



BC's Food and Beverage Processing Industry

Industry Overview and Economic Impact Analysis

Prepared for the BC Food Processors Association
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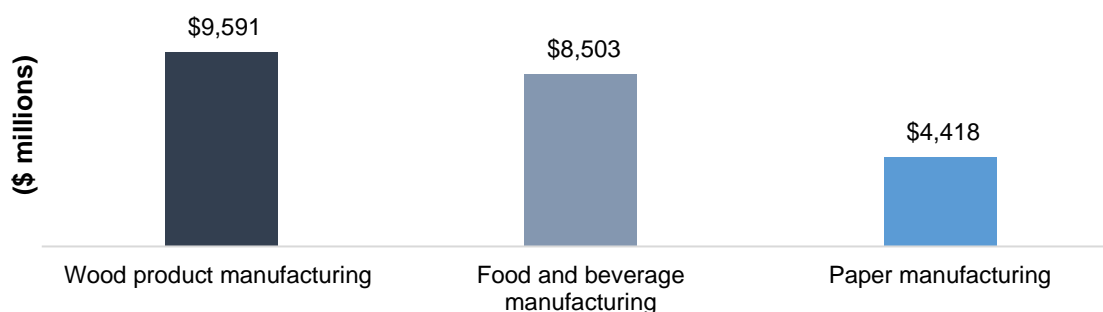
1. EXECUTIVE SUMMARY

The BC Food Processors Association (“BCFPA”) commissioned MNP LLP (“MNP”) to carry out an industry overview and economic impact assessment of the BC food and beverage processing industry (the “Industry”).

INDUSTRY OVERVIEW

In 2013, the Industry generated approximately \$8.5 billion in total revenues, making it the second largest manufacturing industry in BC after the wood product manufacturing industry (Figure A).¹

Figure A: Revenues by Major Manufacturing Industries in BC (2013)



In recent years there has been sustained growth in the total revenues of the Industry. The Industry’s total revenues increased by 5.9 percent, from \$8.0 billion in 2009 to \$8.5 billion in 2013.

Table A summarizes the key statistics of the Industry in 2013.

Table A: Key Industry Statistics in 2013

- There were approximately 1,108 food and beverage processing establishments in BC, of which 87 percent or 967 were micro and small operations employing between 1 and 49 people.²
- The Industry accounted for approximately 19 percent of BC’s total manufacturing revenues.³
- BC exported approximately \$1.9 billion worth of food and beverage processed products, which accounted for 7 percent of Canada’s total food and beverage processing exports.^{4,5}
- The Industry generated an estimated 28,684 direct jobs within the province⁶, with total expenditures on wages and salaries of approximately \$1.0 billion.⁷

¹ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

² Statistics Canada. Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (Accessed: April 27, 2016).

³ Ibid.

⁴ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

⁵ Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

⁶ Statistics Canada, Table 281-0023 - Survey of Employment, Payrolls and Hours (SEPH), employment by type of employee and detailed North American Industry Classification System (NAICS), 2013.

⁷ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

ECONOMIC IMPACTS OF THE INDUSTRY

The Industry is a major contributor to the provincial economy. In 2013, the Industry was estimated to have generated the following economic impacts in BC:

- Approximately \$15.1 billion in total output, consisting of direct output of \$8.5 billion and indirect and induced output of \$6.6 billion.
- Approximately \$6.0 billion in total GDP, consisting of direct GDP of \$2.9 billion and indirect and induced GDP of \$3.1 billion.
- Approximately 65,271 total full time equivalent (FTE) positions, consisting of direct employment of 28,684 FTEs and indirect and induced employment of 36,587 FTEs.
- Approximately \$1.4 billion in total federal, provincial and municipal tax revenue, consisting of direct tax revenue of \$618 million and indirect and induced tax revenue of \$762 million.

Table B summarizes the estimated economic impacts generated in 2013 by the Industry.

	Output (million)	GDP (million)	Employment (FTEs) ⁸	Federal Tax (million)	Provincial Tax (million)	Municipal Tax (million)
Direct	\$8,503	\$2,921	28,684	\$359	\$226	\$33
Indirect and Induced	\$6,560	\$3,049	36,587	\$385	\$291	\$86
Total	\$15,063	\$5,970	65,271	\$744	\$517	\$119

The economic impacts of the Industry are comparable with many of the province's largest sectors, including mining, film and television production and new home construction. The following are comparisons of the Industry's impacts with three other important industries in BC:

- **Mining.** The direct employment supported by the Industry (28,684 FTEs) in 2013 was roughly three times that generated by the BC mining industry (10,720 FTEs).⁹
- **High End Television Series.** The total employment created by the BC food and beverage processors (65,271 FTEs) in 2013 was equivalent to the employment that would be created from the production of approximately 58 high-end television series in BC.
- **New Home Construction.** The total employment supported by the Industry (65,271 FTEs) in 2013 was roughly equivalent to the total employment supported by the construction of all new homes in the province that year (approximately 27,000 housing starts).¹⁰

⁸ MNP used the direct employment reported by Statistics Canada's Survey of Employment, Payrolls and Hours (SEPH) to report on the direct full time equivalents of the BC food and beverage processing industry.

⁹ PWC, Looking Forward - The Mining Industry in British Columbia 2015, available here: <http://www.pwc.com/ca/en/mining/publications/pwc-mining-industry-british-columbia-2016-en.pdf>

¹⁰ Canadian Home Builders' Association, "British Columbia Economic Impacts of New Home Construction," available here: <http://chbafiles1.ca/impacts/3.%20British%20Columbia.%20New%20Residential%20Construction.pdf>. Housing start data is from Statistics Canada, "Housing Starts, by Province," CANSIM 027-0009, available here: <http://www.statcan.gc.ca/tables-tableaux/sum-som/I01/cst01/manuf05-eng.htm>

KEY RESEARCH FINDINGS

There were a number of key study findings based on a survey of BCFPA members, a roundtable panel of Industry leaders, and published reports on the Industry. The following is a summary of the key findings of the study:

The BC Industry is comprised mainly of small companies that are focused on value added and niche products.

The Industry consists mainly of small companies that are focused on value added and niche products. There are currently over 1,100 food and beverage processing firms located throughout the province, with over 90 percent employing fewer than 100 staff.¹¹ Compared with similar jurisdictions across Canada, the Industry is more focused on value added and niche markets. BC is highly diverse in terms of ethnicity, culture, and lifestyle. Such diversity complements the small size of BC's food and beverage processors, which have capacity levels more suitable for niche market sizes. Niche food markets can include products that are natural, organic, convenient/prepared, gluten and lactose free, as well as natural health supplements. In addition, many immigrants to BC have strong ties to their native countries, which has resulted in the introduction of new cultures and cuisines to BC, and which has created greater potential for exports of BC products to immigrants' home countries.

The BC Industry faces labour shortages and is in need of a labour market strategy.

The Industry is characterized by a variety of positions and labour needs, including both skilled and unskilled labour. According to the survey of BCFPA members and roundtable panelists, the key positions that are experiencing shortages include technical trades, supervisors, managers, and machine operators. Industry representatives stressed the need for a labour market strategy to address the current and future needs of the Industry.

The BC Industry lags behind other major food processing provinces in terms of productivity.

Industry representatives stated that the Industry is facing challenges in terms of productivity. Published reports reviewed as a part of our study support this perception. For example, according to an analysis of the productivity performance of Canadian food manufacturing completed by the Centre for Study of Living Standards, the Industry has lower labour productivity than that of other major food processing provinces in Canada. At \$40.10 in output per hour worked, BC lags behind provinces such as Quebec (\$51.72), Alberta (\$54.55) and Ontario (\$64.38).¹² As well, the high cost of new technology and the small scale of most BC food and beverage processors may lessen the incentive for companies to invest in new machinery or technologies that may increase productivity.

The BC Industry faces increased global competition.

Almost two-thirds of survey respondents agreed that global competition in food and beverage processing is a key threat to the Industry. Global competition comes in the form of increased production of foreign-made products, as well as foreign protectionism and subsidies for foreign agricultural commodities and

¹¹ Statistics Canada. Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (accessed: April 27, 2016).

¹² Centre for Study of Living Standards, "A Detailed Analysis of the Productivity Performance of Canadian Food Manufacturing," 2011, available here: <http://www.csls.ca/reports/csls2011-07.pdf>

processed products. In many foreign jurisdictions, food and beverage production and distribution are regulated by multiple levels of government and may not be standardized across international jurisdictions.¹³ Being compliant with domestic and international regulations therefore requires access to overseas distribution channels, and may be a barrier to small food processors in BC.

A key concern of Industry representatives was that global food and beverage processing regulations are not uniform, and therefore BC-based companies must meet domestic requirements as well as international requirements for the markets into which they export. In addition, the roundtable panelists noted that some products imported into Canada do not meet the Canadian standards required in domestic production plants.

The BC Industry needs support in the area of research and development and commercialization.

Survey respondents stated that many companies are concerned about innovation. It was noted that the Industry often views innovation as strictly new product development, whereas many other industries and other successful food and beverage processing jurisdictions, view innovation in a broader way that includes processes, people, markets, and products.

Among the comparator provinces, BC is the only one without a food innovation centre. Industry representatives noted that it may be difficult for BC food and beverage processors to be innovative, since small and medium sized companies often lack the capital necessary to make investments in equipment and technical skills. Industry representatives noted there may be an opportunity for a food innovation centre in BC similar to food innovation centres in other provinces that could support food and beverage processors with research and development and commercialization.

¹³ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

2. INTRODUCTION

2.1 Background and Study Purpose

The BC Food Processors Association (“BCFPA”) commissioned MNP LLP (“MNP”) to carry out an industry overview and economic impact assessment of the BC food and beverage processing industry (the “Industry”).

The scope of the study, which was finalised in collaboration with the BCFPA, included:

- An overview of the Industry, along with summary of key statistics relevant to the economic performance of the Industry and its sub-industries.
- An analysis of historical trends in Industry statistics.
- An analysis of the Industry against other major food and beverage processing provinces in Canada.
- An analysis of the economic impacts generated by the Industry. The analysis quantified output, GDP, employment, and government tax revenues.
- An analysis of the strengths, weaknesses, opportunities, and threats facing the Industry.
- An overview of programs available to food and beverage processors in BC.

Not included in the scope of the study were:

- An in depth analysis of global market opportunities for the Industry.
- An analysis of the strengths, weaknesses, opportunities, and threats facing individual food and beverage processors in BC.
- Recommendations on actions or policy changes for the Industry.

2.2 Our Approach

In preparing this report, MNP carried out the following activities:

- Gathered industry data and statistics, including trends and benchmarking data, through agencies and sources such as Statistics Canada and Innovation, Science and Economic Development Canada.
- Conducted a roundtable panel and an online survey of food and beverage processors to gather information about the strengths, challenges, opportunities, and threats facing the Industry.
- Estimated the economic impacts of the Industry using an input-output methodology with multipliers published by Statistics Canada.

2.3 Organization of the Report

The remaining sections of the report are organized as follows:

- Section 3 provides an introduction to and definition of the Industry, along with an industry value chain depicting the linkages between the Industry and its suppliers and other sectors.
- Section 4 provides an overview of the Industry, along with summary of key statistics relevant to the economic performance of the Industry and its sub-industries.
- Section 5 contains an overview of historical changes in the Industry’s statistics.
- Section 6 compares the Industry’s statistics with those of other major food and beverage processing provinces in Canada.
- Section 7 provides a summary of the economic impacts generated by the Industry.

- Section 8 provides the strengths, challenges, opportunities, and threats facing the Industry.
- Section 9 provides an overview of programs available to the Industry.
- Section 10 concludes the report.
- The appendices include definitions of sub-industries, data sources, and gaps, a glossary of economic impact terms, a summary of the methodology used to estimate the economic impacts along with relevant assumptions, and background information about MNP.

2.4 Report Limitations

This report is provided for information purposes and is intended for general guidance only. It should not be regarded as comprehensive or a substitute for personalized, professional advice.

We have relied upon the completeness, accuracy, and fair presentation of all information and data obtained from industry representatives and public sources. The accuracy and reliability of the findings and opinions expressed in this report are conditional upon the completeness, accuracy, and fair presentation of the information underlying them. As a result, we caution readers not to rely upon any findings or opinions for business or investment purposes and disclaim any liability to any party who relies upon them as such.

Additionally, the findings and opinions expressed in the presentation constitute judgments as of the date of the presentation, and are subject to change without notice. MNP is under no obligation to advise of any change brought to its attention which would alter those findings or opinions.

3. DEFINITION OF THE BC FOOD AND BEVERAGE PROCESSING INDUSTRY

3.1 Definition of the Industry

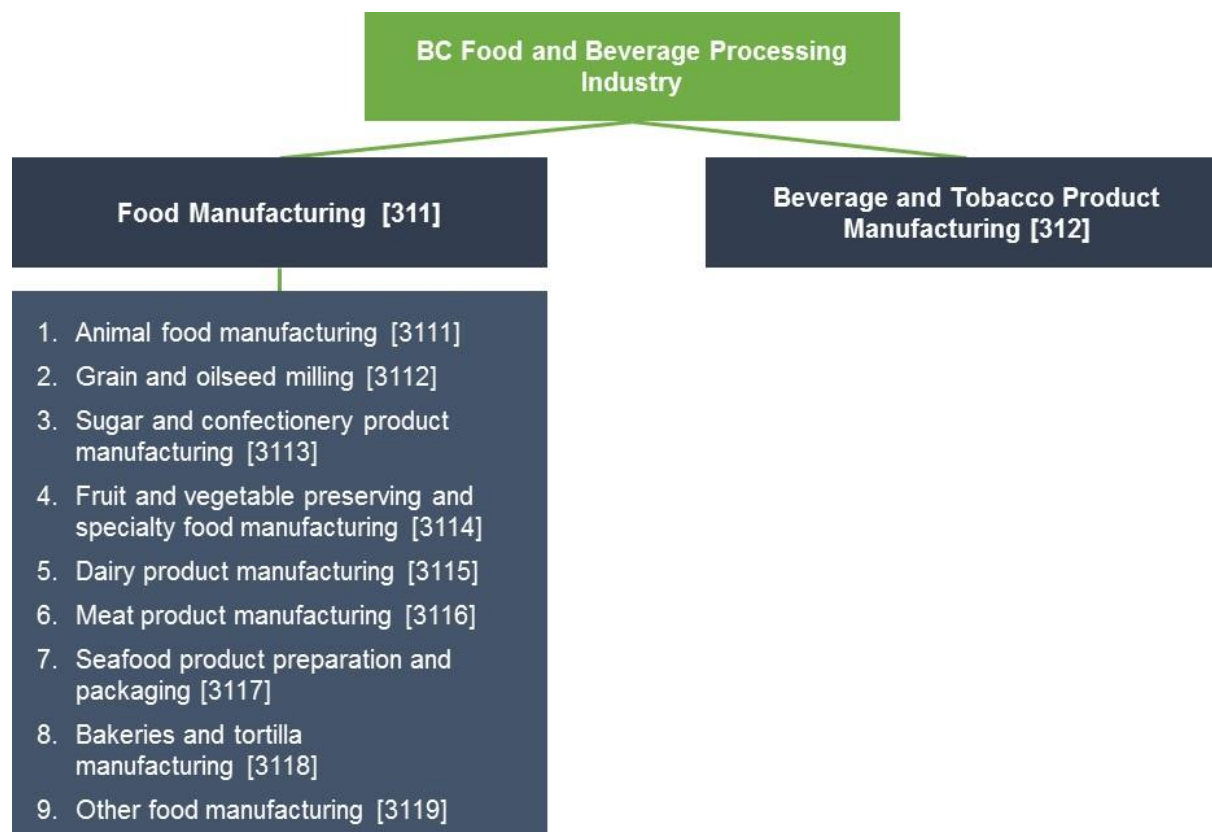
As shown in Figure 1, the Industry is comprised of businesses classified into the following two North American Industry Classification System (NAICS) Codes:

- Food manufacturing (NAICS 311).
- Beverage and tobacco product manufacturing (NAICS 312).

