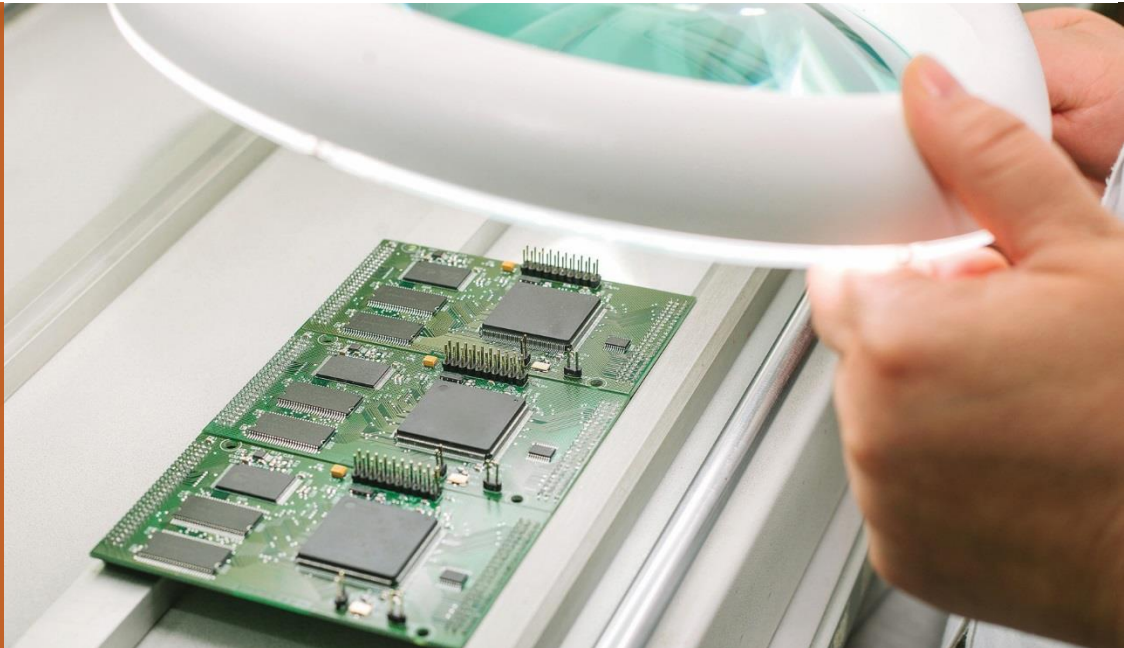


# LABOUR MARKET PROFILE: Manufacturing



## Executive Summary

Manufacturing remains an important part of Canada's gross domestic product (GDP), and makes up to 11% of the national gross domestic product (GDP). In 2013, British Columbia (BC) accounted for approximately 8.5% of the total Canadian manufacturing GDP. Within the province of BC, in 2013, the manufacturing sector is the fourth largest industry, contributing nearly 7% towards the provincial GDP.

This report examines the manufacturing sector in the province, and explores its contributions to the Columbia Basin-Boundary region. This report looks specifically at indicators in the following areas:

- Manufacturing sector establishments;
- Economic contributions; and
- Employment within the manufacturing sector.

This, and the following page presents relevant sector highlights.

## Manufacturing sector establishments

The manufacturing sector is made up of a number of subsectors: Fabricated metal product, food, beverage and tobacco, machinery, paper, primary metal, transportation equipment, wood product, and other.<sup>1</sup>

In 2016, BC. was home to 18,891 manufacturing facilities, with the Kootenay Development Region containing 4% or 756.<sup>2</sup> The Central Kootenay Regional District has the highest number of manufacturing facilities with 386, the East Kootenay follows with 247, and the Kootenay Boundary has the fewest with 123.

### Economic contributions within the manufacturing sector

Manufacturing sales in BC rose for the seventh straight year, up 4.2% to \$45.9 billion in 2016.<sup>3</sup> The increase in 2016 was led by the wood product (+10.3% to \$9.5 billion) and the primary metal (+33.0% to \$3.4 billion) industries.<sup>3</sup>

The value of shipments by BC. manufacturing firms increased to \$4.8 billion in 2014, which marked the fifth year in a row manufacturers experienced an increase in revenues.<sup>4</sup>

Sales growth in BC. was strongest in the manufacturing of transportation equipment and machinery, followed by wood products manufacturing.<sup>4</sup>

In 2015, median hourly wages in the Kootenay Development Region were the third highest in the province at \$28.85, after the Cariboo and the Northeast, and higher than the provincial and national averages. In comparison, the median hourly wage for all employees in all sectors of the economy in the Kootenays was \$23.90.

### Employment forecast within the manufacturing sector

The manufacturing sector accounts for 8.9% of total employment in the Kootenay Development Region, constituting the fifth highest employing sector after health and social assistance (12.5%), wholesale and retail trade (11.4%), construction (10.5%), and forestry, fishing, mining, quarrying, oil and gas (11.0%). The manufacturing sector in the Kootenay Development Region has experienced a 28% increase in employment since 2014, and employed 6,000 people in 2016.

In the Kootenay Development Region, the fabricated metal product manufacturing industry, food, beverage and tobacco industry, machinery manufacturing, and transportation equipment manufacturing subsectors will all see the highest rates of job growth in the manufacturing sector at 1.8% between 2016 and 2025.

In total, there are an anticipated 2,148 job openings forecast for the manufacturing sector by 2025 in the Kootenay Development Region. The primary metal manufacturing subsector will see the highest number of job openings between 2015 and 2025 with 734 positions, accounting for 30% of all jobs in the province within that subsector.

In the Kootenay Development region, the top occupations expected to generate the largest number of new job openings between the years 2017 – 2025 include: retail and wholesale trade managers, retail salespersons, and transport truck drivers. The occupations with the highest, sustained demand in the South East region, include retail salespersons, transport truck drivers, retail and wholesale trade managers, food counter attendants, kitchen helpers and related support occupations.

## Introduction

This report is part of a Social Sciences and Humanities Research Council of Canada (SSHRC) funded project entitled, [Regional Workforce Development in Rural BC](#). The purpose of this profile is to identify current manufacturing sector market trends and issues, including current and projected labour market needs to help workforce development partners within the Columbia Basin-Boundary region understand and respond to changing labour market demands. This manufacturing sector labour market profile identifies characteristics that comprise the BC manufacturing sector, including performance in terms of production, and contribution to the regional economy.

The guiding research questions include:

1. What is known about the manufacturing sector within the Columbia Basin-Boundary region and how does the region compare provincially and nationally?
2. What are the current and projected labour market needs for the Columbia Basin-Boundary region?

