



Sectoral Profile

Manufacturing

Atlantic Region

2018



KEY HIGHLIGHTS

- Manufacturing was the fifth-largest sector¹ by employment in the Atlantic Region in 2017, with 78,300 workers. Employment in manufacturing declined by nearly one-quarter following the 2008 financial crisis, but has improved somewhat during the past two years.
- The food manufacturing subsector represents a much larger share of sectoral Gross Domestic Product (GDP) in the Atlantic provinces than at the national level. In the Atlantic Region, strength in food manufacturing is due to the presence of seafood processors in close proximity to fishing areas, as well as the establishment of major fruit and vegetable processors in Prince Edward Island (P.E.I.) and New Brunswick (N.B.).
- Demand for manufactured products has increased as a result of faster economic growth in Canada and the United States in recent years. Still, low levels of investment, a shortage of some skilled workers and uncertainty surrounding trade with the United States has weighed on the sector.
- International markets represent the largest opportunity for growth for Atlantic manufacturers. Though the United States remains the region's largest export destination for manufactured products, the value of exports to Asian countries has risen rapidly in recent years.

INDUSTRY PROFILE

The manufacturing sector is composed of businesses that transform or render materials into new products. It is broad, including products that may be durable or non-durable, finished or intermediate, and includes diverse categories of goods such as foods, textiles, chemicals, metal products, and electronics. The diversity within this sector is demonstrated by its organization under the North American Industry Classification System (NAICS), which includes 21 subsectors and 181 industries.

The manufacturing sector employed 78,300 Atlantic Canadians in 2017, making it the fifth-largest sector by employment and accounting for 7.1% of all workers. The age composition of workers in this sector is similar to that of the overall Atlantic workforce: in 2017, 67.6% of manufacturing workers were of prime working age (25

¹ Sector refers to 2-digit level of classification under the North American Industrial Classification System (NAICS).

to 54 years of age), 23.7% were older workers (55 years and older), and the remaining 8.8% were youth (aged 15 to 24). Males comprised a disproportionately large share of sectoral employment. While the male to female ratio of the overall Atlantic workforce is approximately 1.1 to 1, the ratio in manufacturing is over 3 to 1.

The median wage in manufacturing is comparable to the overall median wage for all industries. In 2017, the overall provincial median wage for full-time employees ranged from \$20.00 to \$23.75 per hour among the Atlantic provinces, while the manufacturing wage ranged from \$19.00 to \$23.00. In all provinces, the manufacturing wage was within \$1.00 of the all-industry median. Wage growth in the manufacturing sector exceeded that of the overall median wage in all provinces except Nova Scotia (N.S.) Following the recession, median wage growth in manufacturing slowed relative to the overall median at the national level, however this does not appear to have happened in the Atlantic region. There is also wide variation in wages across manufacturing subsectors: in N.B., the 2016 Census indicates that full year, full time manufacturing workers reported an annual median employment income of \$49,867. In food manufacturing, it was approximately 20% lower at \$39,516, while petroleum and coal product manufacturing was significantly higher at \$89,288.

In 2017, the sector’s share of GDP ranged from just under 3% in Newfoundland and Labrador (N.L.) to over 10% in P.E.I. and N.B. while N.S. was in between at 7.3%. Of the 21 manufacturing subsectors, food manufacturing is notably larger with respect to both output and employment, and comprises a larger share of manufacturing in Atlantic Canada than at the national level. Due to the high volume of seafood landings in the region, seafood product preparation and packaging is a sizeable industry in all four Atlantic provinces. Fruit and vegetable preserving and specialty food manufacturing also contribute a large proportion of sectoral output in P.E.I. and N.B.

Table One Employed Labour Force - Manufacturing Atlantic Canada and Canada		
	Atlantic	Canada
Manufacturing	100%	100%
Food manufacturing	34.6%	14.8%
Beverage and tobacco product manufacturing	2.7%	2.0%
Textile mills	0.4%	0.5%
Textile product mills	0.8%	0.6%
Clothing manufacturing	1.2%	1.8%
Leather and allied product manufacturing	0.2%	0.3%
Wood product manufacturing	8.2%	5.9%
Paper manufacturing	6.1%	3.5%
Printing and related support activities	2.0%	3.9%
Petroleum and coal products manufacturing	2.8%	1.2%
Chemical manufacturing	2.5%	5.6%
Plastics and rubber products manufacturing	7.2%	5.7%
Non-metallic mineral product manufacturing	2.7%	3.3%
Primary metal manufacturing	2.0%	4.1%
Fabricated metal product manufacturing	6.5%	9.5%
Machinery manufacturing	3.3%	7.3%
Computer and electronic product manufacturing	2.2%	3.9%
Electrical equipment, appliance and component manufacturing	0.8%	2.2%
Transportation equipment manufacturing	8.1%	14.2%
Furniture and related product manufacturing	2.5%	4.9%
Miscellaneous manufacturing	3.1%	4.8%