While data for food manufacturing is reported by Statistics Canada for nine different sub-industries, data for beverage and tobacco product manufacturing is only reported at an aggregate level. Therefore, for the purposes of this study, we have categorized beverage and tobacco product manufacturing as a tenth sub-industry.

Appendix A includes sub-industry definitions as defined by Statistics Canada.

Figure 1: Overview of the BC Food and Beverage Processing Industry



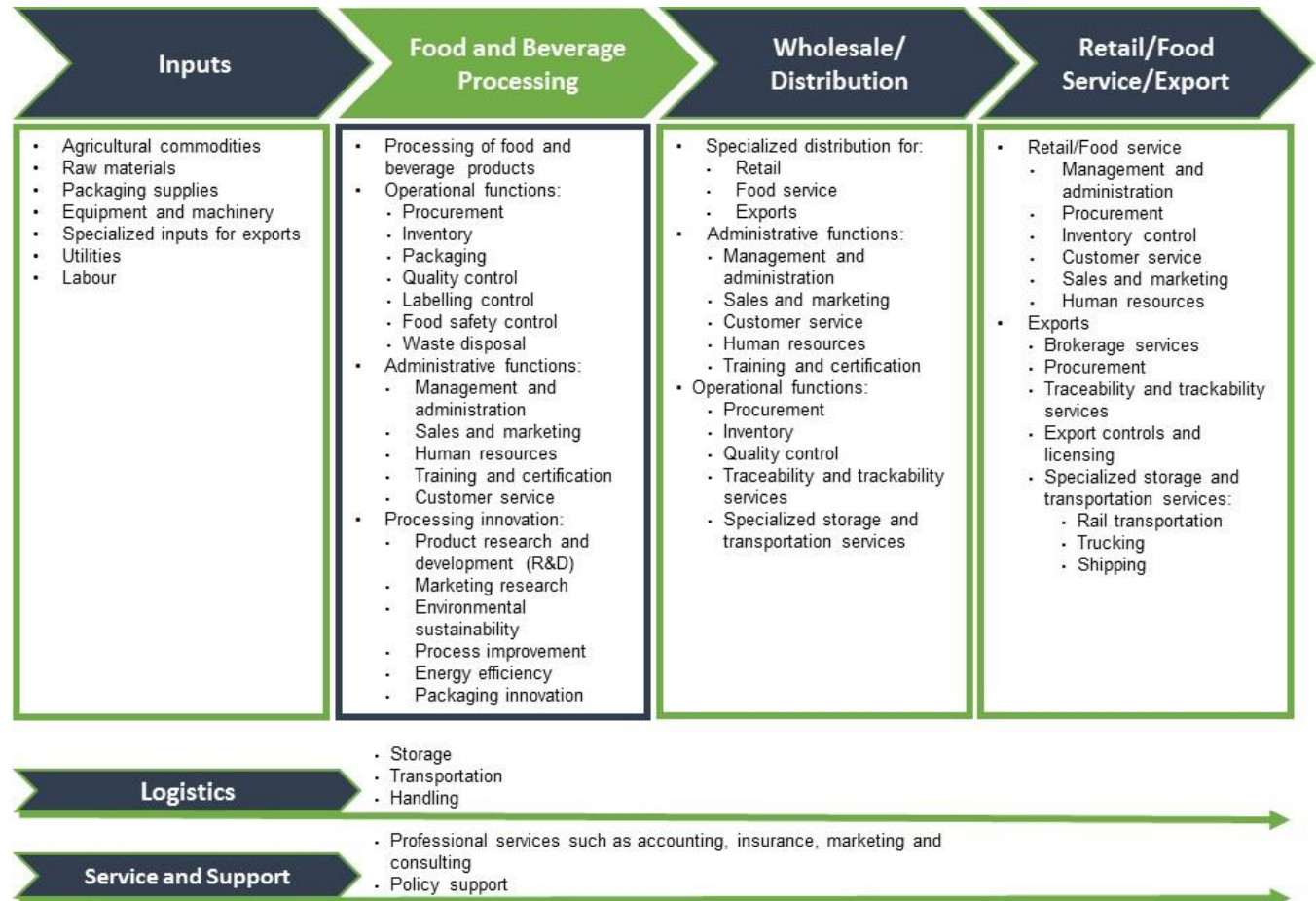
Source: Statistics Canada, "North American Industry Classification System (NAICS)" 2012.

3.2 Industry Value Chain

A value chain illustrates the activities carried out by an industry that add value at each stage in the production process. Using the value chain as a starting point, linkages between an industry's main components and other industries can be highlighted. This is done by identifying inputs provided by suppliers and external service providers that the Industry uses to create and deliver goods and services.

The value chain graphic in Figure 2 displays the linkages between the Industry and its suppliers and organizations with which it interacts.

Figure 2: BC Food and Beverage Processing Industry Value Chain



4. OVERVIEW OF THE BC FOOD AND BEVERAGE PROCESSING INDUSTRY

4.1 Overview of the Industry

This section contains an overview of key statistics of the Industry. It is based on available industry statistics from government sources, including Statistics Canada and Innovation, Science and Economic Development Canada. For a full list of data sources, please see Appendix B.

KEY INDUSTRY STATISTICS

Table 1 summarizes the key statistics of the Industry in 2013.

Table 1: Key Statistics of the Industry in 2013¹⁴

Key Industry Statistics	(\$ millions)
Total revenue¹⁵	\$8,503
Total expenses¹⁶	\$7,627
Net profit¹⁷	\$876
Value of exports^{18,19}	\$1,887
Value of imports^{20,21}	\$3,966
Direct employment²²	28,684
Number of establishments^{23,24,25}	1,108

¹⁴ Please note that the estimates for the food and beverage processing industry include estimates for the combined food, beverage and tobacco processing sub-industries.

¹⁵ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

¹⁶ Ibid.

¹⁷ Net profit was estimated by subtracting total expenses from total revenues.

¹⁸ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

¹⁹ Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

²⁰ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

²¹ Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

²² Statistics Canada, Table 281-0023 - Survey of Employment, Payrolls and Hours (SEPH), employment by type of employee and detailed North American Industry Classification System (NAICS), 2013.

²³ Statistics Canada. Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (Accessed: April 27, 2016).

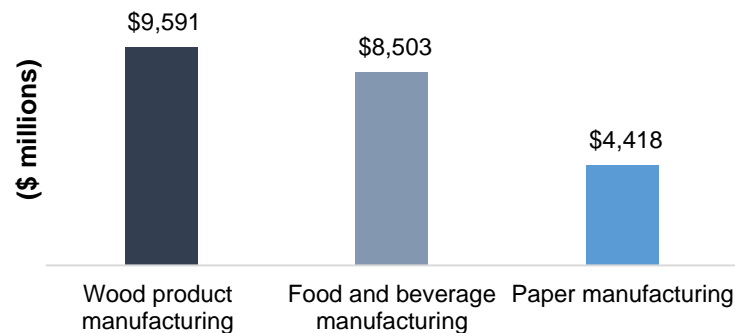
²⁴ Please note that in addition to the 1,108 food and beverage processing establishments with employees, there were 474 intermediate food and beverage processing establishments in BC in 2013. Intermediate establishments are categories as those establishments that do not maintain an employee payroll, but may have a workforce which consists of contracted workers, family members or business owners. This category also includes employers that did not have employees in the last 12 months.

²⁵ Please note that 2014 and 2015 estimates for number of establishments are available through Statistics Canada. We report estimates for number of statistics for the year 2013 to be consistent with the remaining industry statistics for which only 2013 data is published.

REVENUES

The Industry generated approximately \$8.5 billion in total revenues in 2013, making it the second largest manufacturing industry in BC after the wood product manufacturing industry.²⁶ In 2013, the Industry accounted for approximately 19 percent of BC's total manufacturing revenues.²⁷

Figure 3: Revenues by Major Manufacturing Industries in BC (2013)

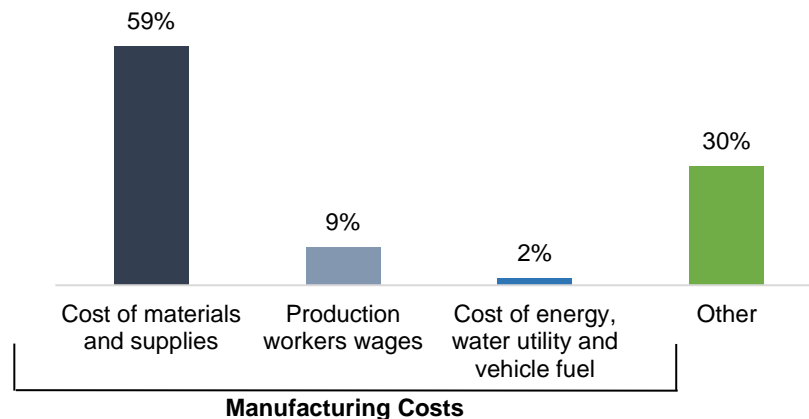


EXPENSES

In 2013, the total expenditures by the Industry amounted to \$7.6 billion.²⁸ Approximately 70 percent of the Industry's total costs were considered manufacturing costs.²⁹ The three most important categories of manufacturing costs were materials and supplies, production worker wages, and cost of energy, water utility and vehicle fuel.

As shown in Figure 4, the cost of materials and supplies were the largest cost for BC food and beverage processors, accounting for 59 percent of total expenses.

Figure 4: Industry's Expenses by Type



²⁶ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

²⁷ Ibid.

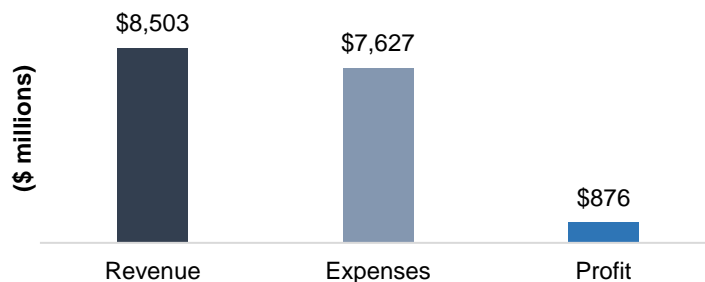
²⁸ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

²⁹ Please note that the distribution of expenses by type is not available for the year 2012. Therefore, data for the year 2012 was used to illustrate the distribution of industry expenses by type.

NET PROFIT

In 2013, the Industry generated an estimated \$876 million in net profit, which equated to a net profit margin of approximately 10 percent.³⁰

Figure 5: Industry Revenue, Expenses, and Net Profit (2013)

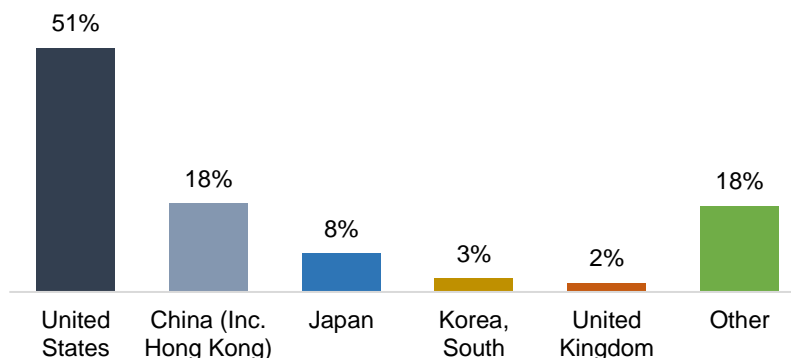


EXPORTS

In 2013, BC exported approximately \$1.9 billion worth of food and beverage processed products, which accounted for 7 percent of Canada's total food and beverage processing exports.^{31,32} The five main export markets for BC's food and beverage processed products were the United States, China, Japan, South Korea, and the United Kingdom.³³ Approximately 25 percent of the value of the Industry's manufactured goods were exported and about 75 percent of the Industry's manufactured goods were destined for the domestic market.³⁴

As shown in Figure 6, the United States was BC's largest export destination for food and beverage processed products, and accounted for \$962 million, or 51 percent of the total value of BC's food and beverage processed exports.³⁵

Figure 6: Value of the Industry's Exports by Market (2013)



³⁰ MNP estimated net profit by subtracting total expenses from total revenues. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

³¹ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

³² Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

³³ Ibid.

³⁴ Export intensity was calculated as total exports as share of revenue from goods manufactured.

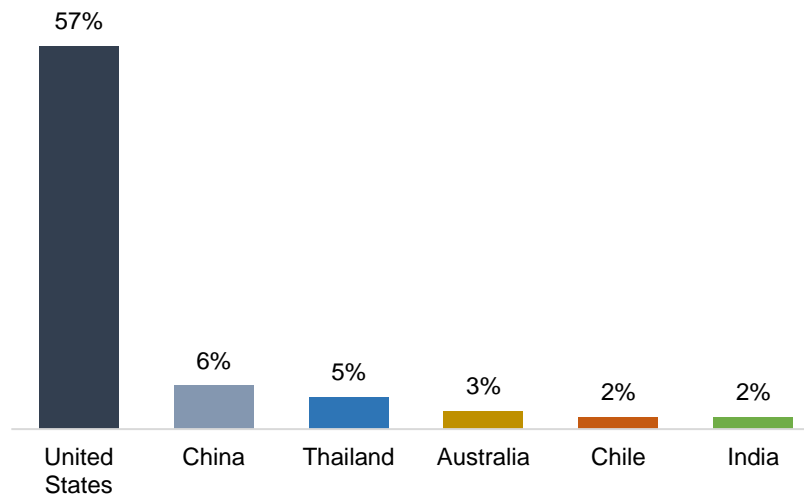
³⁵ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

IMPORTS

In 2013, BC imported approximately \$4.0 billion worth of food and beverage processed products, which accounted for 15 percent of Canada's total food and beverage processing imports.^{36,37} The five main countries from which BC imported food and beverage products were the United States, China, Thailand, Australia, and Chile.³⁸

As shown in Figure 7, the United States was the largest market from which BC imported food and beverage products, and accounted for \$2.3 billion, or 57 percent of the total value of BC's food and beverage imports.³⁹

Figure 7: Value of the Industry's Imports by Market (2013)



³⁶ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

³⁷ Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

³⁸ Ibid.

³⁹ Ibid.