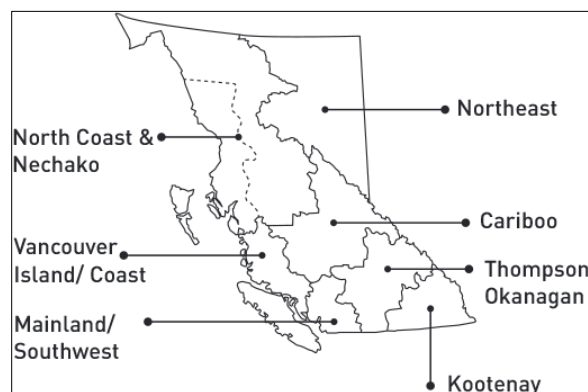
## Methodology

The Manufacturing Labour Market Profile was prepared by reviewing the following sources (see **Appendix A: References and Resources**):

- Industry research of publically available studies and reports;
- Industry data and statistics collected from publically available sources such as Statistics Canada, BC Stats, Work BC;
- Secondary research documents, such as regional economic studies; and
- Labour Force Survey data purchased through Statistics Canada.

Data related specifically to the labour market for the manufacturing industry was selected, as well as economic data that illustrates the status of the labour market. Additional information on a sector in the Columbia Basin-Boundary region may be available as part of the State of the Basin report prepared by the Columbia Basin Rural Development Institute.

Statistics are not frequently reported for the Columbia Basin-Boundary region making it challenging in some instances to report on statistics for the Columbia Basin-Boundary in its entirety. For instance some data is collected at a Development Region level and the Columbia Basin-Boundary covers three Development Regions: Revelstoke and Golden in the Thompson-Okanagan region, Valemount in the Cariboo region, and the entirety of the Kootenay Development Region (see **Figure 1**). In other instances, data is reported for the South East region, including the Thompson-Okanagan and Kootenay Development Regions, but excludes Valemount.

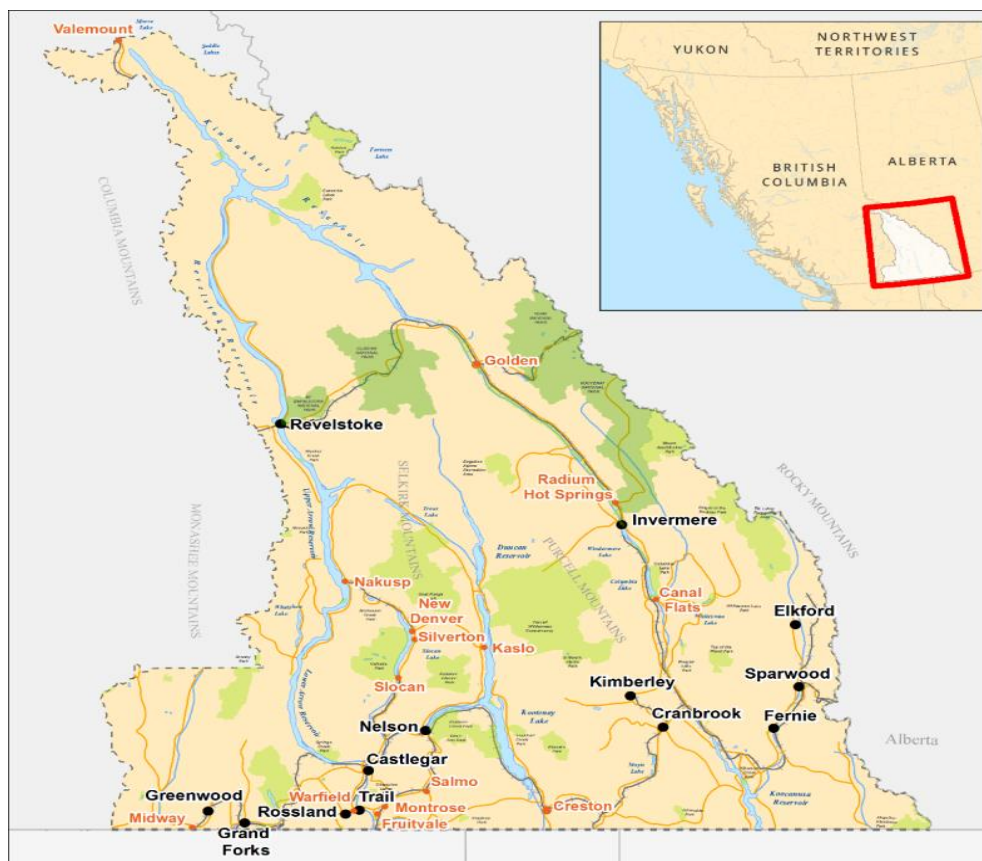


**Figure 1:** BC Development Regions as defined by Work BC<sup>i,28</sup>

This report was researched and prepared between January 2, 2017—June 30, 2017.

## The Columbia Basin-Boundary

Located in the southeast corner of British Columbia, the Columbia Basin-Boundary region (see **Figure 2**) includes the Regional Districts of East Kootenay, Central Kootenay, Kootenay Boundary, in addition to Revelstoke, Golden, Valemount and Columbia Shuswap Regional District Areas A and B. With an approximate land area of 83,171 square kilometres, the region accounts for 9% of the size of British Columbia, and is abundant with valleys and mountain ranges including the Purcells, Selkirks and Monashees.



**Figure 2:** The Columbia Basin-Boundary Region

With a regional population of 162,900, it accounts for 3.5% of the provincial population.<sup>5</sup> The overall population is aging and while different communities have different population projections the overall regional population projection is steady with no large gains or losses.<sup>5</sup>

The economy is primarily resource-based with forestry and mining as key economic drivers. The region's hydro-electric power generation accounts for approximately 44% of electricity generated in the province and the region is home to British Columbia's largest coal fields.<sup>6</sup> The Columbia Basin-Boundary region is also amenity-rich, supporting a vibrant tourism industry.

The labour market in the Kootenay Development Region is currently strong with the second highest job growth of the seven development regions reported between 2010-2015 (3.5%).<sup>6</sup> However, while 54.2% of residents have some post-secondary education, only 5.1% have a university certificate, diploma, or degree above a bachelor's degree, and 9.9% have a university bachelor's degree. These are both lower than BC and Canada, where in BC 8.1% have a university certificate, diploma, or degree above a bachelor's degree, and 14.0% have a university bachelor's

degree. For Canada, it is 7.5% and 13.3% respectively.<sup>7</sup> It is important to note that provincially more than 78% of all future job openings will require post-secondary education, including 36% that will require a bachelor's, graduate or first professional degree and/or significant work experience.<sup>8</sup> The unemployment rate in the Kootenay Development Region in March of 2017 is 6.4%.<sup>9</sup>

## Characteristics of the Manufacturing Sector

The manufacturing sector comprises activities that require the physical or chemical transformation of materials or substances into new products. These products may be finished, in the sense that they are ready to be used or consumed; or semi-finished, to be used as an input by another manufacturer or industry. Related activities, such as the assembly of the component parts of manufactured goods, the blending of materials, and the finishing of manufactured products by dyeing, heat-treating, plating and similar operations are also treated as manufacturing activities.