Source: Statistics Canada, 2016 Census of Canada, Table 98-400-X2016290

The manufacturing sector accounts for the majority of goods exports at both the regional and national level. In 2017, the value of goods exported from the Atlantic provinces was \$29.9B, of which over two-thirds originated in the manufacturing sector. Nearly half of this amount—\$10.0B—was from the petroleum refineries industry, which is largely due to the Irving Oil Refinery in Saint John, New Brunswick. Seafood product preparation and packaging, whose activity is distributed more evenly across all four provinces, posted the second largest export value.

Atlantic Canada manufacturers compete globally with jurisdictions where input costs (such as wages and energy) may be lower. In recent years, increased global competition has led to some closures and layoffs in this industry group. Still, many manufacturers have continued to thrive, particularly those with a regional advantage (i.e. seafood processors in close proximity to the Atlantic fishery and ship/boat builders with access to safe harbours, infrastructure and machinery). Deliberate efforts by provincial governments to encourage local specialization (such as P.E.I.'s aerospace industry) have also enjoyed some success.

RECENT HISTORY

Since 2014, a number of positive developments have lifted the manufacturing sector. Over a longer window, the picture has been less positive. During the past two decades, employment and output in the manufacturing industry in the Atlantic Region have mirrored trends at the national level, rising to a peak in 2004 before declining. The deterioration of employment quickened in the wake of the 2008 financial crisis and recession. Following the recession, the sector fluctuated between weakly positive and negative growth for several years, before beginning to make gains again in 2017.

Many economically developed countries have observed a decline in employment in the 21st century and this is not exclusive to Canada. With increased international trade, developing countries with lower prevailing wages have experienced growth in traditional, labour-intensive manufacturing, undercutting the prices of comparable products made in more developed countries. As a result, many of these traditional manufacturing industries have experienced a decline in developed countries. There is a growing need for Canadian manufacturers to specialize in new machinery and advanced manufacturing technologies and raise productivity to remain competitive.

In light of this need, certain conditions in Canada are generating uncertainty and challenges, which extend to the Atlantic provinces. A persistent gap in capital investment has been observed between Canada and its international peers that is particularly pronounced in the three Maritime provinces.² As a result, the manufacturing sector has experienced much lower growth in labour productivity between 2002 and 2014 than other comparably developed countries.³ A survey of manufacturing management across Canada from November 2018 indicates that more than half of companies have not invested in advanced manufacturing technologies due to high costs and uncertainty of returns.⁴ To try to incentivize capital investment and innovation, in November

² William B.P. Robson, Aaron Jacobs and Benjamin Dachis. *Equipment Failure: Feeble Business Investment Costs Canadians their Competitive Edge*. (Toronto: C.D. Howe Institute, March 24, 2017.)
https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/e-brief_255.pdf.

³ *Industrie 2030: Manufacturing Growth, Innovation and Prosperity for Canada*. (Ottawa: Canadian Manufacturers & Exporters, 2016).

http://cme-mec.ca/wp-content/uploads/2018/11/Doc_Industrie-2030_Manufacturing-Growth-Innovation-and-Prosperity-for-Canada.pdf

⁴ Mike Holden. *2018 Management Issues Survey*. (Ottawa: Canadian Manufacturers & Exporters, 2018.) http://cme-mec.ca/wp-content/uploads/2018/11/CME-MEC-Survey_2018-v9-min.pdf

2018 the Government of Canada began allowing the cost of machinery and equipment to be written off completely in the year it is adopted.