DIRECT EMPLOYMENT

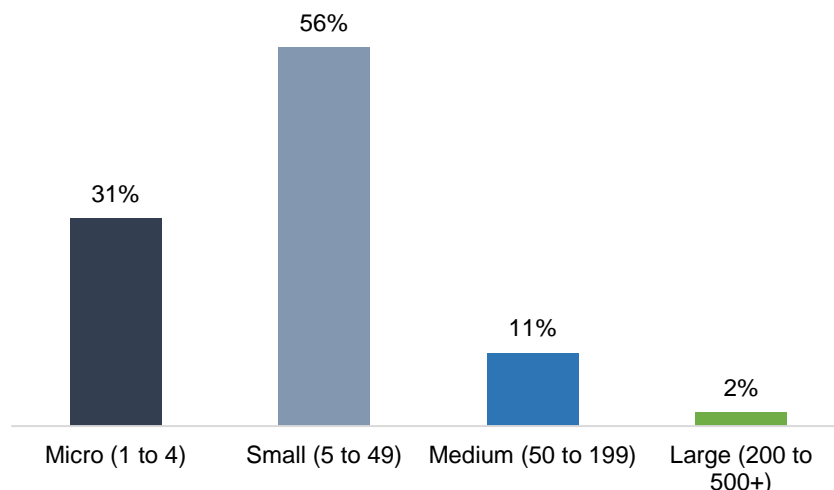
In 2013, the Industry generated an estimated 28,684 direct jobs within the province,⁴⁰ with total expenditures on wages and salaries of approximately \$1.0 billion.⁴¹

NUMBER OF ESTABLISHMENTS

In 2013, BC had approximately 1,108 food and beverage processing establishments, of which 87 percent were micro and small operations.^{42,43}

As shown in Figure 8, the distribution of the Industry establishments by size was as follows: 87 percent were micro and small establishments employing between 1 and 49 people, 11 percent were medium-sized employing between 50 and 199 people, and 2 percent were large-sized employing over 200 people.⁴⁴

Figure 8: Industry's Number of Establishments by Size (2013)



⁴⁰ Statistics Canada, Table 281-0023 - Survey of Employment, Payrolls and Hours (SEPH), employment by type of employee and detailed North American Industry Classification System (NAICS), 2013.

⁴¹ Statistics Canada, Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

⁴² Statistics Canada, Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (Accessed: April 27, 2016).

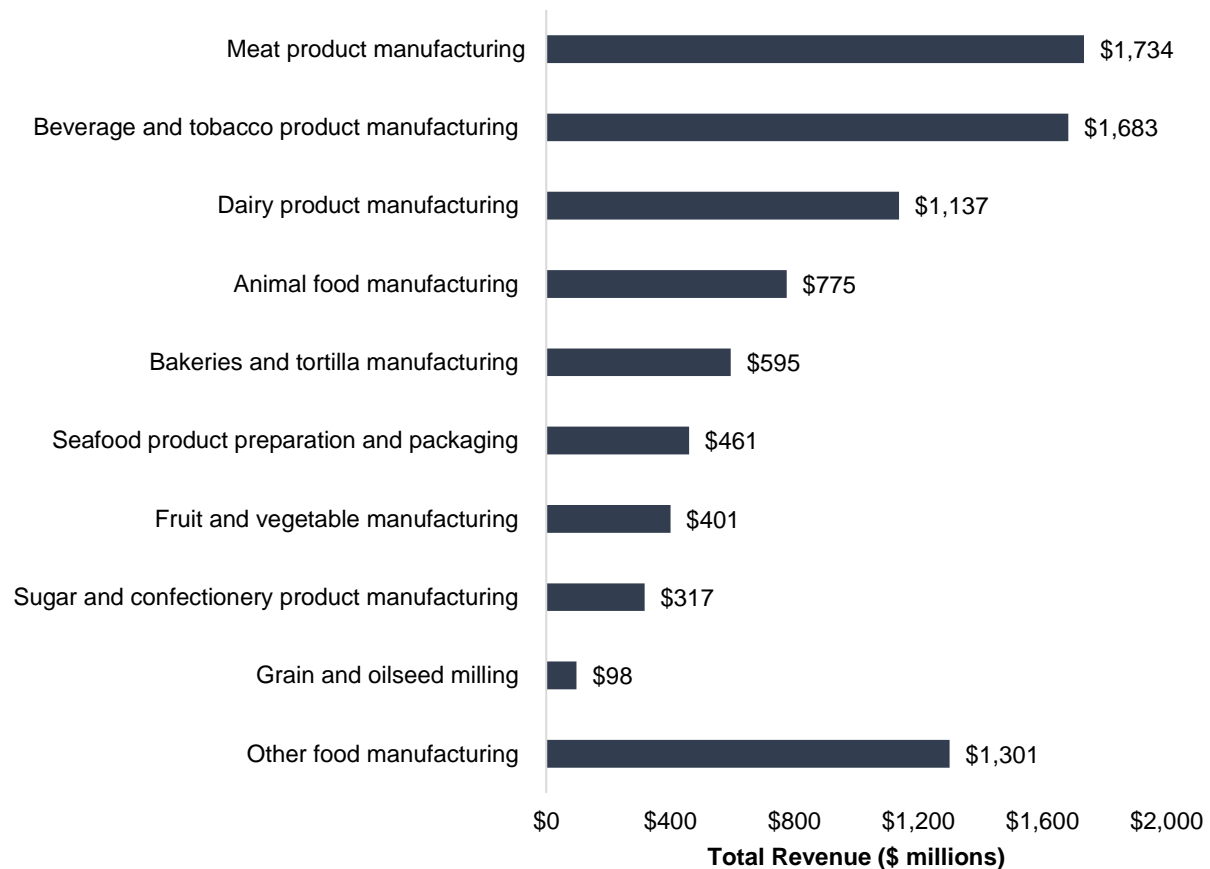
⁴³ Please note that in addition to the 1,108 food and beverage processing establishments with employees, there were 474 intermediate food and beverage processing establishments in BC in 2013. Intermediate establishments are categories as those establishments that do not maintain an employee payroll, but may have a workforce which consists of contracted workers, family members, or business owners. This category also includes employers that did not have employees in the last 12 months.

⁴⁴ Statistics Canada, Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (Accessed: April 27, 2016).

REVENUES BY SUB-INDUSTRY

As shown in Figure 9, in 2013, the largest food and beverage processing sub-industries in terms of total revenues were meat product manufacturing, beverage and tobacco product manufacturing, and other food manufacturing. Together, these three sub-industries accounted for approximately 55 percent of the Industry's total revenues.⁴⁵

Figure 9: Total Revenues by Sub-Industry (2013)

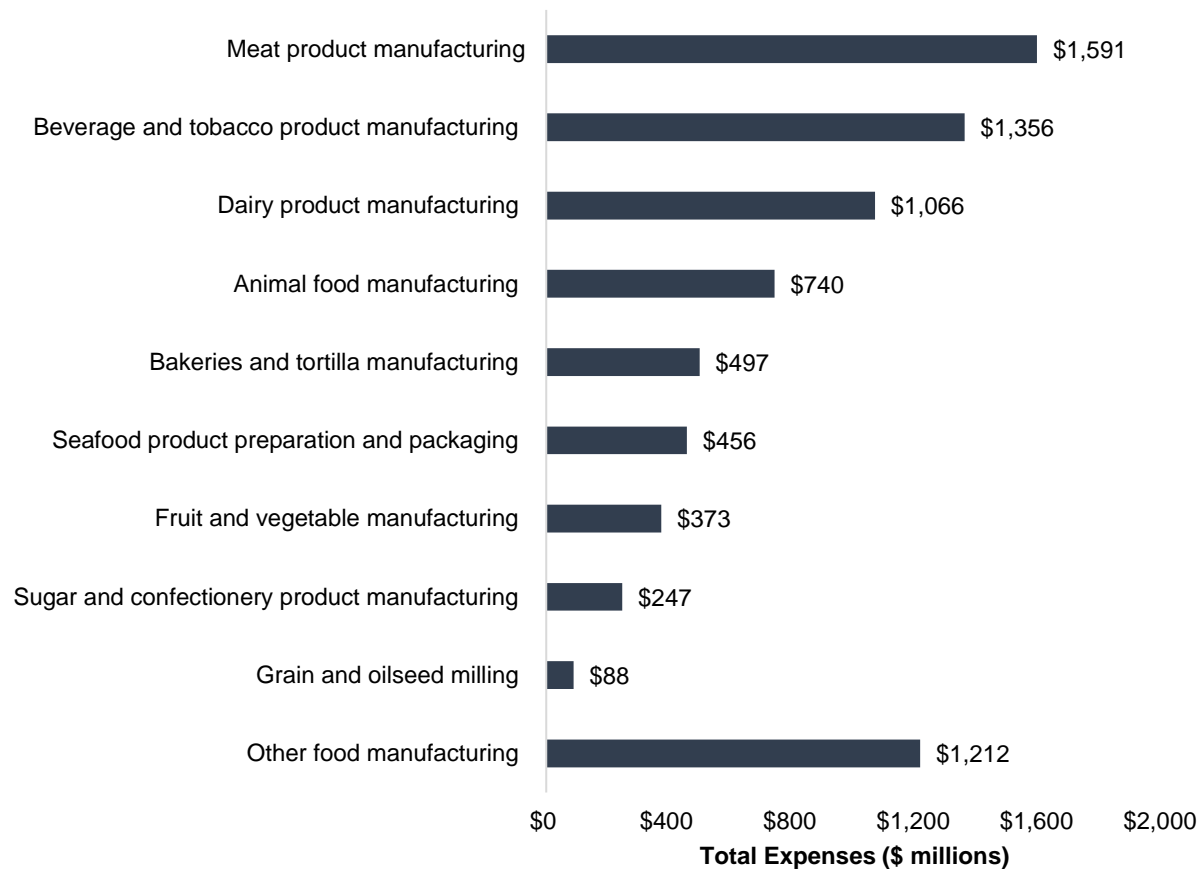


⁴⁵ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

EXPENSES BY SUB-INDUSTRY

As shown in Figure 10, in 2013, the largest food and beverage processing sub-industries in terms of total expenses were meat product manufacturing, beverage and tobacco product manufacturing, and other food manufacturing. These three sub-industries together accounted for approximately 55 percent of the Industry's total expenses.⁴⁶

Figure 10: Total Expenses by Sub-Industry (2013)

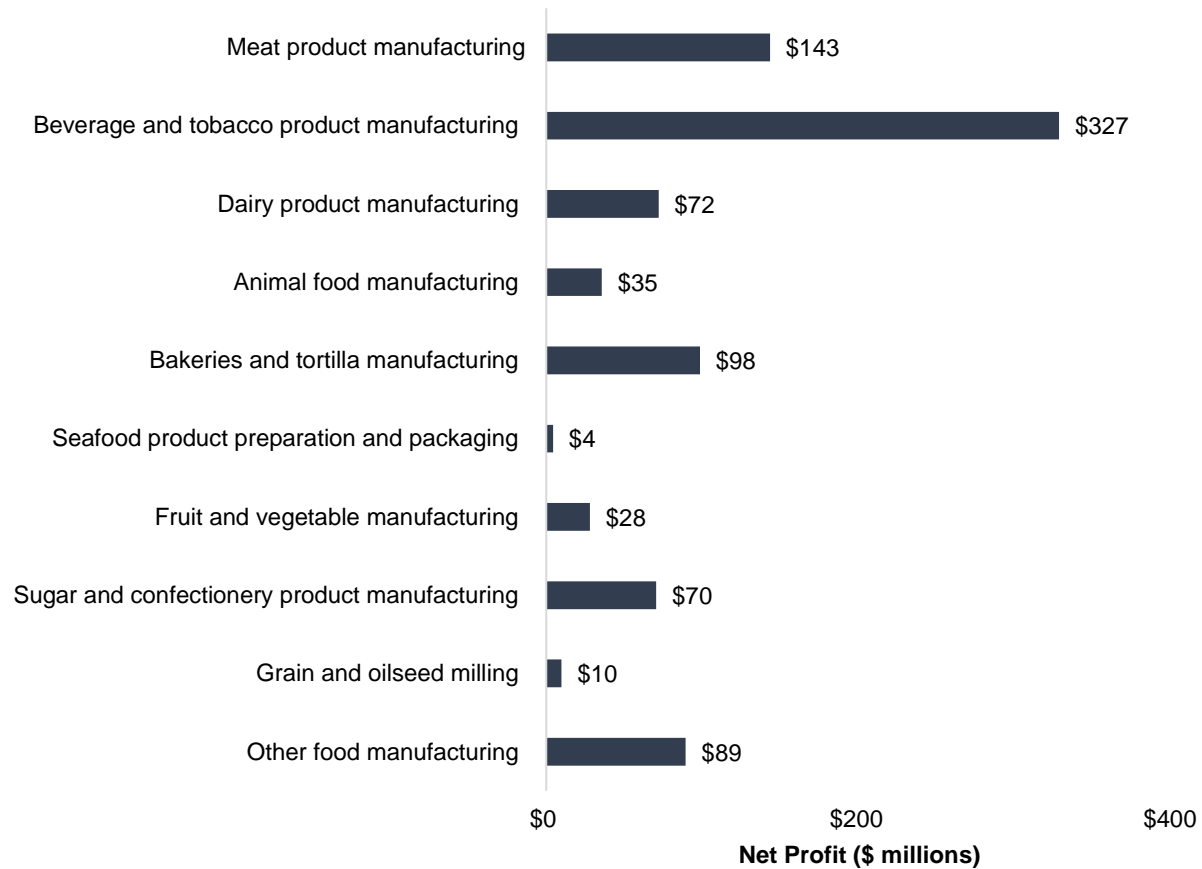


⁴⁶ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

NET PROFIT BY SUB-INDUSTRY

As shown in Figure 11, in 2013, the sub-industries that generated the largest net profit were beverage and tobacco product manufacturing, followed by meat product manufacturing and bakeries and tortilla manufacturing.⁴⁷

Figure 11: Net Profit by Sub-Industry (2013)

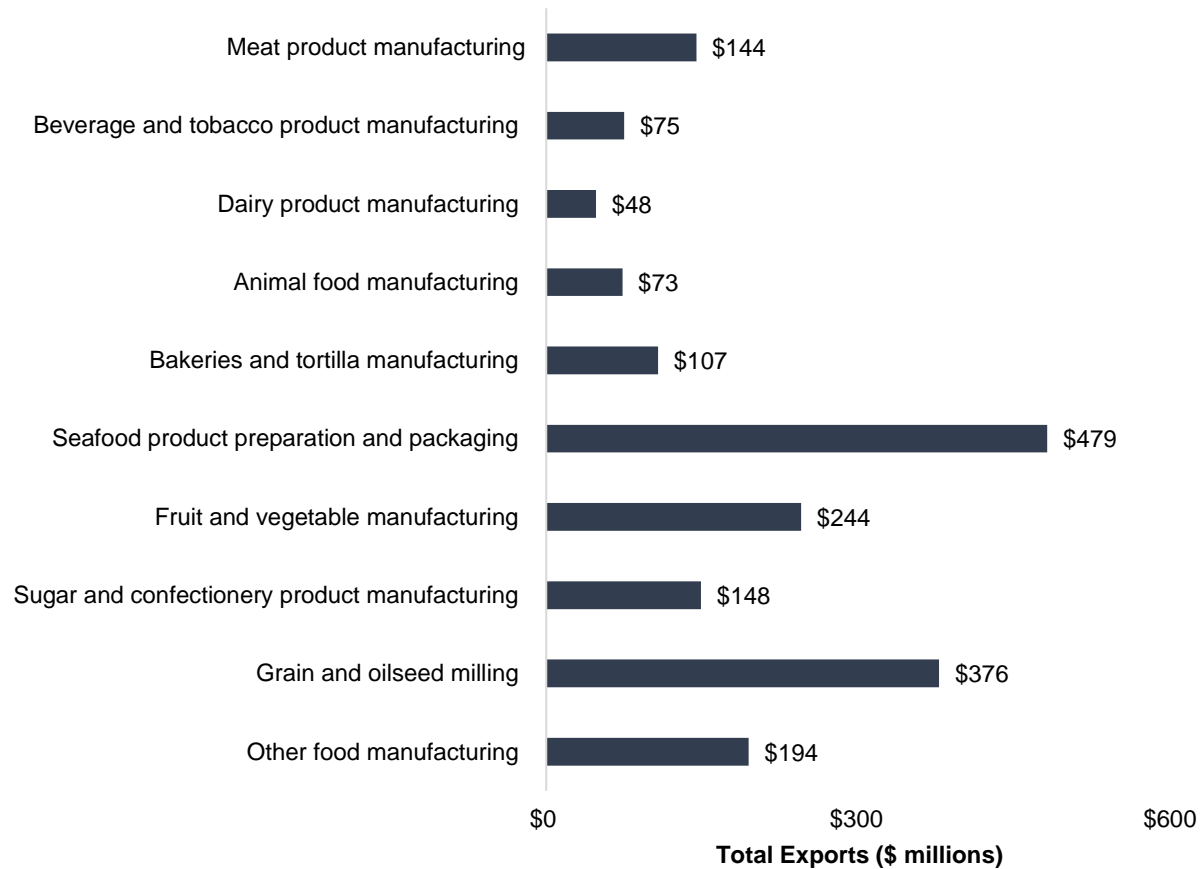


⁴⁷ MNP estimated net profit by subtracting total expenses from total revenues. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

EXPORTS BY SUB-INDUSTRY

As shown in Figure 12, in 2013, the largest food and beverage processing sub-industries in terms of value of exports were seafood product preparation and packaging, followed by grain and oilseed milling and fruit and vegetable manufacturing.^{48,49}

Figure 12: Total Value of Exports by Sub-Industry (2013)



⁴⁸ Innovation, Science and Economic Development Canada, Trade Data Online, 2013 (Accessed: April 11, 2016).