Advanced manufacturing is a commonly referenced term which is widely defined as “manufacturing that involves the use of technology to improve products and/or processes, with the relevant technology being described as ‘advanced,’ ‘innovative,’ or ‘cutting edge.’”<sup>10</sup> This labour market profile includes advanced manufacturing, but also looks at the larger manufacturing sector as most of the data is not classified along advanced manufacturing categories.

## Manufacturing in Canada

Manufacturing remains an important part of Canada’s gross domestic product (GDP), as it does for many other member states of the Organisation for Economic Co-operation and Development (OECD).<sup>4</sup> Canada’s manufacturing sector makes up more than 10% of the total GDP or \$173 billion<sup>11</sup>, similar to countries like the United Kingdom, France and the Netherlands.<sup>4</sup> Manufacturers export more than \$318 billion each year representing 61% of all of Canada’s merchandise exports.<sup>11</sup> The sector is responsible for 1.7 million jobs across the country.<sup>11</sup>

## Manufacturing in BC

The manufacturing sector is a primary generator for growing BC exports, comprising 67% of goods shipped.<sup>12</sup> A wide range of high-value products and components are produced for international and domestic markets. In 2015, manufacturing generated \$15 billion in GDP and supported 172,500 jobs in BC.<sup>12</sup> Of the goods manufactured in BC, 64% are exported to international destinations, with the United States being the largest trade partner (57% of all exported manufactured goods), followed by China (18% of all exported manufactured goods).<sup>4</sup> Exports to China have become increasingly important, due primarily to the export of wood and wood products, which accounted for 81% of all goods exported to China in 2014.<sup>4</sup>

Domestically, BC’s biggest trading partner of manufactured goods is Alberta.<sup>4</sup> In 2013, BC accounted for approximately 8.5% of the total Canadian manufacturing GDP. This made it the fourth largest contributor of manufacturing sector GDP to the country’s total manufacturing GDP, after Ontario (44.5%), Quebec (25.7%), and Alberta (11.1%).<sup>4</sup>

Within the province, in 2013, the manufacturing sector was the fourth largest industry, contributing nearly 7% towards the provincial GDP. The finance, insurance, real estate and leasing sector, construction sector, and health care and social assistance sector all contributed more to the provincial GDP than the manufacturing sector.<sup>4</sup>

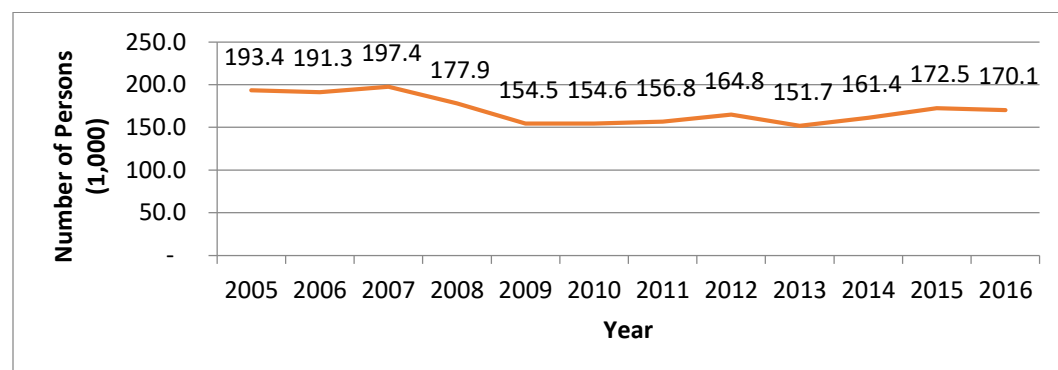


Manufacturing sales in BC rose for the seventh straight year, up 4.2% to \$45.9 billion in 2016.<sup>3</sup> The increase in 2016 was led by the wood product (+10.3% to \$9.5 billion) and the primary metal (+33.0% to \$3.4 billion) industries.<sup>3</sup> The value of shipments by BC manufacturing firms increased to \$4.8 billion in 2014, which marked the fifth year in a row manufacturers experienced an increase in revenues.<sup>4</sup>

Sales growth in BC was strongest in the manufacturing of transportation equipment and machinery, followed by wood products manufacturing.<sup>4</sup> Primary metal manufacturing firms experienced a decline in revenues in 2014.<sup>4</sup>

The provincial manufacturing sector in BC is more reliant on natural resources than other manufacturing provinces in Canada, with nearly 70% of BC's sector originating from resource-based manufacturing.<sup>4</sup> BC's top manufacturing industries in 2013 were wood products (nearly 24%), food (approximately 12%), and paper (nearly 8%).<sup>4</sup>

Since the 1980's, overall employment in the BC manufacturing industry has remained relatively constant. As shown in **Figure 3**, following a decline in 2008 the number of people employed has fluctuated from a high of 172,500 in 2015 to a low of 151,700 in 2013. Employment numbers in the manufacturing industry have yet to recover to 2008 levels.



**Figure 3:** British Columbia Manufacturing Employment, Annual Averages, 2005 - 2016<sup>13</sup>

Just 26% of the employed labour force in the manufacturing sector were women in 2014. In comparison, nearly 48% of the employed labour force across all sectors is female.<sup>4</sup>

### Manufacturing Sector Classifications: NAICS

The North American Industry Classification System (NAICS<sup>1</sup>) was used to define the manufacturing sector.<sup>4</sup> This report focuses on NAICS 31, 32, and 33. Refer to **Appendix B** for a detailed list of NAICS codes relating to the manufacturing sector.

### Manufacturing Sector Composition

The manufacturing industry is made up of a number of sub-industries: Fabricated metal product, food, beverage and tobacco, machinery, paper, primary metal, transportation equipment, wood product, and other.<sup>1</sup>

<sup>1</sup>The North American Industry Classification System (NAICS) is an industry classification system composed of sectors (two-digit codes), subsectors (three-digit codes), industry groups (four-digit codes), industries (five-digit codes) and country specific industries (six-digit codes)

### 1. NAICS 332 - fabricated metal product manufacturing

“The fabricated metal product manufacturing industry comprises establishments primarily engaged in forging, stamping, forming, turning and joining processes to produce ferrous and nonferrous metal products, such as cutlery and hand tools, architectural and structural metal products, boilers, tanks and shipping containers, hardware, spring and wire products, turned products, and bolts, nuts and screws.”<sup>14</sup>

### 2. NAICS 321 – wood product manufacturing

“There are three industry groups in this subsector, comprising establishments engaged in sawing logs into lumber and similar products, or preserving these products; making products that improve the natural characteristics of wood, by making veneers, plywood, reconstituted wood panel products or engineered wood assemblies; and making a diverse range of wood products, such as millwork.”<sup>15</sup>