A second challenge facing the Atlantic manufacturing sector is a perceived shortage of skilled labour. This problem is national in scale, with 73% of manufacturing businesses in Canada reporting that they cannot find enough skilled trades workers. Some businesses in Atlantic Canada have reported refusing contracts due to inadequate staffing.⁵ Various initiatives tailored to the Atlantic Region have been introduced to address potential labour supply problems. For example, joint initiatives between Irving Shipbuilding and the Nova Scotia Community College have created training spots for trades related to shipbuilding, some of which are earmarked for Indigenous and African Nova Scotians. Furthermore, a number of options exist for employers to hire workers from other countries under the Atlantic Immigration Pilot and provincial immigration streams.

Investing in new machinery and technologies will be a key factor for many businesses in the region to remain competitive as demographic trends and labour shortages contribute to productivity and growth challenges.

International markets are of growing importance for Atlantic manufacturers. From 2012 to 2017, the average annual growth rate of manufacturing exports (excluding petroleum products) was 6.0%.⁶ Exports from the food manufacturing subsector increased by more than 9% annually during the same timeframe, as food exports to the U.S. rose by over \$1B CAD (of which a large portion was due to changes in the exchange rate). More recently, the market for seafood in Southeast Asian countries has become a key area for growth: exports to this region increased by nearly one-third during the 2016 to 2017 period, and now account for one-quarter of all food manufacturing exports from Atlantic Canada.

Despite the expansion of exports to other markets, the U.S. remains the largest purchaser of Atlantic Canadian manufacturing products by a large margin. Much of 2018 was marked by uncertainty surrounding the renegotiations of the North American Free Trade Agreement (NAFTA) and import tariffs applied by the U.S. on wood and paper products. Despite these challenges, manufacturing exports to the U.S. from January to September 2018 were up by more than 15% compared to the same period the year before. Though there is a widely cited need to diversify Canadian exports, NAFTA is the only trade agreement, which more than half of manufacturers believe, has had a positive impact on their business. A large majority of manufacturers indicated that the impact of other trade agreements such as the Canada-EU Comprehensive Economic and Trade Agreement (CETA) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) on their business was neutral or unknown.⁷

U.S. tariffs have created difficulties for certain Atlantic manufacturing industries, though generally to a lesser extent than in the rest of the country. Softwood lumber tariffs of 20.8% were applied to N.B. producers, though the largest wood product manufacturer in the province, J.D. Irving, is subject to a lower rate of 9.9%. Duties on supercalendared paper which had been applied to specific mills in Port Hawkesbury, Corner Brook, and Saint John were ended in July 2018.

U.S. import tariffs on aluminum and steel have not been felt as strongly in Atlantic Canada as in other provinces, as the region accounts for just a small percentage of the production of those metals. However, some manufacturers of metal products such as rebar have been negatively affected. Atlantic manufacturers importing

⁵ Inda Intiar. "BDC Economist Says 50 Per Cent Of Atlantic Canadian Businesses Face Labour Shortages." *Huddle*. September 5, 2018. <https://huddle.today/bdc-economist-says-50-per-cent-of-atlantic-canadian-businesses-face-labour-shortages/>

⁶ The value of Petroleum refinery products, which was about half of the Manufacturing total in 2017, fluctuates significantly as market prices change. This obscures the generally positive trend in other Manufacturing industries.

⁷ Mike Holden. *2018 Management Issues Survey*.

steel or aluminum from the U.S. as an intermediate good would also be impacted by Canadian import tariffs levied in response to the U.S.

Despite the challenges posed by low investment and a shortage of skilled labour, faster overall economic growth in Canada and the U.S. in recent years has contributed to the improvement of business conditions in the manufacturing sector.