⁴⁹ Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

IMPORTS BY SUB-INDUSTRY

As shown in Figure 13, in 2013, the largest food and beverage processing sub-industries in terms of value of imports were seafood product preparation and packaging, followed by other food manufacturing and fruit and vegetable manufacturing.^{50,51}

Figure 13: Total Value of Imports by Sub-Industry (2013)



⁵⁰ Innovation, Science and Economic Development Canada, 2013 (Accessed: April 11, 2016).

⁵¹ Please note that 2014 and 2015 trade statistics are available through Innovation, Science and Economic Development Canada. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

DIRECT EMPLOYMENT

As shown in Figure 14, in 2013, the largest sub-industries in terms of direct employment were bakeries and tortilla manufacturing, followed by meat product manufacturing and beverage and tobacco product manufacturing. These three sub-industries accounted for approximately 54 percent of the Industry's direct employment.⁵²

Figure 14: Direct Employment by Sub-Industry (2013)

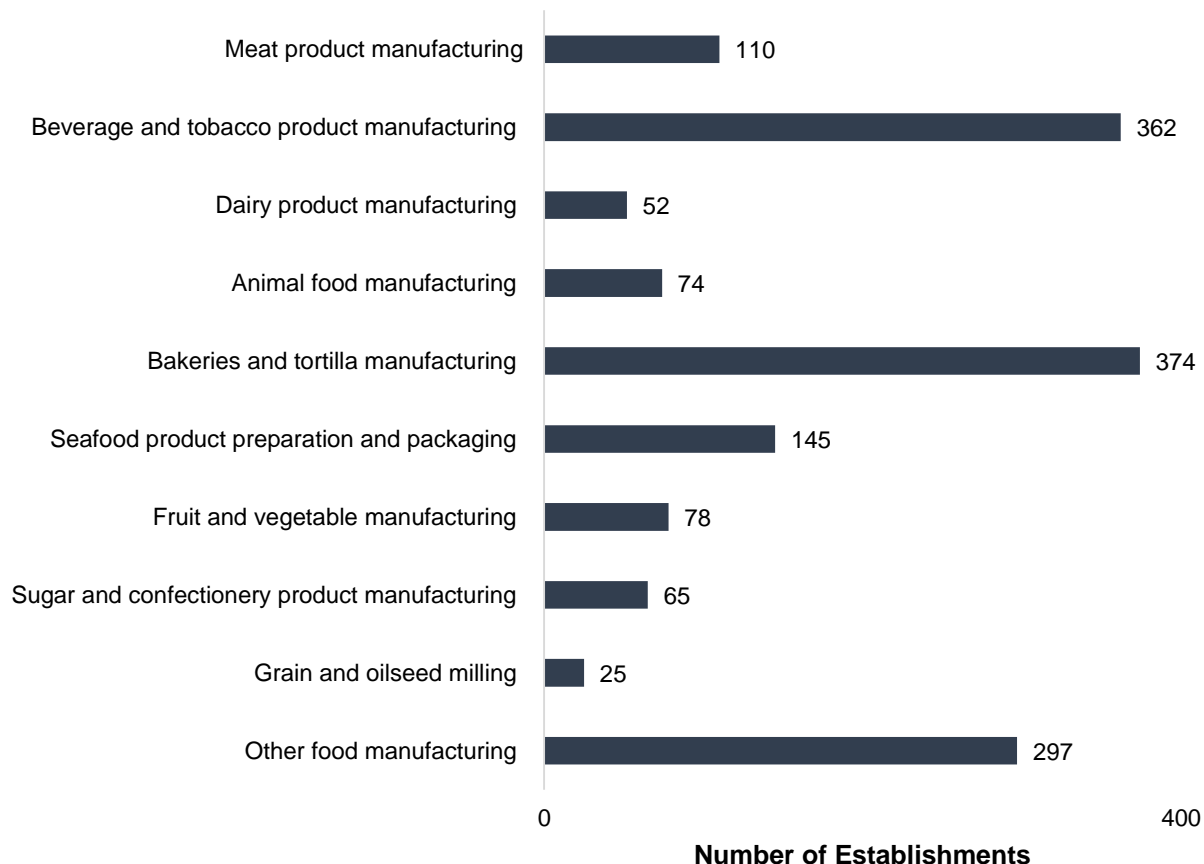


⁵² Statistics Canada, Table 281-0023 - Survey of Employment, Payrolls and Hours (SEPH), employment by type of employee and detailed North American Industry Classification System (NAICS), 2013.

NUMBER OF ESTABLISHMENTS

As shown in Figure 15, in 2013, the largest sub-industries in terms of number of establishments were bakeries and tortilla manufacturing, followed by beverage and tobacco product manufacturing and other food manufacturing.^{53,54,55}

Figure 15: Industry's Number of Establishments by Sub-Industry (2013)



⁵³ Statistics Canada. Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (Accessed: April 27, 2016).

⁵⁴ Please note that in addition to the 1,108 food and beverage processing establishments with employees, there were 474 intermediate food and beverage processing establishments in BC in 2013. Intermediate establishments are categories as those establishments that do not maintain an employee payroll, but may have a workforce which consists of contracted workers, family members or business owners. This category also includes employers that did not have employees in the last 12 months.

⁵⁵ Please note that 2014 and 2015 estimates for number of establishments are available through Statistics Canada. We report estimates for number of statistics for the year 2013 to be consistent with the remaining industry statistics for which only 2013 data is published.

5. HISTORICAL TRENDS ANALYSIS

This section summarizes historical trends in the Industry related to the following key industry statistics:

- Revenues
- Expenses
- Net profit
- Exports
- Imports
- Employment

The analysis is intended to assist the BCFPA with determining how trends may impact the Industry's future needs and key priorities.

KEY HISTORICAL TRENDS

As shown in Table 2, between 2009 and 2013 the Industry experienced growth in terms of total revenues, total expenses, exports, and imports.

- Total revenues increased from \$8.0 billion in 2009 to \$8.5 billion in 2013.
- Total expenses increased from \$7.1 billion in 2009 to \$7.6 billion in 2013.
- Net profits decreased by 4 percent over the same time period.
- The value of exports of food and beverage processed products increased from \$1.4 billion in 2009 to \$1.9 billion in 2013.
- The value of imports of food and beverage processed products increased from \$3.2 billion in 2009 to \$4.0 billion in 2013.
- Direct employment decreased slightly from 28,716 in 2009 to 28,684 in 2013.

Table 2: Industry's Key Historical Trends

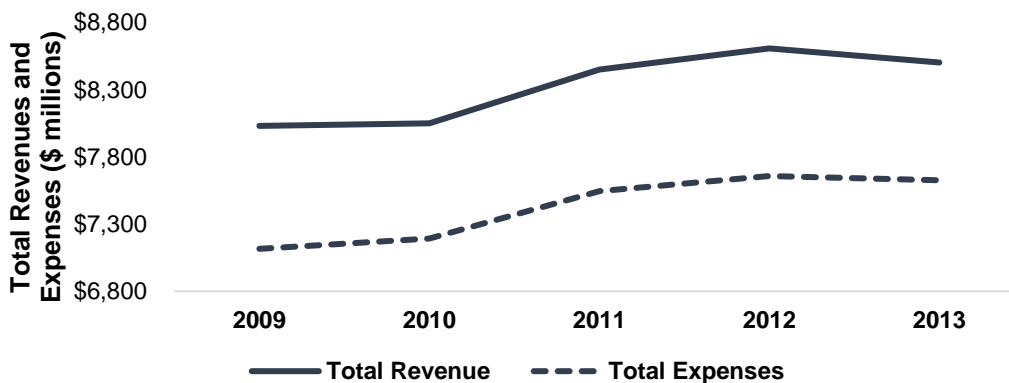
	2009	2010	2011	2012	2013	Total Change from 2009-2013	Average Annual Percentage Change (Average)	Average Annual Percentage Change (Compound)
Total Revenue (\$ millions)	\$8,031	\$8,049	\$8,450	\$8,608	\$8,503	5.9%	1.5%	1.4%
Total Expenses (\$ millions)	\$7,116	\$7,193	\$7,546	\$7,658	\$7,627	7.2%	1.8%	1.7%
Net Profit (\$ millions)	\$915	\$857	\$905	\$950	\$876	-4.2%	-1.1%	-1.1%
Net Profit Margin	11.4%	10.6%	10.7%	11.0%	10.3%	N/A	N/A	N/A
Total Exports (\$ millions)	\$1,419	\$1,492	\$1,497	\$1,687	\$1,887	33.0%	8.2%	7.4%
Total Imports (\$ millions)	\$3,151	\$3,284	\$3,455	\$3,691	\$3,966	25.9%	6.5%	5.9%
Direct Employment	28,716	28,663	29,540	28,579	28,684	-0.1%	0.0%	0.0%

REVENUES AND EXPENSES

Total revenues of the Industry increased by \$0.5 billion between 2009 and 2013, from \$8.0 billion to \$8.5 billion. This was a total increase of 6 percent or an average increase of 1 percent per year. There was an increase in revenues each year except from 2012 to 2013, which experienced a 1 percent decrease.

Total expenses of the Industry increased by \$0.5 billion between 2009 and 2013, from \$7.1 billion to \$7.6 billion. This was a total increase of 7 percent or an average increase of 2 percent per year. There was an increase in expenses each year except from 2012 to 2013, which experienced a 0.4 percent decrease.

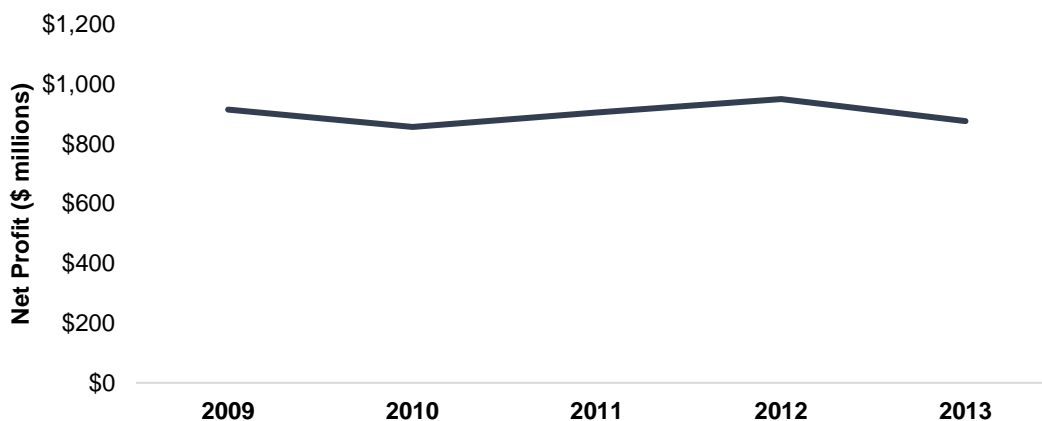
Figure 16: Industry's Total Revenues and Expenses (2009-2013)⁵⁶



NET PROFIT

Net profit of the Industry decreased by \$39 million between 2009 and 2013, from \$915 million to \$876 million. This was a total decrease of 4 percent or an average decrease of 1 percent per year.

Figure 17: Industry's Net Profit (2009-2013)^{57,58}



⁵⁶ Statistics Canada. Table 301-006 and Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

⁵⁷ MNP estimated net profit by subtracting total expenses from total revenues.

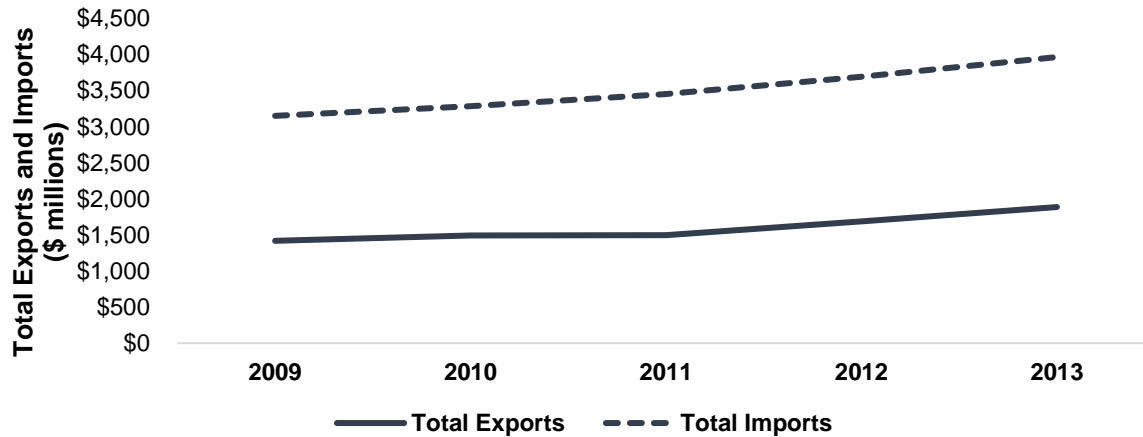
⁵⁸ Statistics Canada. Table 301-006 and Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

EXPORTS AND IMPORTS

The Industry's exports increased \$0.5 billion between 2009 and 2013, from \$1.4 billion to \$1.9 billion. This was a total increase of 33 percent or an average increase of 8 percent per year. There was an increase in exports every year since 2009.

The Industry's imports increased by \$0.8 billion between 2009 and 2013, from \$3.2 billion to \$4.0 billion. This was a total increase of 25 percent or an average increase of 5 percent per year. There was an increase in imports every year since 2009.