### 3. NAICS 311 & 312 – food and beverage and tobacco product manufacturing

“The food manufacturing industry comprises establishments primarily engaged in producing food for human or animal consumption. The beverage and tobacco product manufacturing industry comprises establishments primarily engaged in manufacturing beverages and tobacco products.”<sup>16</sup>

### 4. NAICS 333 – machinery manufacturing

“The machinery manufacturing industry comprises establishments primarily engaged in manufacturing industrial and commercial machinery. These manufactures assemble parts into components, subassemblies and complete machines. They may make the parts themselves, using general metal-working processes, or purchase them.”<sup>17</sup>

### 5. NAICS 322 – paper manufacturing

“The paper manufacturing industry comprises establishments primarily engaged in manufacturing pulp, paper and paper products. The manufacture of pulp involves separating the cellulose fibres from other impurities in wood, used paper or other fibre sources. The manufacture of paper involves matting these fibres into a sheet. Converted paper products are produced from paper and other, materials by various cutting and shaping techniques.”<sup>18</sup>

### 6. NAICS 331 – primary metal manufacturing

“The primary metal manufacturing industry comprises establishments primarily engaged in smelting and refining ferrous and non-ferrous metals from ore, pig iron or scrap in blast or electric furnaces. Metal alloys are made with the introduction of other chemical elements. The output of smelting and refining, usually in ingot<sup>ii</sup> form, is used in rolling and drawing operations to produce sheet, strip, bars, rods and wire, and in molten form to produce castings and other basic metal products.”<sup>19</sup>

### 7. NAICS 336 – transportation equipment manufacturing

“The transportation equipment manufacturing industry comprises establishments primarily engaged in manufacturing equipment for transporting people and goods. The

<sup>ii</sup> Ingot is a mold in which metal is cast.<sup>27</sup>

industry groups are based on the various modes of transport - road, rail, air, and water. Three industry groups are based on road transportation equipment - for complete vehicles, for body and trailer manufacture and for parts.”<sup>20</sup>

#### 8. NAICS 313, 314, 315, 323, 325, 326, 327, 335, 337 & 339 – other manufacturing

The ‘other’ category includes the following manufacturing subsectors: textile mills, clothing manufacturing, leather and allied product manufacturing, printing and related support activities, petroleum and coal product manufacturing, chemical manufacturing, plastics and rubber product manufacturing, non-metallic mineral product manufacturing, computer and electronic product manufacturing, electrical equipment, appliance and component manufacturing, furniture and related product manufacturing, and miscellaneous manufacturing.<sup>21</sup>

### Manufacturing Sector Trends & Outlook in the Columbia Basin–Boundary

The following indicators will be examined within the Columbia Basin–Boundary region:

- Manufacturing sector establishments;
- Economic contributions; and
- Employment within the manufacturing sector.

These indicators are presented in detail below, including a description of what is measured and its importance, as well as current data and trends where available.

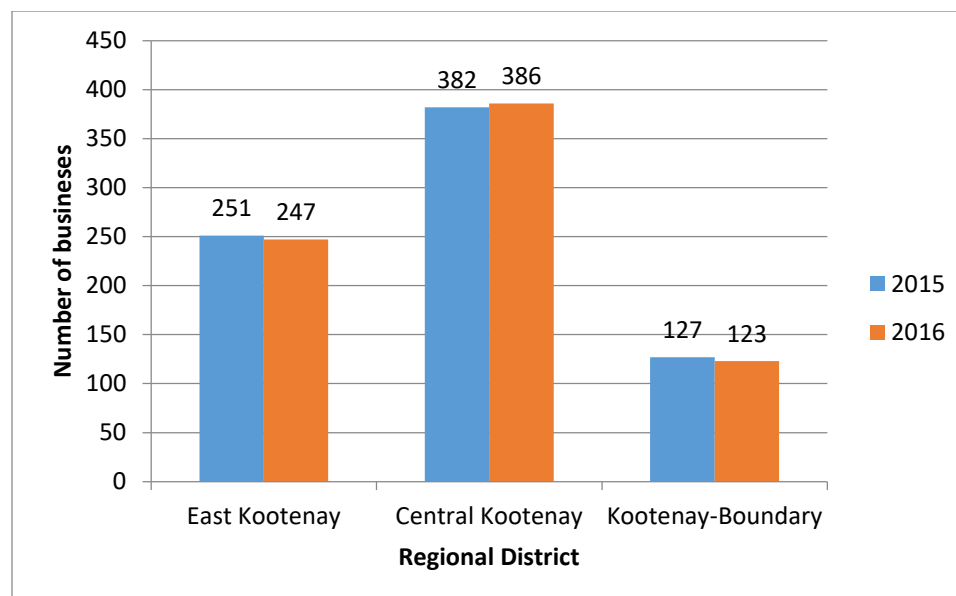
#### Manufacturing sector establishments

In 2016, BC was home to 18,891 manufacturing facilities<sup>iii</sup>, with the Kootenay Development Region containing 4% or 756.<sup>2</sup> A data request from BC Stats indicates that the count of manufacturing businesses in the Columbia Basin–Boundary was just slightly higher at 840. **Figure 4** provides a comparison between the three Regional Districts in the Columbia Basin–Boundary. The Central Kootenay Regional District has the highest number of manufacturing facilities with 386 in 2016, a slight increase from 2015. The East Kootenay follows with 247 in 2016, a slight decrease from 2015; and the Kootenay Boundary has the fewest with 123 in 2016, a slight decrease from 2015.<sup>iv</sup>

<sup>iii</sup> The count includes establishments with and without employees.

<sup>iv</sup> A change in methodology in 2014 means that comparing data with previous years may provide inaccurate results.