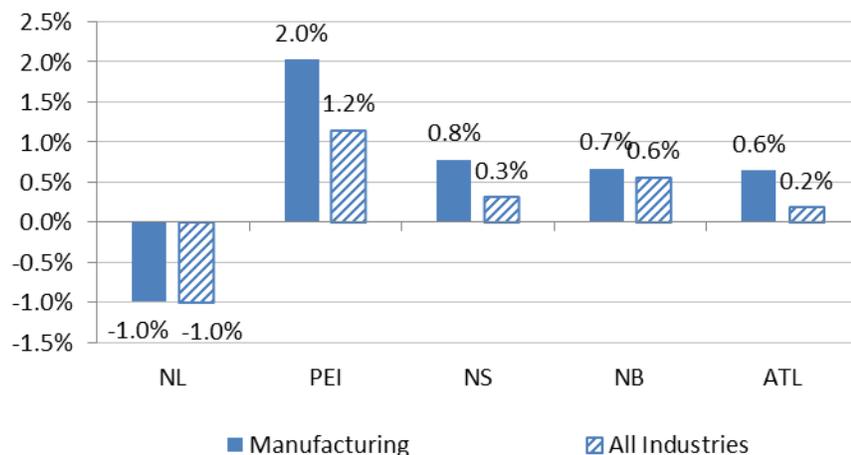
EXPECTED OUTLOOK

From 2018 to 2020, employment in the Atlantic Region’s manufacturing sector is anticipated to increase at an average annual rate of 0.6%, a higher rate than total employment for all industries. By 2020, regional employment in this sector is expected to approach 80,000 for the first time since 2011. The rate of growth is expected to be positive in the three Maritime provinces but slightly negative in N.L., with varying prospects across different types of manufacturing.

Many of the drivers and challenges outlined in the previous section are expected to persist and influence the growth of the sector in the short to medium-term. Consumer demand in the region’s two largest markets for manufactured goods—Canada and the U.S.—will continue to be a major determinant of growth. Though all indications suggest that exports to Asia for the region’s largest subsector, food manufacturing, will continue to expand, it will take up to 15 years for all tariffs to be eliminated under the CPTPP and an unknown amount of time for manufacturers to take full advantage of this trade agreement (along with other newer trade agreements). The conclusion of negotiations for the trade agreement replacing NAFTA, the U.S.-Mexico-Canada Agreement (USMCA), should immediately reduce some of the risk surrounding investment for manufacturers that export to the U.S.

The issues of under-investment and labour shortages have been addressed by changes to federal tax credits and immigration programs, however it is likely that the effectiveness of these measures will take effect over the longer term. In the meantime, it is probable that these two challenges will continue to be a drag on the expansion of the manufacturing sector.

**Projected Average Annual Employment Growth Rate (%),
Atlantic Provinces, 2018-2020**



SUB-REGIONAL DYNAMICS

Newfoundland and Labrador

- N.L. has the smallest manufacturing sector of the four Atlantic provinces in terms of its share of GDP and employment, and is the only Atlantic province in which manufacturing employment is expected to decline.
- A handful of industries comprise a larger employment share of the manufacturing sector in N.L. than in the other Atlantic provinces, such as seafood product preparation and packaging, non-ferrous metal production and processing, and other general-purpose machinery manufacturing. N.L.'s manufacturing sector has the highest level of productivity and median wage because of the prominence of high-value manufacturing.
- Some of N.L.'s major fabricators serve other major sectors in the province—such as the offshore oil and gas industry, the mining industry, and shipbuilding—and are strongly influenced by developments in these sectors.

Prince Edward Island

- In 2017, manufacturing accounted for one-tenth of the Island's GDP and nearly 9% of all employment. During the past several years, P.E.I.'s manufacturing sector has expanded at the fastest rate in the Atlantic region. This trend is expected to continue and is reflected in the employment outlook.
- Food manufacturing constitutes over 40% of P.E.I.'s manufacturing sector. Of this, approximately half is associated with fruit and vegetable preserving and specialty food manufacturing, a much larger proportion than in the other provinces. This reflects the importance of agriculture to P.E.I.'s economy as well as the presence of the large food processor Cavendish Farms.
- Certain higher-wage industries account for a larger share of the manufacturing sector in P.E.I. than in other provinces. Examples include pharmaceutical and medicine manufacturing and aerospace product and parts manufacturing.

Nova Scotia

- Manufacturing comprised approximately 7% of N.S.'s economy in 2017 in terms of both employment and GDP. With an average annual GDP growth rate of 3.0% during the past three years, the sector is expanding at about the same pace as in N.B. and N.L.
- Food manufacturing comprises a smaller share of the manufacturing sector in N.S. than in the other Atlantic provinces. The share of manufacturing workers in food manufacturing in N.S. was 21.6% in 2017, while in the other three Atlantic provinces it ranged from 29.0% to 47.7%.
- Rubber product manufacturing is of greater importance to the manufacturing sector in N.S. than in the other Atlantic provinces due to the presence of three large Michelin tire plants. All three are situated outside of Halifax and are major employers in their communities. One location, in Pictou County, announced the addition of 150 positions in October 2018.