Figure 18: Industry's Value of Exports and Imports (2009-2013)^{59,60}



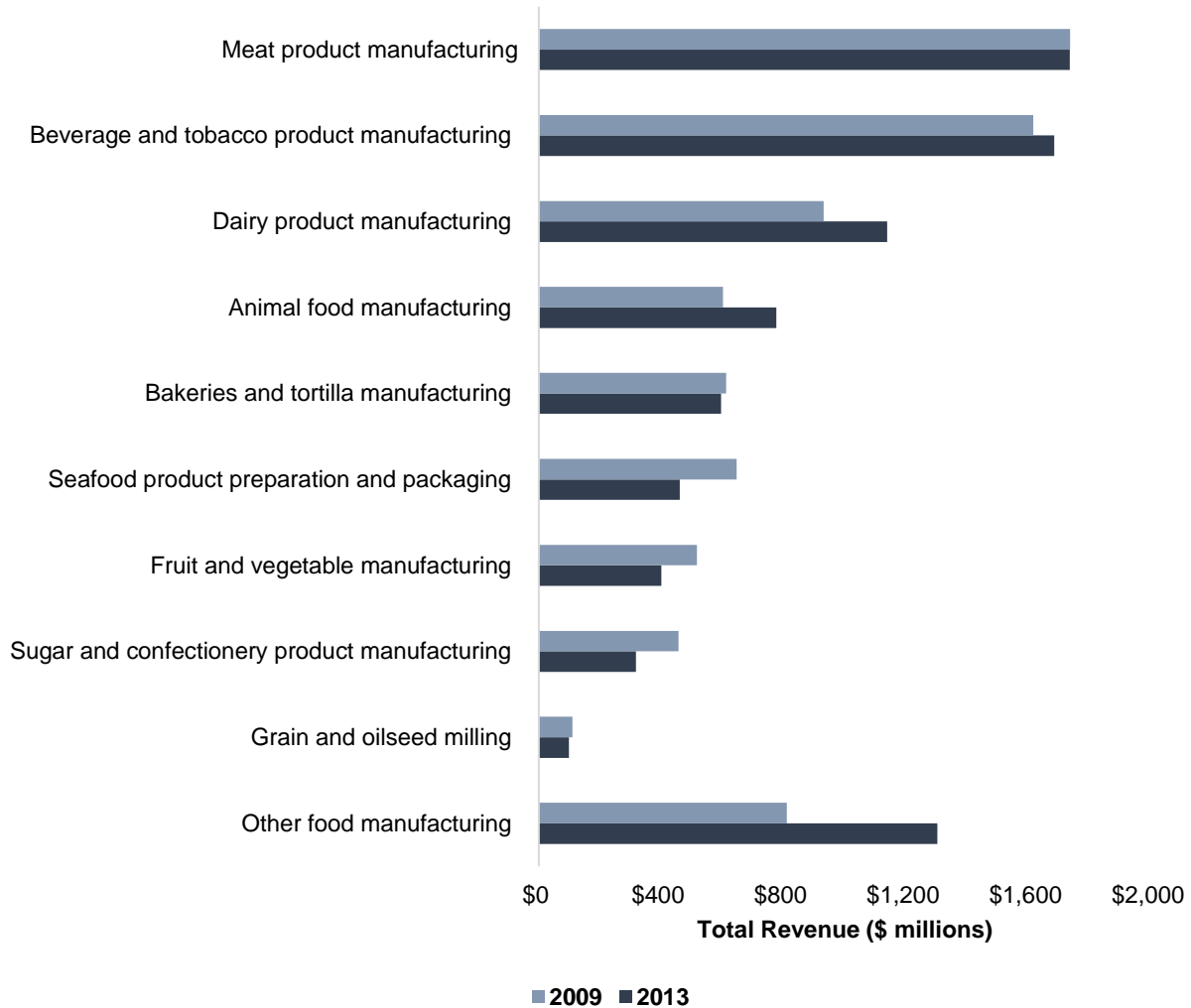
⁵⁹ Innovation, Science and Economic Development Canada, Trade Data Online, accessed April 11, 2016.

⁶⁰ Please note that 2014 and 2015 trade statistics are available. We reported 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

REVENUES BY SUB-INDUSTRY

The increase in total revenues of the Industry between 2009 and 2013 was driven by an increase in revenues of the other food manufacturing (61 percent increase), animal food manufacturing (29 percent increase), dairy product manufacturing (22 percent increase), and beverage and tobacco product manufacturing (4 percent increase) sub-industries. The total revenues of the meat manufacturing sub-industry, which accounted for the largest percentage of the Industry's total revenues in 2013, remained steady over the same time period (0.1 percent decrease).

Figure 19: Total Revenues by Sub-Industry (2009 and 2013)⁶¹

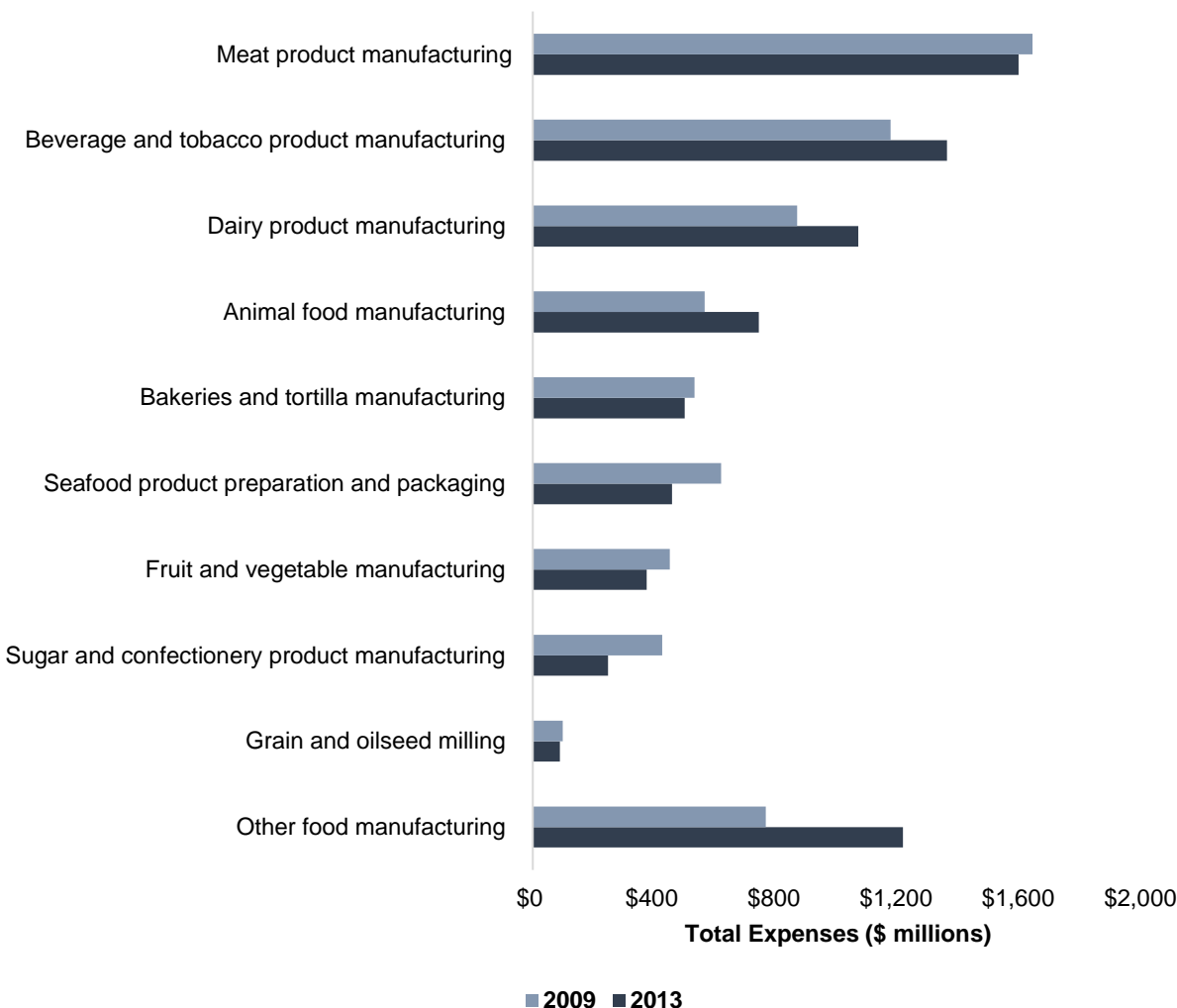


⁶¹ Statistics Canada. Table 301-006 and Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

EXPENSES BY SUB-INDUSTRY

The increase in total expenses of the Industry between 2009 and 2013 was driven by an increase in expenses of the other food manufacturing (59 percent increase), animal food manufacturing (31 percent increase), dairy product manufacturing (23 percent increase), and beverage and tobacco product manufacturing (16 percent increase) sub-industries. The remainder of the food and beverage processing sub-industries experienced a decrease in expenses from 2009 to 2013.

Figure 20: Total Expenses by Sub-Industry (2009 and 2013)⁶²

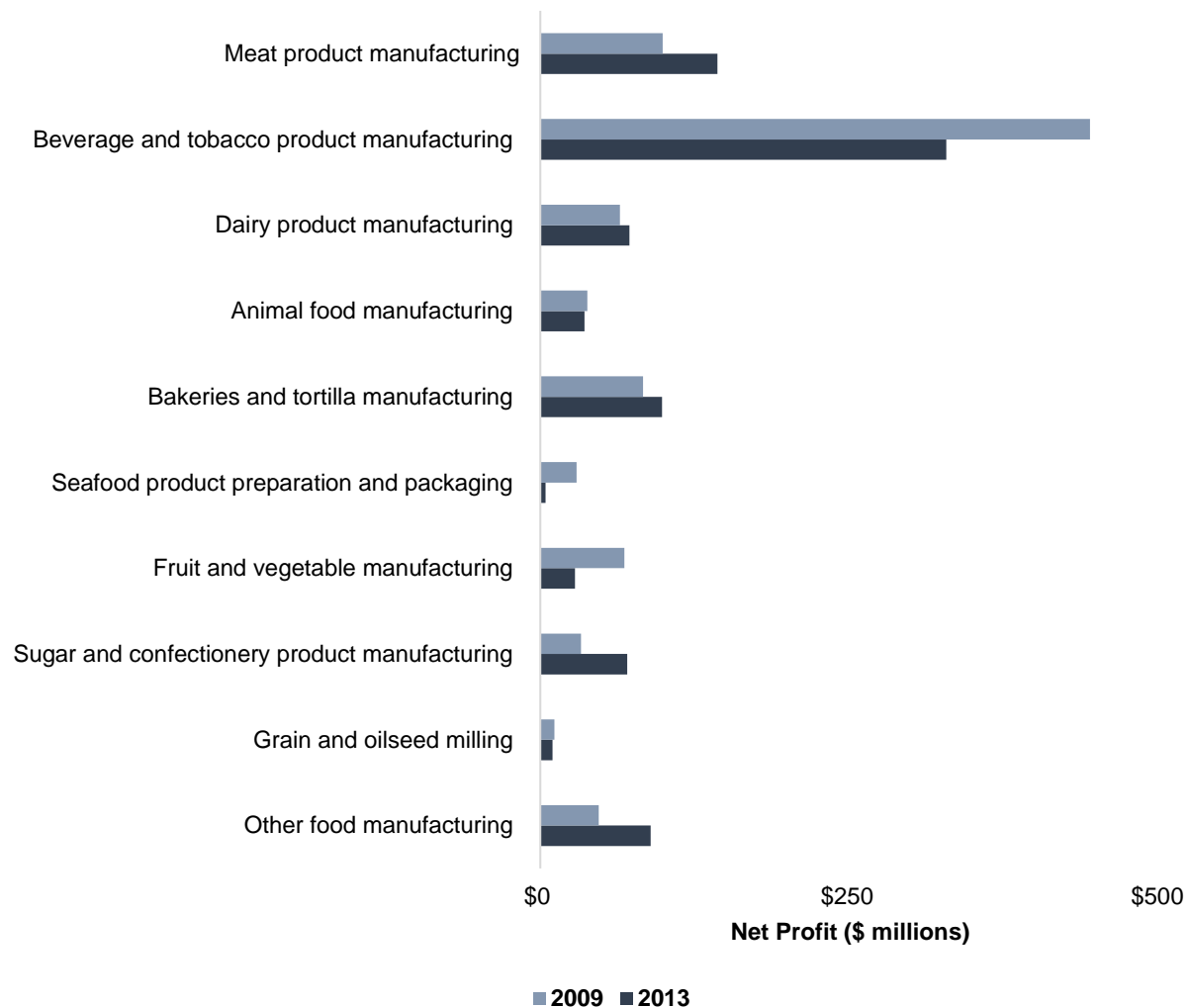


⁶² Statistics Canada. Table 301-006 and Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

NET PROFIT BY SUB-INDUSTRY

Between 2009 and 2013, the sub-industries that experienced an increase in net profit were sugar and confectionery product manufacturing (114 percent increase), other food manufacturing (89 percent increase), meat product manufacturing (45 percent increase), bakeries and tortilla manufacturing (18 percent increase), and dairy product manufacturing (12 percent increase). The remainder of the sub-industries experienced a decline in net profit over the same time period.

Figure 21: Net Profit by Sub-Industry (2009 and 2013)^{63,64}



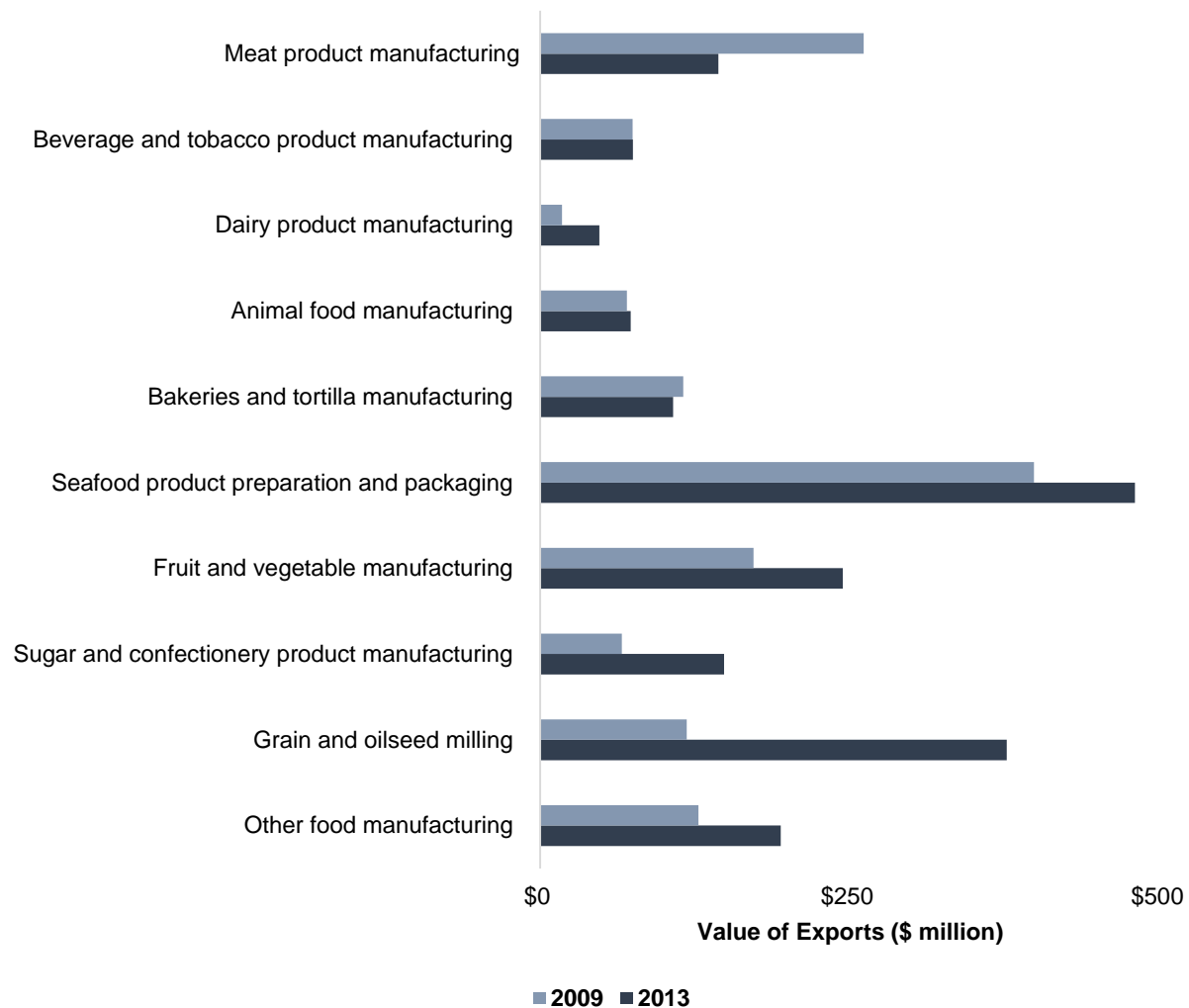
⁶³ MNP estimated net profit by subtracting total expenses from total revenues.