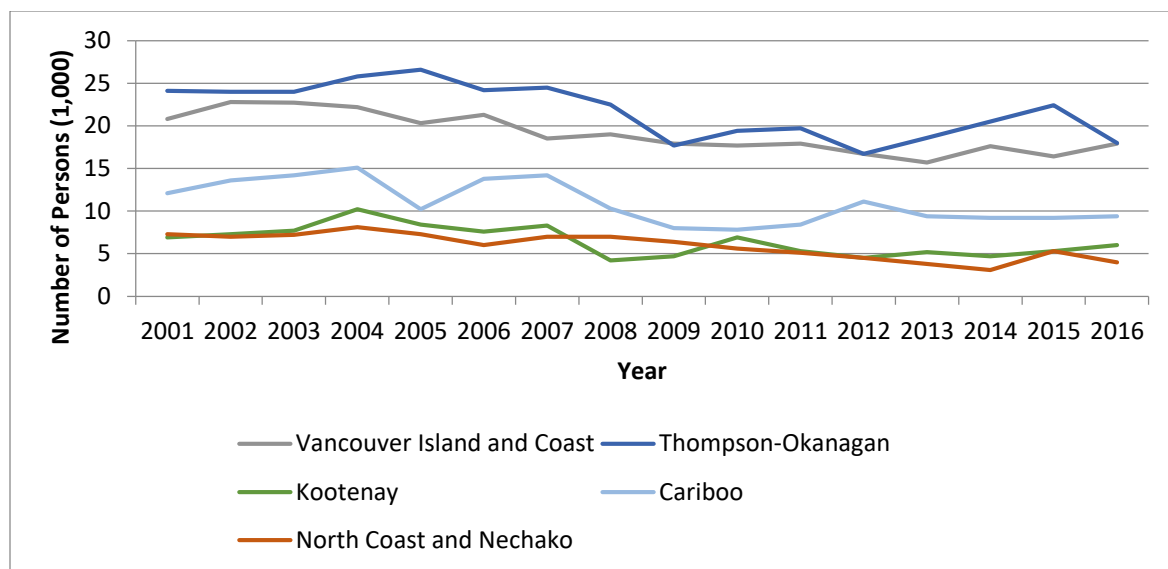




**Figure 4:** Count of manufacturing businesses by regional district, 2015 - 2016<sup>2</sup>

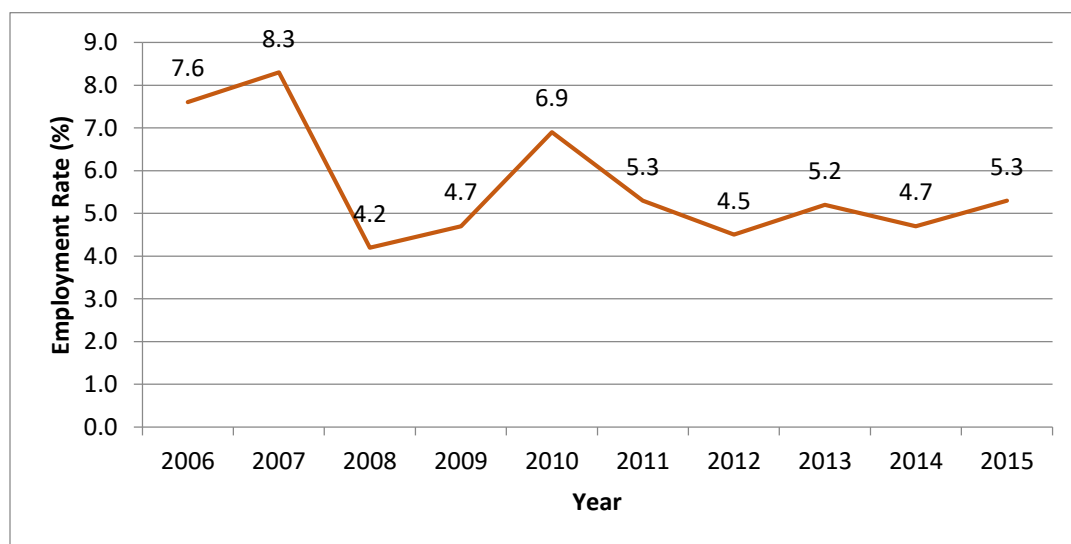
#### Economic contribution

The manufacturing sector in British Columbia is a vital part of the economy with major employment centers in the province (see **Figure 5**). In 2016, manufacturing was concentrated in the Lower Mainland – Southwest regions with 66.4% of all people employed in manufacturing working in that region. The Thompson–Okanagan region is the second largest Development Region to employ people in the manufacturing sector with 10.6%, followed closely by Vancouver Island and the Coast with 10.5%, the Cariboo region with 5.5%, and the Kootenay Development Region with 3.5%. The number of people employed in the manufacturing sector has ebbed and flowed in the Kootenay Development Region since 2001, with a high of 10,200 (2004) to a low of 4,200 (2008). In 2016, there were 6,000 people employed in the manufacturing sector in the Kootenay Development Region, representing a 28% increase since 2014.



**Figure 5:** Number of Persons (in thousands) employment by manufacturing 2001-2016<sup>22,v</sup>

**Figure 6** shows that 2007 was the peak employment rate in the manufacturing industry with 8.3%, followed by a sharp decline from which the industry is still recovering. The manufacturing employment rate in the Kootenay Development Region in 2015 was 5.3%.

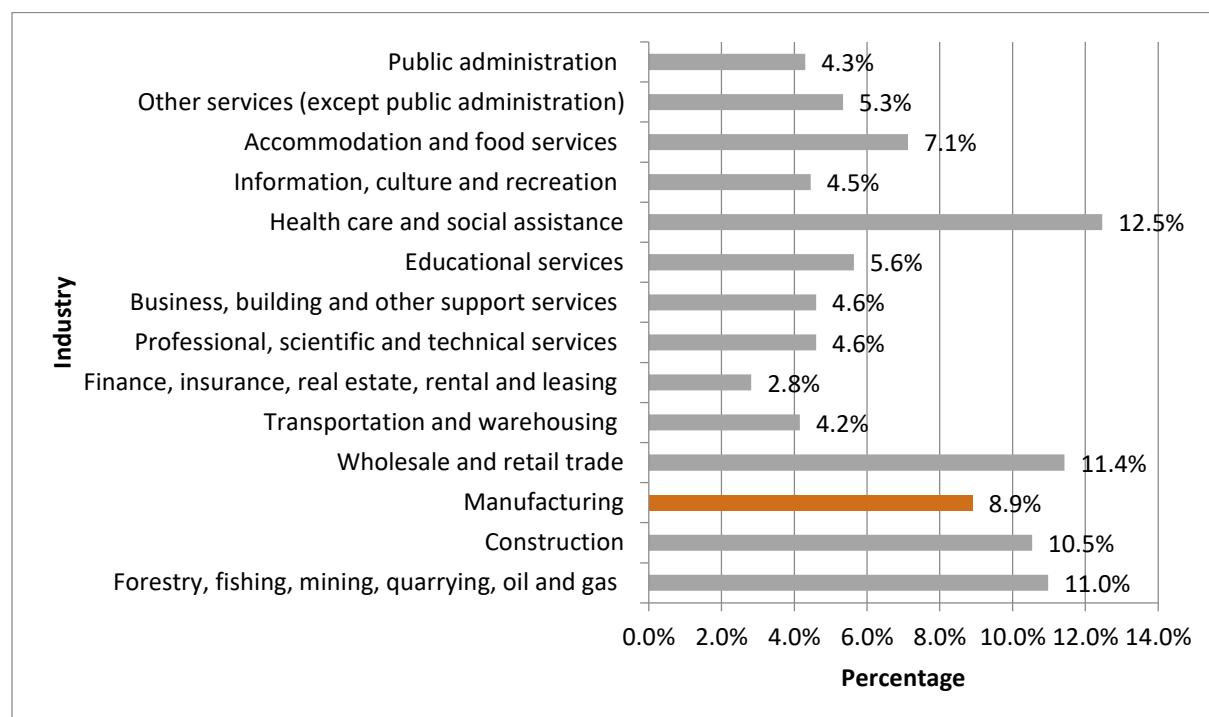


**Figure 6:** Manufacturing employment in the Kootenay Development Region from 2006 to 2015<sup>23</sup>

The Kootenay Development Region has a diverse economic base; with employment both in the service sector as well as the goods-producing sector. The services producing sector is the main employment sector, accounting for 67% of total employment in 2016, while the goods-producing sector makes up approximately 33% of total employment.<sup>22</sup> The manufacturing sector, accounts for 8.9% of total employment (see **Figure 7**) in the Kootenay Development Region, constituting