- One-fifth of the sector's value is in transportation equipment manufacturing due to both aerospace product and parts manufacturing as well as ship and boat building. The value of the latter increased substantially after the Halifax Shipyard began ramping up activity for the National Shipbuilding Procurement Strategy. Employment associated with the project is expected to have peaked in 2018.⁸

New Brunswick

- Among the Atlantic provinces, the manufacturing sector comprised the largest share of employment and GDP in N.B. in 2017 at 9.0% and 10.4%, respectively. Though employment in the sector hit a historic low of 28,000 in 2014, by 2017 it had rebounded to 31,700.
- Food manufacturing accounts for about one-quarter of the sector's output in N.B. In addition to seafood processing, fruit and vegetable preserving and specialty food manufacturing is a significant industry, partially due to the presence of McCain Foods.
- Wood product and paper manufacturing together made up about one-third of the sector's value in 2017, while petroleum and coal product manufacturing contributed a further 21%. Much of the activity in these sectors is attributable to the activities of the Irving Group of Companies which own several wood product and pulp mills as well as the Saint John Oil Refinery.

⁸ The Conference Board of Canada. *The Economic Impact of Canada's Arctic and Offshore Patrol Ship Program—January 2018*. (Ottawa: The Conference Board of Canada, 2018.) https://www.conferenceboard.ca/temp/33efc996-28ea-4de4-bfa7-0fe4318c7ef6/9299_Eco-Impact-AOPS_BR.pdf

APPENDIX

Table Two
Real GDP (2017) and Employment (2017) for Atlantic Canada

	Manufacturing			All Industries		
	Number	Share of Total	AAGR*	Number	Share of Total	AAGR*
Real GDP (M\$)	\$7,218.6	100.0%	0.4%	\$103,511.1	100.0%	0.4%
Newfoundland and Labrador	\$908.8	12.6%	0.2%	\$31,610.6	30.5%	-0.3%
Prince Edward Island	\$555.8	7.7%	3.2%	\$5,553.3	5.4%	1.5%
Nova Scotia	\$2,617.0	36.3%	0.1%	\$36,075.4	34.9%	0.8%
New Brunswick	\$3,137.0	43.5%	0.3%	\$30,271.8	29.2%	0.4%
Employment (000s)	67.2	100.0%	-2.6%	1099.8	100.0%	0.1%
Male	51.8	77.1%	-2.3%	550.8	50.1%	-0.1%
Female	15.5	23.1%	-3.2%	549.0	49.9%	0.2%
15-24 years old	6.7	10.0%	-3.0%	140.3	12.8%	-1.5%
25-54 years old	45.5	67.7%	-3.7%	706.1	64.2%	-0.7%
55 years and older	15.0	22.3%	2.5%	253.4	23.0%	4.3%
Worked full-time	64.8	96.4%	-2.6%	918.9	83.6%	0.1%
Worked part-time	2.4	3.6%	-0.4%	180.9	16.4%	-0.1%
Self-employed	4.4	6.5%	2.0%	131.5	12.0%	0.0%
Employees	62.8	93.5%	-2.8%	968.3	88.0%	0.1%
Permanent job	55.9	83.2%	-2.9%	788.2	71.7%	0.2%
Temporary job	7.0	10.4%	-2.0%	180.1	16.4%	-0.2%
Less than high school	6.9	10.3%	-5.6%	103.3	9.4%	-4.4%
High school graduate	20.9	31.1%	-2.3%	286.2	26.0%	-0.8%
Postsecondary cert. or diploma	28.9	43.0%	-2.8%	430.5	39.1%	0.5%
University degree	10.6	15.8%	0.4%	279.8	25.4%	3.0%
Newfoundland and Labrador	6.6	9.8%	-4.2%	224.1	20.4%	0.3%
Prince Edward Island	5.5	8.2%	0.0%	73.7	6.7%	0.7%
Nova Scotia	27.5	40.9%	-3.2%	449.0	40.8%	0.0%
New Brunswick	27.6	41.1%	-1.9%	352.9	32.1%	-0.1%

Source: Statistics Canada, Labour Force Survey - Custom Table; Table 36-10-0402-01

*Average annual growth rate for last ten years of available data (GDP 2008-17 and Employment 2008-17)

Note: In preparing this document, the authors have taken care to provide clients with labour market information that is timely and accurate at the time of publication. Since labour market conditions are dynamic, some of the information presented here may have changed since this document was published. Users are encouraged to also refer to other sources

for additional information on the local economy and labour market. Information contained in this document does not necessarily reflect official policies of Employment and Social Development Canada.

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