⁶⁴ Statistics Canada. Table 301-006 and Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

EXPORTS BY SUB-INDUSTRY

Between 2009 and 2013, all food and beverage processing sub-industries experienced an increase in value of exports except for meat product manufacturing and bakeries and tortilla manufacturing. The sub-industries that experienced the largest increase in value of exports during this time period were grain and oilseed milling (218 percent increase), dairy product manufacturing (171 percent increase), and sugar and confectionery product manufacturing (125 percent increase).

Figure 22: Value of Exports by Sub-Industry (2009 and 2013)^{65,66}



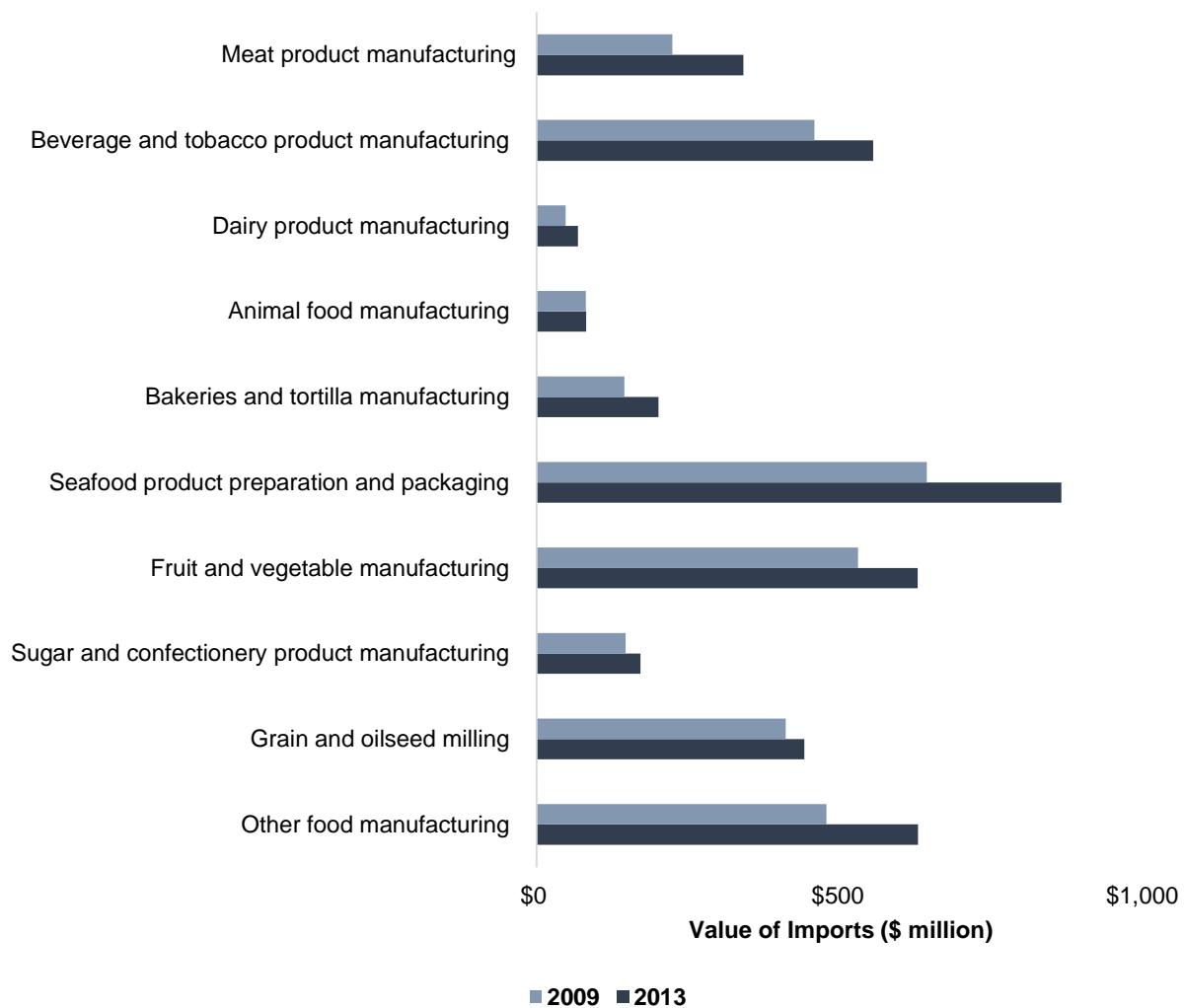
⁶⁵ Innovation, Science and Economic Development Canada, Trade Data Online, accessed April 11, 2016.

⁶⁶ Please note that 2014 and 2015 trade statistics are available. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

IMPORTS BY SUB-INDUSTRY

Between 2009 and 2013, all food and beverage processing sub-industries experienced an increase in value of imports. The sub-industries that experienced the largest increase in value of imports during this time period were meat product manufacturing (52 percent increase), dairy product manufacturing (43 percent increase), and bakeries and tortilla manufacturing (39 percent increase).

Figure 23: Value of Imports by Sub-industry (2009-2013) ^{67,68}



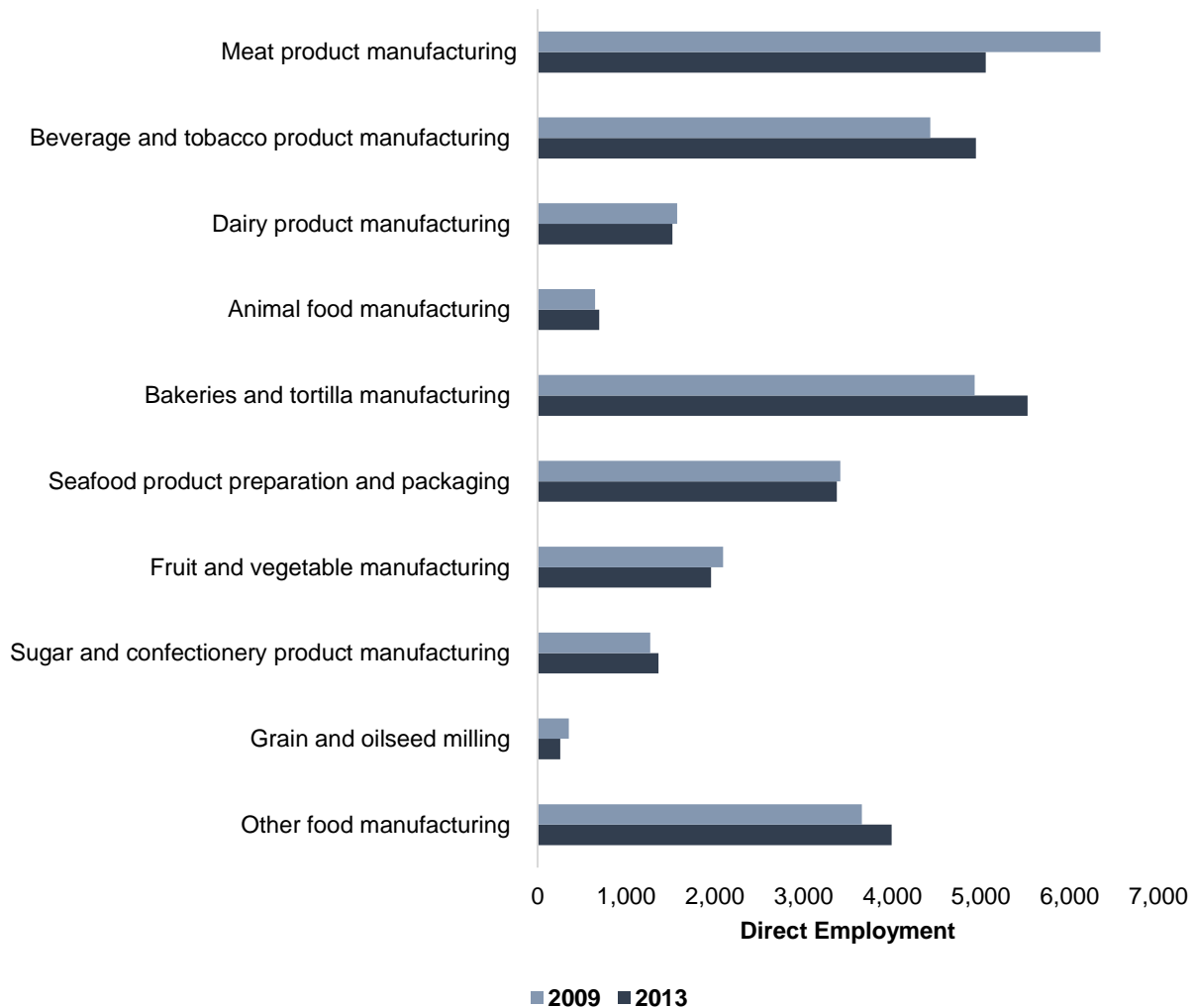
⁶⁷ Innovation, Science and Economic Development Canada, Trade Data Online, accessed April 11, 2016.

⁶⁸ Please note that 2014 and 2015 trade statistics are available. We report 2013 trade statistics to be consistent with the remaining industry statistics for which only 2013 data is published.

DIRECT EMPLOYMENT BY SUB-INDUSTRY

Direct employment in the Industry decreased slightly from 2009 to 2013. However, over the same time period, there was an increase in employment in the bakeries and tortilla manufacturing (12 percent increase), beverage and tobacco product manufacturing (12 percent increase), other food manufacturing (9 percent increase), sugar and confectionery product manufacturing (7 percent increase), and animal food manufacturing (7 percent increase) sub-industries. The remainder of the food and beverage processing sub-industries experienced a decrease in direct employment from 2009 to 2013.

Figure 24: Direct Employment by Sub-Industry (2009-2013)⁶⁹



⁶⁹ Statistics Canada, Table 281-0023 - Survey of Employment, Payrolls and Hours (SEPH), employment by type of employee and detailed North American Industry Classification System (NAICS), 2013.

6. BENCHMARKING ANALYSIS

This section summarizes a benchmarking analysis of the Industry against three of Canada's other major food and beverage processing provinces: Ontario, Quebec, and Alberta.

6.1 Competitive Factors

Table 3 presents the competitive advantages of BC and each comparator province.

Table 3: Competitive Edge of Other Major Food and Beverage Processing Provinces

Province	Competitive Edge
British Columbia	<ul style="list-style-type: none"> • Access to markets. BC is strategically located with deep-sea ports and transportation networks connecting it to key markets, such as the United States, Asian, and European markets. • Diverse inputs. BC has one of the most diverse agri-food industries in Canada, producing more than 200 agricultural commodities and 100 seafood species.⁷⁰ • Low corporate income tax. BC has one of the lowest corporate income tax rates among the major industrialized nations, at a combined federal-provincial corporate rate of 26 percent.⁷¹ • Diverse populations and products. BC has a local population of diverse peoples, cultures, and lifestyles. This has supported the development of new niche, ethnic, and cultural food products. • Reputation for safe, high quality food. BC has an international reputation for producing high quality, safe food. This has been a particular strength when exporting to Asian markets where concerns about food safety are increasing.⁷²
Ontario	<ul style="list-style-type: none"> • Capacity. Ontario has the strongest ability within Canada to compete on scale due to its proximity to many of Canada's largest markets, as well as the eastern United States. The Ontario market has more than 13 million people, and 139 million consumers are within a day's drive of southern Ontario.⁷³ • Business climate. Ontario has some of the lowest business costs amongst cities in the Northeastern United States and Central Canada. Ontario has three of the top five cities (Barrie, Sault Ste. Marie, and Toronto) with the lowest business costs in Canada.⁷⁴

⁷⁰ Ministry of Agriculture, "The BC Agrifood and Seafood Strategic Growth Plan," available here:

<http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

⁷¹ <http://www.britishcolumbia.ca/invest/why-british-columbia-canada/low-business-costs/taxes/>

⁷² World Health Organization, "Food Safety Overview," available here (accessed June 14, 2016):

<http://www.searo.who.int/entity/foodsafety/topics/overview/en/>

⁷³ Ontario Ministry of Finance, "Ontario's Long-Term Report on the Economy," available here:

<http://www.fin.gov.on.ca/en/economy/ltr/2014/ch3.html>

⁷⁴ KPMG, "Competitive Alternatives: Guide to International Business Locations Costs," 2016, available here:

https://www.competitivealternatives.com/reports/compalt2016_report_vol1_en.pdf

Province	Competitive Edge
	<ul style="list-style-type: none"> • Access to ingredients. Ontario farms grow over 200 agricultural commodities, and almost 65 percent of farm products are purchased by Ontario food processors.⁷⁵ • Research and development (R&D). Ontario is a major R&D location for the agri-food industry. Facilities include the Agri-Tech Commercialization Centre, Guelph Food Technology Centre, Toronto Food Business Incubator, and Vineland Research and Innovation Centre.
Quebec	<ul style="list-style-type: none"> • Access to ingredients. Quebec has access to local, high-quality raw materials, with specific strength in access to fresh water, pork, veal, milk, berries, vegetables, and maple syrup. • Access to labour. Labour costs in Quebec are lower than many North American cities, including Vancouver.⁷⁶ • Specialized agri-food training. Quebec has specialized academic programs in the agri-food industry, including agro-environmental engineering, agronomy, biotechnology, consumer sciences, farming and food processing, food engineering, food processing and food quality technology, food science and technology, and nutrition.⁷⁷ • Research and development (R&D). Quebec has a number of private and public research centres that promote innovation in products and services. A selection of their R&D facilities include Cintech agroalimentaire, Food Research and Development Centre, Institute of Nutraceuticals and Functional Foods and Université Laval's Centre de recherche en économie agroalimentaire.⁷⁸ • Competitive operating costs. Quebec has a competitive corporate income tax rate with other North American jurisdictions, as well as an abundance of fresh water and reliable supply of energy at rates among the lowest and most stable.⁷⁹
Alberta	<ul style="list-style-type: none"> • Agri-food training and research facilities. Alberta is home to approximately 15 centres, institutes, and teams that play important roles in Alberta-based food research and innovation. Examples of Alberta's facilities include Food Processing Development Centre, AAFC Lacombe Research Centre, research centres at the University of Alberta, and Portage College's Food Sciences Centre.⁸⁰

⁷⁵ Ministry of Agriculture, Food, and Rural Affairs, "Invest in Ontario's Food and Beverage Industry," available here: <http://www.omafra.gov.on.ca/english/food/investment/invest-ontario.htm>

⁷⁶ Invest Quebec, "A Diversified Workforce," available here (accessed June 15, 2016): <http://www.investquebec.com/international/en/industries/agri-food/a-diversified-workforce.html>

⁷⁷ Invest Quebec, "Agri-Food," available here (accessed June 15, 2016): <http://www.investquebec.com/international/en/industries/agri-food.html>

⁷⁸ Invest Quebec, "Agri-Food," available here (accessed June 15, 2016): <http://www.investquebec.com/international/en/industries/agri-food.html>

⁷⁹ Invest Quebec, "Agri-Food," available here (accessed June 15, 2016): <http://www.investquebec.com/international/en/industries/agri-food.html>

⁸⁰ Alberta Innovates, "Food Innovation Plan 2014-2017", available here: http://bio.albertainnovates.ca/media/64670/alberta_innovates_food_innovation_plan_2014-17_final.pdf

Province	Competitive Edge
	<ul style="list-style-type: none"> • Investment climate. Alberta is ranked first in Canada in terms of investment climate (corporate income tax, fiscal prudence, personal income tax, labour market regulation, and burden of regulation) according to the Fraser Institute.⁸¹ In addition, Alberta has an “A+” grade on entrepreneurial ambition, placing ahead of all Canadian provinces and the United States.⁸² • Business cost advantage. Alberta cities rank among the most cost competitive in North America when it comes to establishing and operating a business. Edmonton and Calgary rank third and fourth, respectively, among 27 large midwest United States and western Canadian locations.⁸³ • Modern infrastructure. Alberta has advanced technology, extensive transportation networks, education and training facilities, research and development, and competitively priced commercial and industrial real estate.⁸⁴

6.2 Opportunity for Partnerships

BC and its three comparator provinces have both complementary and unique competitive advantages. These similarities and differences provide opportunities for the different jurisdictions in BC to coordinate programs and supports in order to capitalize on shared advantages, and to spread unique best practices across the country. Based on the analysis above, there are three main areas where partnerships may be beneficial:

- **Innovation.** Among the comparator regions, BC is the only one without a food innovation centre. Consequently, there may be an opportunity for BC companies to partner with other jurisdictions to support product development and other innovation efforts.
- **Inputs.** One of the strengths of each location is its access to agricultural and other inputs. However, the specific inputs in which each jurisdiction has strength is varied. This creates an opportunity for greater coordination and promotion of inputs to be shared amongst the producers in Canada. For example, BC is strong in seafood products, whereas Quebec is strong in products such as pork and dairy products. This could also reduce the exposure of individual companies to currency fluctuations that can arise from importing ingredients.
- **Market focus.** Each of the comparator regions have different market focuses. For example, BC has a relatively higher focus on Asian markets, whereas jurisdictions like Ontario have a relatively higher focus on the American markets. There may be opportunities to support joint marketing and diversification of markets by leveraging the contacts and distribution networks of individual provinces in order to promote all of Canada’s food and beverage products.