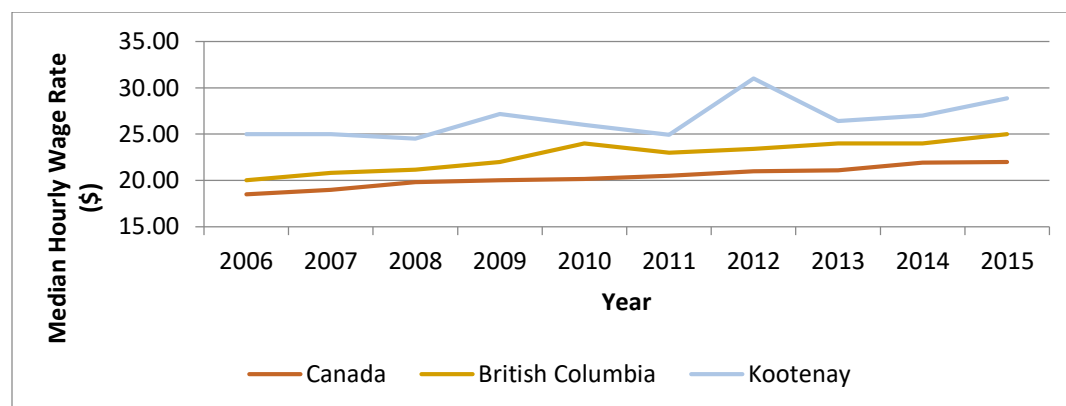
<sup>v</sup> The Northeast region was omitted from Figure 1 due to suppressed data, and the Lower Mainland - Southwest region was omitted from the graph to show the regional differences between the other regions.

the fifth highest employing sector after health and social assistance (12.5%), wholesale and retail trade (11.4%), construction (10.5%), and forestry, fishing, mining, quarrying, oil and gas (11.0%).



**Figure 7:** Percentage of employment by industry in the Kootenay Development Region, 2016<sup>22, vi</sup>

In 2015, median hourly wages for the manufacturing sector in the Kootenay Development Region were the third highest in the province at \$28.85, after the Cariboo and the Northeast, and higher than the provincial and national averages (see **Figure 8**). In comparison, the median hourly wage for all employees in all sectors of the economy in the Kootenays was \$23.90. Provincially, the wages in the durable goods industries were much higher than in non-durable goods, with the exception of paper. Paper placed second after primary metal paying the highest earnings, and food products paying the lowest.<sup>4</sup>



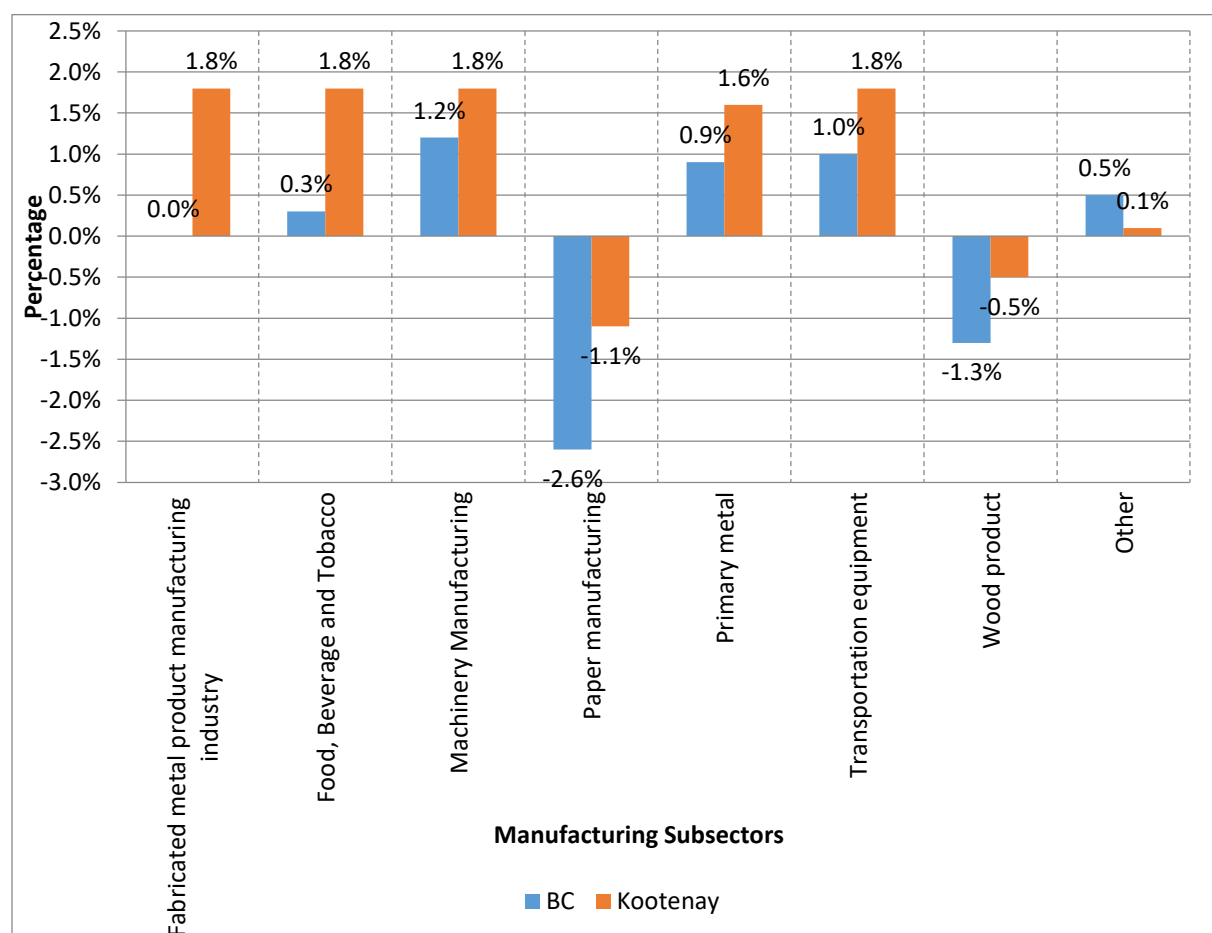
**Figure 8:** Median hourly wage rate, total employed, manufacturing sector, 2006 - 2015<sup>23</sup>

<sup>vi</sup> The Agriculture and Utilities industries were omitted due to suppressed data.

