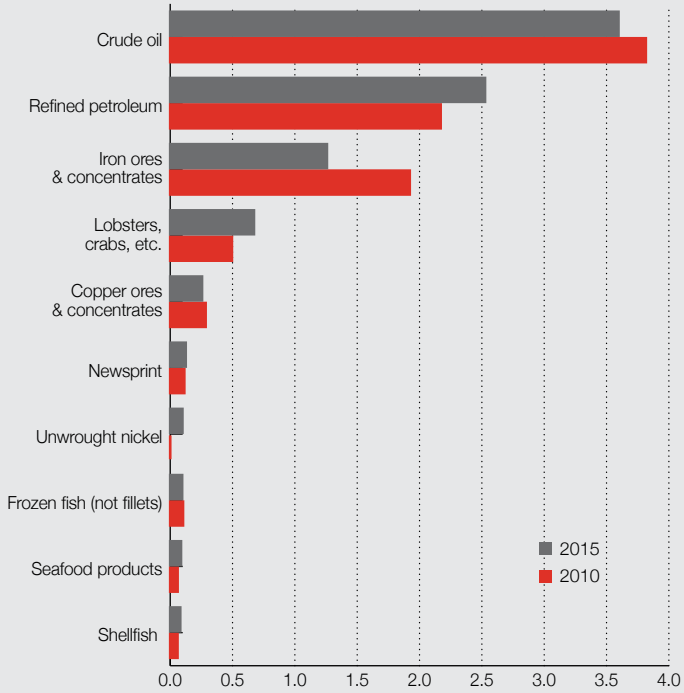


Export Activity in Newfoundland & Labrador

Crude oil and refined petroleum are Newfoundland's most important export products, together accounting for nearly two thirds of the province's total international sales. When oil prices fell, so too did the value of those goods in foreign markets. As a result, total exports from Newfoundland fell by 29 per cent in 2015, the steepest decline of any province.

Aside from fossil fuel products, Newfoundland's main exports include iron ores, other metals, and fish and seafood. The province has enjoyed considerable success in expanding to European markets in recent years.

TOP 10 EXPORTS FROM NEWFOUNDLAND & LABRADOR
(In $billions)



NFLD & Labrador's Top Ten Export Destinations

Country	Value ($millions)		Share of Total		% Growth 2010-2015
	2010	2015	2010	2015	
United States	6421	6192.3	69.5	67.0	-3.6
United Kingdom	74.7	605.6	0.8	6.5	711.1
Netherlands	120.9	516.4	1.3	5.6	327.0
China	715.5	474.8	7.7	5.1	-33.6
Japan	111.5	190.8	1.2	2.1	71.1
Spain	104.2	186.4	1.1	2.0	78.9
Trinidad & Tob.	111.8	109.5	1.2	1.2	-2.0
Norway	6.7	101.7	0.1	1.1	1415.3
Germany	734.4	89.1	8.0	1.0	-87.9
Belgium	7.1	86.9	0.1	0.9	1117.6

Who We Are

About Canadian Manufacturers & Exporters

Since 1871, we have made a difference for Canada's manufacturing and exporting communities. Fighting for their future. Saving them money. Helping them grow.

The association directly represents more than 2,500 leading companies nationwide. More than 85 per cent of CME's members are small and medium-sized enterprises. As Canada's leading business network, CME, through various initiatives including the establishment of the Canadian Manufacturing Coalition, touches more than 100,000 companies from coast to coast, engaged in manufacturing, global business and service-related industries.

CME's membership network accounts for an estimated 82 per cent of total manufacturing production and 90 per cent of Canada's exports.

cme-mec.ca

About the Canadian Manufacturing Coalition

The Canadian Manufacturing Coalition is comprised of more than 50 major industry groups, united by a common vision for a world-class manufacturing sector in Canada.

The Coalition speaks with one voice on priority issues affecting manufacturers, and what must be done to ensure all Canadians continue to enjoy economic growth, high-value outputs and high-paying jobs. The Canadian Manufacturing Coalition's member organizations represent roughly 100,000 companies through their collective networks.

manufacturingourfuture.ca

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