⁸¹ Fraser Institute, “Canadian Provincial Investment Climate,” 2010, available here: <https://www.fraserinstitute.org/sites/default/files/canadian-provincial-investment-climate-2010.pdf>

⁸² Conference Board of Canada, “Entrepreneurial Ambition,” 2014, available here: <http://www.conferenceboard.ca/hcp/provincial/innovation/ambition.aspx>

⁸³ KPMG, “Competitive Alternatives: Guide to International Business Locations Costs,” 2016, available here: https://www.competitivealternatives.com/reports/compalt2016_report_vol1_en.pdf

⁸⁴ Advantage Alberta, “Alberta Business Advantages,” available here (accessed June 15, 2016): http://www.albertasouthwest.com/advantage_alberta

6.3 Benchmarking BC Against Other Provinces

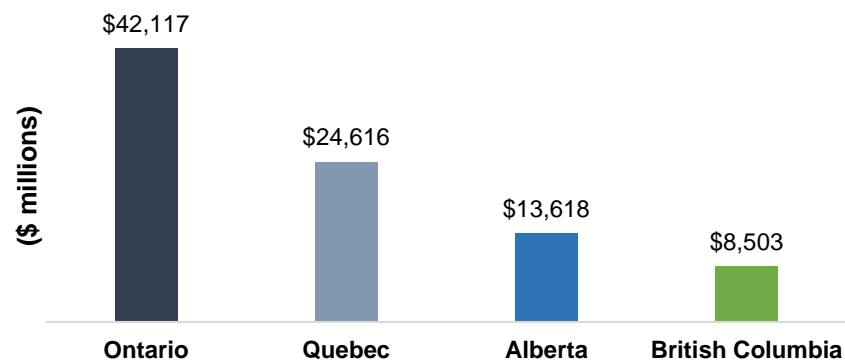
This section compares the Industry in BC against the Industry in Ontario, Quebec and Alberta in terms of total revenues, total expenses, and net profit margin.

REVENUES

In 2013, the BC Industry's total revenues were lower than revenues in the comparator provinces.

The benchmarking analysis showed that in 2013, the Industry's share of the total food and beverage processing revenues in Canada was 8 percent. In comparison, Ontario's share was 40 percent, Quebec's share was 23 percent, and Alberta's share was 13 percent.

Figure 25: Food and Beverage Processing Revenues by Province (2013)⁸⁵

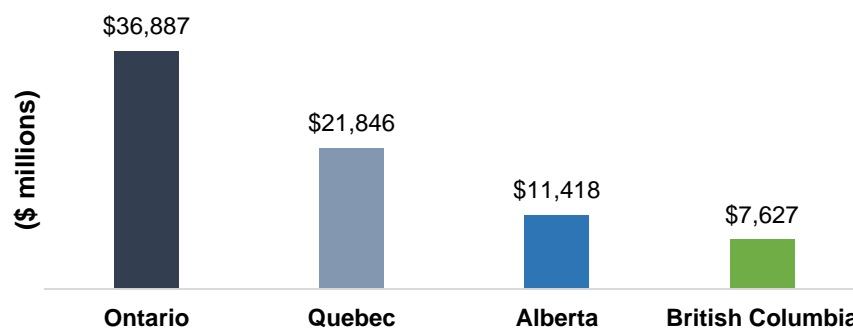


EXPENSES

In 2013, the BC Industry's total expenses were lower than expenses in the comparator provinces.

The benchmarking analysis showed that in 2013, the Industry's share of the total food and beverage manufacturing expenses in Canada was 8 percent. In comparison, Ontario's share was 40 percent, Quebec's share was 24 percent, and Alberta's share was 12 percent.

Figure 26: Food and Beverage Processing Expenses by Province (2013)⁸⁶



⁸⁵ Statistics Canada. Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

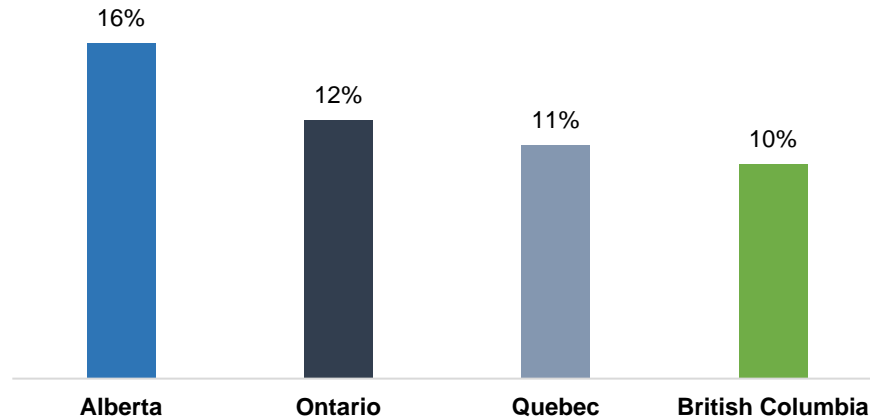
⁸⁶ Ibid.

NET PROFIT MARGIN

In 2013, the BC Industry's net profit margin was lower than net profit margins in the comparator provinces.

The benchmarking analysis showed that in 2013, the Industry's net profit margin was 10 percent. In comparison, Ontario's net profit margin was 12 percent, Quebec's net profit margin was 11 percent, and Alberta's net profit margin was 16 percent.

Figure 27: Food and Beverage Processing Net Profit Margin by Province (2013)⁸⁷



⁸⁷ Net profit margin was calculated as net profit divided by total revenue. Table 301-0008 - Principal Statistics for Manufacturing Industries, by North American Industry Classification System (NAICS), annual dollars, accessed April 18, 2016.

7. ECONOMIC IMPACT ANALYSIS

7.1 Economic Impact Analysis Overview

In general, economic impacts are measured using quantitative, well-established measures of economic activity. The most commonly used of these measures are output, gross domestic product (GDP), employment and government tax revenues:

- **Output** is the total gross value of goods and services produced by a given organization, industry, or project measured by the price paid to the producer. This is the broadest measure of economic activity.
- **Gross domestic product (GDP)**, or value added, refers to the additional value of a good or service over the cost of inputs used to produce it from the previous stage of production. Thus, GDP is equal to net output, or the difference between revenues and expenses on intermediate inputs. It is the incremental value created through labour or mechanical processing. GDP is a more meaningful measure of economic impact than output, as it avoids double counting during each round of impacts.
- **Employment** is the number of additional jobs created. Employment is measured in terms of full-time equivalents (FTEs).
- **Government tax revenues** are the total amount of tax revenues generated for different levels of government. Tax revenues include taxes on products (e.g. GST), taxes on production (e.g. licence fees, capital taxes, or property taxes) and income taxes. Please note that because tax revenues can regularly change due to modifications in tax policy, the tax revenue impacts in this report are estimates only and are subject to change. They should be viewed as approximate in nature.

Economic impacts may be estimated at the direct, indirect, and induced levels:

- **Direct impacts** are changes that occur in “front-end” businesses that would initially receive expenditures and operating revenue as a direct consequence of the operations and activities of an industry, organization, or project.
- **Indirect impacts** arise from changes in activity for suppliers of the “front-end” businesses.
- **Induced impacts** arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses.

To assess the economic impacts arising from the Industry, MNP followed an input-output methodology using provincial industry multipliers published by Statistics Canada. Input-output modeling is a widely used and accepted approach, making it recognizable by many different stakeholders and audiences. The structure of the approach also facilitates easy comparisons between reported results for different industries and projects.

For examples and definitions of economic impact terms, please refer to Appendix D, and for a detailed description of MNP’s economic impact methodology, please refer to Appendix E.

7.2 Economic Impacts of the Industry

Table 4 presents the estimated economic impacts generated in 2013 by the Industry based on the Industry's total revenues. In summary, the Industry was estimated to have generated the following economic impacts in BC:

- Approximately \$15.1 billion in total output, consisting of direct output of \$8.5 billion, and indirect and induced output of \$6.6 billion.
- Approximately \$6.0 billion in total GDP, consisting of direct GDP of \$2.9 billion, and indirect and induced GDP of \$3.1 billion.
- Approximately 65,271 total full time equivalent (FTE) positions, consisting of direct employment of 28,684 FTEs, and indirect and induced employment of 36,587 FTEs.
- Approximately \$1.4 billion in total federal, provincial, and municipal tax revenue, consisting of direct tax revenue of \$618 million, and indirect and induced tax revenue of \$762 million.⁸⁸

Table 4: Economic Impacts of the BC Food and Beverage Processing Industry in 2013

	Output (million)	GDP (million)	Employment (FTEs) ⁸⁹	Federal Tax (million)	Provincial Tax (million)	Municipal Tax (million)
Direct	\$8,503	\$2,921	28,684	\$359	\$226	\$33
Indirect and Induced	\$6,560	\$3,049	36,587	\$385	\$291	\$86
Total	\$15,063	\$5,970	65,271	\$744	\$517	\$119

COMPARISON WITH OTHER INDUSTRIES

To provide perspective on the size of the economic impacts of the Industry, it is useful to compare the impacts with those created by other industries. The following are comparisons of the Industry's impacts with three important industries in BC:

- **Mining.** The direct employment supported by the Industry (28,684 FTEs) in 2013 was roughly three times that generated by the BC mining industry (10,720 FTEs).⁹⁰
- **High End Television Series.** The total employment created by the BC food and beverage processors (65,271 FTEs) in 2013 was equivalent to the employment that would be created from the production of approximately 58 high-end television series in BC.
- **New Home Construction.** The total employment supported by the Industry (65,271 FTEs) in 2013 was roughly equivalent to the total employment supported by the construction of all new homes in the province that year (approximately 27,000 housing starts).⁹¹

⁸⁸ Please note that because tax revenues can regularly change due to modifications in tax policy, the tax revenue impacts in this report are estimates only and are subject to change. They should be viewed as approximate in nature.

⁸⁹ MNP used the direct employment reported by Statistics Canada's Survey of Employment, Payrolls and Hours (SEPH) to report on the direct full time equivalents of the BC food and beverage processing industry.

⁹⁰ PWC, Looking Forward - The Mining Industry in British Columbia 2015, available here: <http://www.pwc.com/ca/en/mining/publications/pwc-mining-industry-british-columbia-2016-en.pdf>

⁹¹ Canadian Home Builders' Association, "British Columbia Economic Impacts of New Home Construction," available here: <http://chbafiles1.ca/impacts/3.%20British%20Columbia.%20New%20Residential%20Construction.pdf>. Housing start data is from

7.3 Economic Impacts by Sub-Industry

Table 5 presents the estimated economic impacts for each of the food and beverage processing sub-industries. In terms of economic impacts, the largest sub-industries are meat product manufacturing, beverage and tobacco product manufacturing, and dairy product manufacturing. Together, these three sub-industries account for over 55 percent of the total estimated GDP generated by the Industry, as well as over 50 percent of the employment supported by the Industry.

Table 5: Total Economic Impacts by Sub-Industry

	Total Output (million)	% of Total	Total GDP (million)	% of Total	Total Employment (FTEs) ⁹²	% of Total	Total Taxes (million)	% of Total
Meat product manufacturing	\$3,428	23%	\$1,247	21%	15,574	24%	\$284	21%
Beverage and tobacco product manufacturing	\$2,565	17%	\$1,219	20%	9,535	15%	\$290	21%
Dairy product manufacturing	\$2,516	17%	\$862	14%	7,838	12%	\$200	14%
Animal food manufacturing	\$1,260	8%	\$330	6%	3,388	5%	\$77	6%
Bakeries and tortilla manufacturing	\$993	7%	\$523	8%	7,991	12%	\$116	8%
Seafood product preparation and packaging	\$836	6%	\$331	6%	5,619	8%	\$77	6%
Fruit and vegetable manufacturing	\$657	4%	\$293	5%	3,772	6%	\$70	5%
Sugar and confectionery product manufacturing	\$502	3%	\$213	4%	2,428	4%	\$48	3%
Grain and oilseed milling	\$157	1%	\$49	1%	506	1%	\$12	1%
Other food manufacturing	\$2,149	14%	\$903	15%	8,620	13%	\$206	15%
Total	\$15,063	100%	\$5,970	100%	65,271	100%	\$1,380	100%

Statistics Canada, "Housing Starts, by Province," CANSIM 027-0009, available here: <http://www.statcan.gc.ca/tables-tableaux/sum-som/i01/cst01/manuf05-eng.htm>

⁹² MNP used the direct employment reported by Statistics Canada's Survey of Employment, Payrolls and Hours (SEPH) to report on the direct full time equivalents of the BC food and beverage processing industry.

Table 6 presents detailed estimated economic impacts for each of the food and beverage processing sub-industries.

Table 6: Detailed Economic Impacts by Sub-Industry⁹³

	Output (million)	GDP (million)	Employment (FTEs) ⁹⁴	Total Government Revenue (million)
Meat product manufacturing				
Direct	\$1,734	\$491	5,055	\$101
Indirect and Induced	\$1,694	\$756	10,519	\$183
Total	\$3,428	\$1,247	15,574	\$284
Beverage and tobacco product manufacturing				
Direct	\$1,684	\$738	4,942	\$168
Indirect and Induced	\$881	\$481	4,593	\$122
Total	\$2,565	\$1,219	9,535	\$290
Dairy product manufacturing				
Direct	\$1,137	\$353	1,519	\$74
Indirect and Induced	\$1,379	\$509	6,319	\$126
Total	\$2,516	\$862	7,838	\$200
Animal food manufacturing				
Direct	\$775	\$100	696	\$21
Indirect and Induced	\$485	\$230	2,692	\$56
Total	\$1,260	\$330	3,388	\$77
Bakeries and tortilla manufacturing				
Direct	\$595	\$296	5,527	\$58
Indirect and Induced	\$398	\$227	2,464	\$58
Total	\$993	\$523	7,991	\$116

⁹³ MNP used the direct employment reported by Statistics Canada's Survey of Employment, Payrolls and Hours (SEPH) to report on the direct full time equivalents of the BC food and beverage processing industry.