## Employment forecast

A total of 134,700 job openings are expected in the South East<sup>vii</sup> region by 2025.<sup>24</sup> Three in ten job openings are due to economic growth and the rest are to replace retired workers. Employment demand in the region is forecast to increase each year by 1.1 % on average, the same rate as the provincial average.<sup>8</sup>

Provincially, 98% of all job openings in the manufacturing industry will occur to replace workers who will leave the labour force over the next ten years.<sup>24</sup> As shown in **Figure 9**, in BC the paper manufacturing sector will see the lowest average annual growth rate of employment between 2016 and 2025 at a rate of -2.6%, while the machinery manufacturing will see the highest growth at 1.2%. In the Kootenay Development Region, the fabricated metal product manufacturing industry, food, beverage and tobacco industry, machinery manufacturing, and transportation equipment manufacturing will all see the highest rates of growth at 1.8%. Similar to the provincial profile, the paper manufacturing sector will see the lowest rate of growth at -1.1%.



**Figure 9:** Average growth rate of employment, manufacturing subsectors, 2016 - 2025<sup>14-21</sup>

As shown in **Figure 10**, the primary metal manufacturing subsector will see the highest number of job openings between 2015 and 2025 with 734 positions. This accounts for 30% of all jobs in

<sup>vii</sup> The South East region includes Thompson-Okanagan and Kootenay Census Economic Regions. Note that while this area does not match the Columbia Basin-Boundary region it covers the majority of the study region except for Valemount which is located in the Cariboo Census Economic Region.

the primary metal sector in the province (2,423 provincially). The wood product sector (476), other manufacturing (327), and paper manufacturing (253) are all sectors which will see higher numbers of job openings in the region. In total, there are an anticipated 2,148 job openings forecast for the manufacturing sector by 2025 in the Kootenay Development Region.



**Figure 10:** Industry job openings, Kootenay Development Region, 2015-2025<sup>14-21</sup>

#### Occupational forecast<sup>viii</sup>

None of the manufacturing occupations are in the top 10 occupations forecast to expand the fastest in the South East region.<sup>24</sup>

Given that the manufacturing industry is made up of a number of sub-industries (i.e., fabricated metal product, food, beverage and tobacco, machinery, paper, primary metal, transportation equipment, wood product, and other manufacturing), the number and range of occupations associated with this industry makes it very difficult to look at the occupational forecast for the manufacturing sector in its entirety. Many of the occupations identified as related to the manufacturing industry or one of its sub-industries are also related to other non-manufacturing industries, such as construction trades helpers and labourers, transport truck drivers, financial auditors and accountants, and restaurant and food service managers. For a complete list of all occupations associated with the manufacturing industry as included in the WorkBC Industry Outlook reports, refer to **Appendix B**. Given these constraints, this section will look only at the top 10 occupations identified based on largest number of job openings in the South East region<sup>24</sup>, and that are also considered occupations related to the manufacturing sector as per the WorkBC Industry Outlook for the manufacturing sub-industries.<sup>14-21,ix</sup> They include:

- (0621) Retail and wholesale trade managers
- (0631) Restaurant and food service managers
- (1111) Financial auditors and accountants

<sup>ix</sup> A complete list of all occupations is available from: <https://catalogue.data.gov.bc.ca/dataset/labour-market-outlook>

- (1221) Administrative officers
- (6421) Retail salespersons
- (6731) Light duty cleaners
- (6711) Food counter attendants, kitchen helpers and related support occupations
- (6733) Janitors, caretakers and building superintendents
- (7511) Transport truck drivers
- (7611) Construction trades helpers and labourers

### Labour demand-supply projection

Labour force supply less demand<sup>x</sup> (see **Table 1**) looks at the occupations related to the manufacturing sector in the South East region<sup>xi</sup> and examines the supply of workers against the demand for workers. Labour force demand is an estimate of the number of workers needed (i.e., employment) as well as the number of workers that are normally unemployed (e.g., due to transitioning between jobs, responding to seasonal fluctuations, or lack of skills match). Labour force supply represents the possible labour force, including supply from new entrants and from migrants.

As shown in **Table 1**, retail salespersons, transport truck drivers, retail and wholesale trade managers, food counter attendants, kitchen helpers and related support occupations are the occupations with the highest, sustained demand in the manufacturing sector until 2025 in the South East region.

<sup>x</sup> Labour Force Supply Less Demand: The difference between the Labour Force Supply and Labour Force Demand. If this value is positive, then Labour Force Supply is greater than Labour Force Demand.

<sup>xi</sup> Data is only available at the South East regional level.



Labour Force Supply Less Demand – South East Region												
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
0621 Retail and wholesale trade managers	13	15	-58	-109	-114	-124	-119	-93	-64	-62	-62	-777
0631 Restaurant and food service managers	30	3	-19	-35	-37	-40	-38	-30	-21	-20	-20	-227
1111 Financial auditors and accountants	-38	10	-12	-27	-29	-32	-31	-25	-17	-16	-16	-233
1221 Administrative officers	-27	5	-29	-55	-57	-66	-62	-50	-35	-33	-32	-441
6421 Retail salespersons	18	26	-90	-170	-178	-196	-188	-148	-102	-99	-98	-1225
6711 Food counter attendants, kitchen helpers and related support occupations	67	7	-53	-96	-104	-113	-109	-86	-61	-59	-59	-666
6731 Light duty cleaners	35	3	-41	-70	-74	-81	-79	-62	-44	-42	-42	-497
7511 Transport truck drivers	-287	64	-10	-69	-82	-100	-95	-73	-46	-46	-44	-788
7611 Construction trades helpers and labourers	18	2	-30	-42	-41	-54	-44	-38	-26	-24	-21	-300

**Table 1:** Labour Force Supply Less Demand, South East region<sup>25</sup>

### Labour demand due to growth & attrition

**Table 2** presents the estimated total number of job openings for the Kootenay Development Region between 2017 and 2025 due to expansion and replacement. Note that the Kootenay Development Region represents a slightly smaller geographic area than the Columbia Basin-Boundary region in so far as it excludes Valemount, Revelstoke, and Golden. Provincially, by 2025 it is expected that 69% of job openings will be due to retirements and deaths.<sup>8</sup>

In the Kootenay Development Region, the top occupations expected to generate the largest number of new openings (full year job openings) between the years 2017 – 2025 include: retail and wholesale trade managers (1,094), retail salespersons (844), and transport truck drivers (728).

Kootenay Development Region	Total job openings between 2017 and 2025
0621 Retail and wholesale trade managers	1094
0631 Restaurant and food service managers	173
1111 Financial auditors and accountants	132
1221 Administrative officers	534
6421 Retail salespersons	844
6711 Food counter attendants, kitchen helpers and related support occupations	278
6731 Light duty cleaners	492
6733 Janitors, caretakers and building superintendents	453
7511 Transport truck drivers	728
7611 Construction trades helpers and labourers	159

**Table 2:** Summary of potential job openings due to growth & attrition (in full-year jobs) by industry & occupation in manufacturing-related industries (2017-2025), Kootenay Development Region<sup>26</sup>

### Conclusion

The purpose of this profile is to identify current manufacturing sector market trends and issues, including current and projected labour market needs to help workforce development partners within the Columbia Basin-Boundary region understand and respond to changing labour market demands.

In total, there are an anticipated 2,148 job openings forecast for the manufacturing sector by 2025 in the Kootenay Development Region. The primary metal manufacturing subsector will see the highest number of job openings between 2015 and 2025 with 734 positions, and that accounts for 30% of all jobs in the province within that subsector. At a subsector level, job openings will be highest in the primary metal (734), wood products manufacturing (476), other (327), paper (253), food, beverage and tobacco (187), transportation equipment (71), machinery (66), and fabricated metal product (34). Job *openings* for specific occupations relating to the manufacturing sector are highest for transport truck drivers (728), retail and wholesale trade managers (1,094), and retail salesperson (844). Retail salespersons (-1225), transport truck drivers (-788), retail and wholesale trade managers (-777), food counter attendants, kitchen

helpers and related support occupations (-666) are the occupations with the highest, sustained *demand* in the manufacturing sector until 2025 in the South East region.

Despite being hit hard by the 2008-2009 recession, the manufacturing sector has made a relatively strong recovery in output and employment.<sup>4</sup> External factors such as the economic recovery of the United States, increasing exports to high-growth destinations like China, and efforts to diversify market access can have benefits to BC's manufacturing sector.

## Appendix A: References & Resources

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## Appendix B - BC Manufacturing Sector NAICS & NOC Codes

### BC Manufacturing Sector NAICS Codes

NAICS	Description
311	Food manufacturing
312	Beverage and tobacco product manufacturing
313	Textile mills
314	Textile product mills
315	Clothing manufacturing
316	Leather and allied product manufacturing
321	Wood product manufacturing
322	Paper manufacturing
323	Printing and related support activities
324	Petroleum and coal product manufacturing
325	Chemical manufacturing
326	Plastics and rubber products manufacturing
327	Non-metallic mineral product manufacturing
331	Primary metal manufacturing
332	Fabricated metal product manufacturing
333	Machinery manufacturing
334	Computer and electronic product manufacturing
335	Electrical equipment, appliance and component manufacturing
336	Transportation equipment manufacturing
337	Furniture and related product manufacturing
339	Miscellaneous manufacturing

### Manufacturing Sector National Occupation Classification (NOC) Codes

Referenced in Work BC Industry Outlook Profiles for fabricated metal product, food, beverage and tobacco, machinery, paper, primary metal, transportation equipment, wood product, and other.<sup>14–21</sup>

Code	NOC Occupation
0016	Senior managers - construction, transportation, production and utilities
0111	Financial managers
0113	Purchasing managers
0211	Engineering managers
0213	Computer and information systems managers
0601	Corporate sales managers
0621	Retail and wholesale trade managers
0631	Restaurant and food service managers
0714	Facility operation and maintenance managers
0811	Managers in natural resources production and fishing



Code	NOC Occupation
0911	Manufacturing managers
1111	Financial auditors and accountants
1121	Human resources professionals
1122	Professional occupations in business management consulting
1123	Professional occupations in advertising, marketing and public relations
1215	Supervisors, supply chain, tracking and scheduling co-ordination occupations
1221	Administrative officers
1225	Purchasing agents and officers
1431	Accounting and related clerks
1521	Shippers and receivers
2121	Biologists and related scientists
2122	Forestry professionals
2131	Civil engineers
2132	Mechanical engineers
2133	Electrical and electronics engineers
2141	Industrial and manufacturing engineers
2142	Metallurgical and materials engineers
2146	Aerospace engineers
2171	Information systems analysts and consultants
2173	Software engineers and designers
2174	Computer programmers and interactive media developers
2243	Industrial instrument technicians and mechanics
4163	Business development officers and marketing researchers and consultants
5244	Artisans and craftspersons
6221	Technical sales specialists - wholesale trade
6332	Bakers
6342	Tailors, dressmakers, furriers and milliners
6411	Sales and account representatives - wholesale trade (non-technical)
6421	Retail salespersons
6711	Food counter attendants, kitchen helpers and related support occupations
6731	Light duty cleaners
6732	Specialized cleaners
6733	Janitors, caretakers and building superintendents
7231	Machinists and machining and tooling inspectors
7233	Sheet metal workers
7235	Structural metal and platework fabricators and fitters
7237	Welders and related machine operators
7242	Industrial electricians
7272	Cabinetmakers
7311	Construction millwrights and industrial mechanics
7315	Aircraft mechanics and aircraft inspectors
7384	Other trades and related occupations, n.e.c.
7452	Material handlers
7511	Transport truck drivers
7611	Construction trades helpers and labourers
7612	Other trades helpers and labourers
8614	Mine labourers
9211	Supervisors, mineral and metal processing
9213	Supervisors, food, beverage and associated products processing

Code	NOC Occupation
9215	Supervisors, forest products processing
9227	Supervisors, other products manufacturing and assembly
9231	Central control and process operators, mineral and metal processing
9235	Pulping, papermaking and coating control operators
9241	Power engineers and power systems operators
9243	Water and waste treatment plant operators
9411	Machine operators, mineral and metal processing
9412	Foundry workers
9416	Metalworking and forging machine operators
9418	Other metal products machine operators
9421	Chemical plant machine operators
9422	Plastics processing machine operators
9431	Sawmill machine operators
9432	Pulp mill machine operators
9433	Papermaking and finishing machine operators
9434	Other wood processing machine operators
9435	Paper converting machine operators
9436	Lumber graders and other wood processing inspectors and graders
9437	Woodworking machine operators
9442	Weavers, knitters and other fabric making occupations
9446	Industrial sewing machine operators
9461	Process control and machine operators, food, beverage and associated products processing
9462	Industrial butchers and meat cutters, poultry preparers and related workers
9463	Fish and seafood plant workers
9521	Aircraft assemblers and aircraft assembly inspectors
9522	Motor vehicle assemblers, inspectors and testers
9523	Electronics assemblers, fabricators, inspectors and testers
9526	Mechanical assemblers and inspectors
9531	Boat assemblers and inspectors
9532	Furniture and fixture assemblers and inspectors
9533	Other wood products assemblers and inspectors
9536	Industrial painters, coaters and metal finishing process operators
9537	Other products assemblers, finishers and inspectors
9611	Labourers in mineral and metal processing
9612	Labourers in metal fabrication
9614	Labourers in wood, pulp and paper processing
9615	Labourers in rubber and plastic products manufacturing
9617	Labourers in food, beverage and associated products processing
9618	Labourers in fish and seafood processing
9619	Other labourers in processing, manufacturing and utilities