⁹⁴ The direct employment numbers are available from Statistics Canada CANSIM Table 281-0024. Survey of Employment, Payrolls and Hours (SEPH), employment by type of employee and detailed North American Industry Classification System (NAICS)

	Output (million)	GDP (million)	Employment (FTEs) ⁹⁴	Total Government Revenue (million)
Seafood product preparation and packaging				
Direct	\$461	\$164	3,374	\$34
Indirect and Induced	\$375	\$167	2,245	\$43
Total	\$836	\$331	5,619	\$77
Fruit and vegetable manufacturing				
Direct	\$401	\$143	1,958	\$33
Indirect and Induced	\$256	\$150	1,814	\$37
Total	\$657	\$293	3,772	\$70
Sugar and confectionery product manufacturing				
Direct	\$317	\$114	1,362	\$24
Indirect and Induced	\$185	\$99	1,066	\$24
Total	\$502	\$213	2,428	\$48
Grain and oilseed milling				
Direct	\$98	\$27	257	\$6
Indirect and Induced	\$59	\$22	249	\$6
Total	\$157	\$49	506	\$12
Other food manufacturing				
Direct	\$1,301	\$495	3,994	\$99
Indirect and Induced	\$848	\$408	4,626	\$107
Total	\$2,149	\$903	8,620	\$206

8. SWOT ANALYSIS

This section of the report assesses key strengths, weaknesses, opportunities, and threats (SWOT) facing the Industry. The section was informed by an online survey of BCFPA members, a roundtable panel of CEOs representing the Industry, and secondary reports published by the public and private sector. For a complete list of our primary and secondary sources, please see Appendix B.

The following sub-sections describe:

- **Strengths.** Internal attributes of the Industry or the province that could be helpful to achieving success/growth.
- **Weaknesses.** Internal attributes of the Industry or the province that could be harmful to achieving success/growth.
- **Opportunities.** External conditions that could be helpful to the Industry's success/growth.
- **Threats.** External conditions that could be harmful to the Industry's success/growth.

In consultation with the BCFPA, MNP developed a list of potential strengths, weaknesses, opportunities, and threats facing the Industry. The list was presented to BCFPA members through an online survey and respondents were asked to rank their level of agreement with each of the options provided. The figures in each of the following four sub-sections summarize MNP's survey findings.

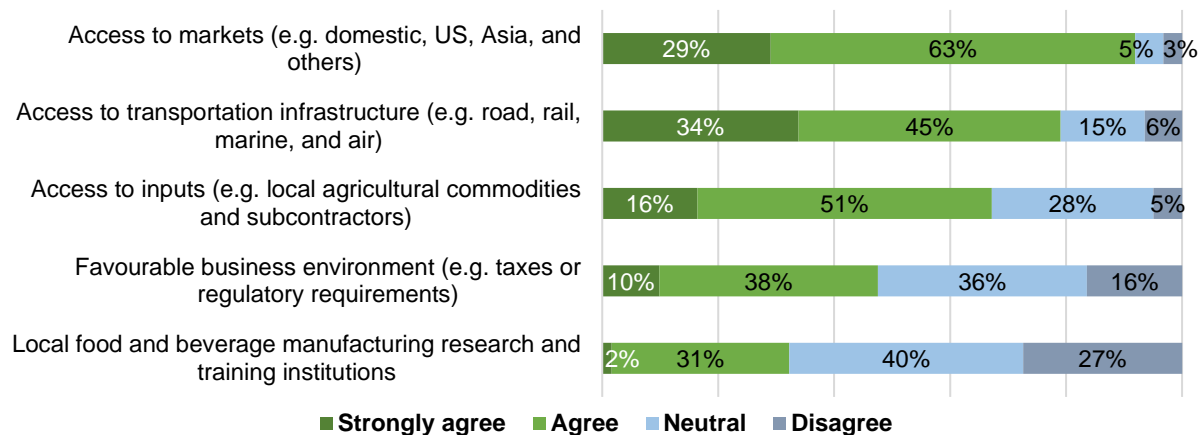
Figure 28: SWOT Analysis

	Helpful to achieving success /growth	Harmful to achieving success / growth
Internal - attributes of the Industry	Strengths	Weaknesses
External - attributes of the environment	Opportunities	Threats

Strengths

Figure 29 summarizes survey respondents' level of agreement with each of the strengths presented in the survey. Survey respondents felt that access to markets is the most significant strength of the Industry, followed closely by access to transportation infrastructure, and access to inputs. A favourable business environment and local food and beverage manufacturing research and training institutions were also ranked as strengths, but to a lesser degree. In addition, BC's international reputation for safe, high quality food was identified as an industry strength through industry input and a review of secondary sources.

Figure 29: Which of the following are strengths of the food and beverage processing industry in BC?



The strengths of the Industry are described below.

- 1. Access to markets.** The Industry has access to many markets. BC is home to over 4.5 million people, of which over half live in the Metro Vancouver area.⁹⁵ In addition, almost all metropolitan areas in western Canada are within a 24-hour drive from Vancouver. BC companies have access to a \$17 trillion marketplace under NAFTA,⁹⁶ including 65 million American consumers within a one-day drive from Vancouver. BC also has strong ties to the Asian-Pacific markets, and some of North America's shortest shipping routes to China, Japan and India.⁹⁷
- 2. Access to transportation infrastructure.** Almost 80 percent of survey respondents agreed that access to transportation infrastructure is a strength of the Industry. Most food and beverage processors in BC are close to the province's integrated transportation system, making it easy to access ingredients and ship finished goods to local, Canadian and international markets. BC's infrastructure system includes road, rail, marine and air links. For example, Vancouver International

⁹⁵ Data derived from BC Stats, "Population Estimates," available here:

<http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx>

⁹⁶ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here:

<http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

⁹⁷ Government of BC, "Efficient Transportation Network," available here (accessed June 8, 2016):

<http://www.britishcolumbia.ca/buy/why-b-c/efficient-transportation-network/>

Airport provides direct access to over 75 cities in North America, and over 25 cities in the Asia-Pacific and European regions.⁹⁸

3. **Access to inputs.** Two-thirds of survey respondents agreed that access to inputs is a strength of the food and beverage processing industry. BC has one of the most diverse agri-food industries in Canada, producing more than 200 agricultural commodities and 100 seafood species.⁹⁹ The province is best known for fruits, vegetables, livestock, dairy, and poultry. However, BC also produces other crops and animals such as hogs, sheep and goats. Additionally, it is a Canadian leader in the production of many seafood varieties.¹⁰⁰
4. **Favourable business environment.** Almost half of survey respondents agreed that BC has a favourable business environment. According to survey respondents, a competitive advantage of BC is its competitive tax rate. BC's corporate income tax rate is 26 percent, which is among the lowest of major industrialized nations.¹⁰¹
5. **Local food and beverage manufacturing research and training institutions.** BC is known for quality research and educational institutions, such as the University of British Columbia (UBC), University of Northern British Columbia, Simon Fraser University, and University of Victoria. BC has agri-food centres such as the BC Institute of Technology Food Processing Resource Centre, National Health and Food Products Research Group, and Food Science Group at UBC. Consequently, BC has considerable strength in agri-food research with over 80 researchers across these institutions.¹⁰² However, survey respondents and roundtable panelists noted that BC has limited commercialization assistance. There is no food innovation centre in BC to support small companies with research and development and commercialization. Companies in BC are required to contact the facilities in Alberta, Saskatchewan, or Manitoba in order to access these services.¹⁰³
6. **International reputation for safe, high quality food.** The Industry's key strength is its reputation for producing high quality, safe food products.¹⁰⁴ This has become particularly important for BC companies that sell to emerging Asian markets, where concerns about food safety and the origin of products are increasing.¹⁰⁵ High quality food has also been an important marketing strategy for the Industry. For example, one roundtable participant noted that a successful company has three potential key success factors: price, quality, and service. As an industry of small and medium sized companies, it may be difficult to compete on price, but there can be a strong focus on quality and service.

⁹⁸ Vancouver International Airport, "Non-Stop Destinations North America," 2015/16, available here: http://www.yvr.ca/-/media/yvr/documents/air-services/destinations-brochure_2016.pdf?la=en and "Flight Schedules," available here (accessed June 8, 2016): <http://www.yvr.ca/en/passengers/flights/flight-schedules>

⁹⁹ Ministry of Agriculture, "The BC Agrifood and Seafood Strategic Growth Plan," available here: <http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

¹⁰⁰ Ministry of Agriculture, "The BC Agrifood and Seafood Strategic Growth Plan," available here: <http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

¹⁰¹ Trade and Invest BC, "Business Cost Considerations," available here (accessed June 14, 2016): <http://www.britishcolumbia.ca/invest/doing-business/business-cost-considerations/>

¹⁰² Genome BC, "Asset Map for BC's Agri-Food Sector," May 2014., available here: http://www.genomebc.ca/files/9014/0968/6794/Agri-Foods_Asset_Map_for_web.pdf

¹⁰³ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

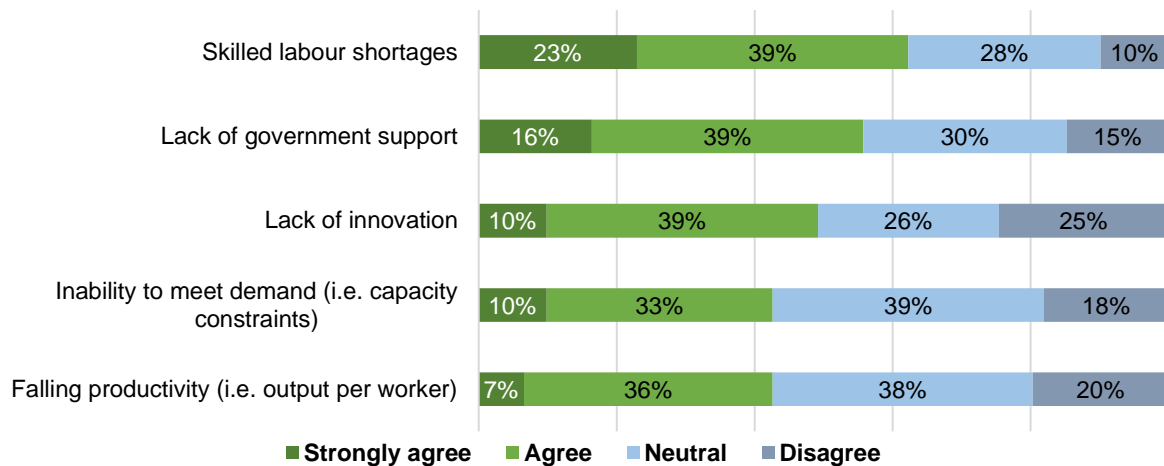
¹⁰⁴ Ministry of Agriculture, "The BC Agrifood and Seafood Strategic Growth Plan," available here: <http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

¹⁰⁵ World Health Organization, "Food Safety Overview," available here (accessed June 14, 2016): <http://www.searo.who.int/entity/foodsafety/topics/overview/en/>

Weaknesses

Figure 30 summarizes survey respondents' level of agreement with each of the weaknesses presented in the survey. Survey respondents felt that skilled labour shortages were the most significant weaknesses, followed by lack of government support, and lack of innovation. Inability to meet demand and falling productivity were also viewed as weaknesses, but to a lesser degree.

Figure 30: Which of the following are weaknesses of the food and beverage processing industry in BC?



The weaknesses of the Industry are described below.

- 1. Skilled labour shortages.** Access to skilled and unskilled labour in the Industry is a challenge. The low retention and attraction rates, as well as availability of suitable labour, may lead to dampened labour productivity and lower competitiveness against other jurisdictions. As one roundtable participant noted, the Industry is characterized by a variety of positions and labour needs which makes it hard to have a provincial or industry wide training strategy that would be consistent across all businesses in the Industry.¹⁰⁶ According to the survey and roundtable panelists, the key positions that are experiencing shortages include technical trades, supervisors, managers, and machine operators.
- 2. Lack of government support.** Over 50 percent of survey respondents felt there is a lack of government support for the Industry. In particular, respondents generally felt that there are many government programs for start-up companies, but there is limited support for companies seeking to grow or expand. However, roundtable panelists noted that there is a significant amount of government support, but it is not always provided in a coordinated way, it is not always easily accessible for food and beverage processing firms, and there is sometimes a lack of communication on what programs are available and how to access them.¹⁰⁷ This was supported by survey results, which found that 70 percent of survey respondents have participated in a program or have received a grant from the provincial or federal government. Of those that did not participate in a program or receive a grant, the most common reasons were:

¹⁰⁶ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

¹⁰⁷ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

- The process to assess eligibility for government support was unclear.
 - The process to complete an application for government support was too time consuming.
 - There was a lack of awareness of any government programs or grants.
 - The programs and grants provided limited funds.
- 3. Lack of innovation.** Almost 50 percent of survey respondents felt that there was a lack of innovation in the Industry. It was noted that the BC food and beverage processing industry often views innovation as strictly new product development, whereas many other industries and other successful food and beverage processing jurisdictions view innovation in a broader way that includes processes, people, markets, and products.¹⁰⁸ Survey respondents noted that it is difficult to be innovative because BC's small and medium sized companies often lack the necessary capital to make the required investments.¹⁰⁹ Pressure on margins may reduce the profit available to invest in the equipment and technical skills that are required to be more innovative. One roundtable panelist also noted that a key success factor for the Industry could be a better link between companies and the academic and other research in the province. For example, the individual noted that their company is developing a cognitive performance product and is seeking additional scientific research, trials, and testing. However, they are not currently well linked with any of the researchers at UBC, Simon Fraser University, or elsewhere in the province. The agri-food sector in BC ranks third among Canadian provinces in total business research and development expenditures.¹¹⁰
- 4. Inability to meet demand.** The Industry is comprised of a high concentration of small and medium sized companies and is heavily focused on niche manufacturing and product development. There are currently over 1,100 food and beverage processing firms throughout the province, with over 90 percent of them employing fewer than 100 staff.¹¹¹ While this can be a strength, it may also mean that BC's processors have a limited ability to compete on scale. One implication of this is export capacity. Many BC producers are limited in their ability to provide the volume needed to serve large, international markets. In addition, BC's small companies may lack the technology, marketing skills, foreign import requirements, and capital needed to access foreign distribution channels.
- 5. Falling productivity.** Over 40 percent of survey respondents felt that productivity is a weakness in the Industry. There are two primary drivers of this according to survey responses: old machinery and labour productivity. The machinery in the agri-food sector in Canada is older than in other sectors, which may reduce productivity and often requires significant levels of investment to upgrade equipment and train employees.¹¹² However, the high cost of new technology and the small scale of most BC food and beverage processors may lessen the incentive for companies to invest in new machinery or technologies. Labour productivity in the food and beverage processing industry is also lower in BC than in most other provinces. At \$40.10 in output per hour worked, BC

¹⁰⁸ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

¹⁰⁹ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

¹¹⁰ Ministry of Agriculture, "The BC Agrifood and Seafood Strategic Growth Plan," available here:

<http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

¹¹¹ Statistics Canada. Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (accessed: April 27, 2016).

¹¹² Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here:

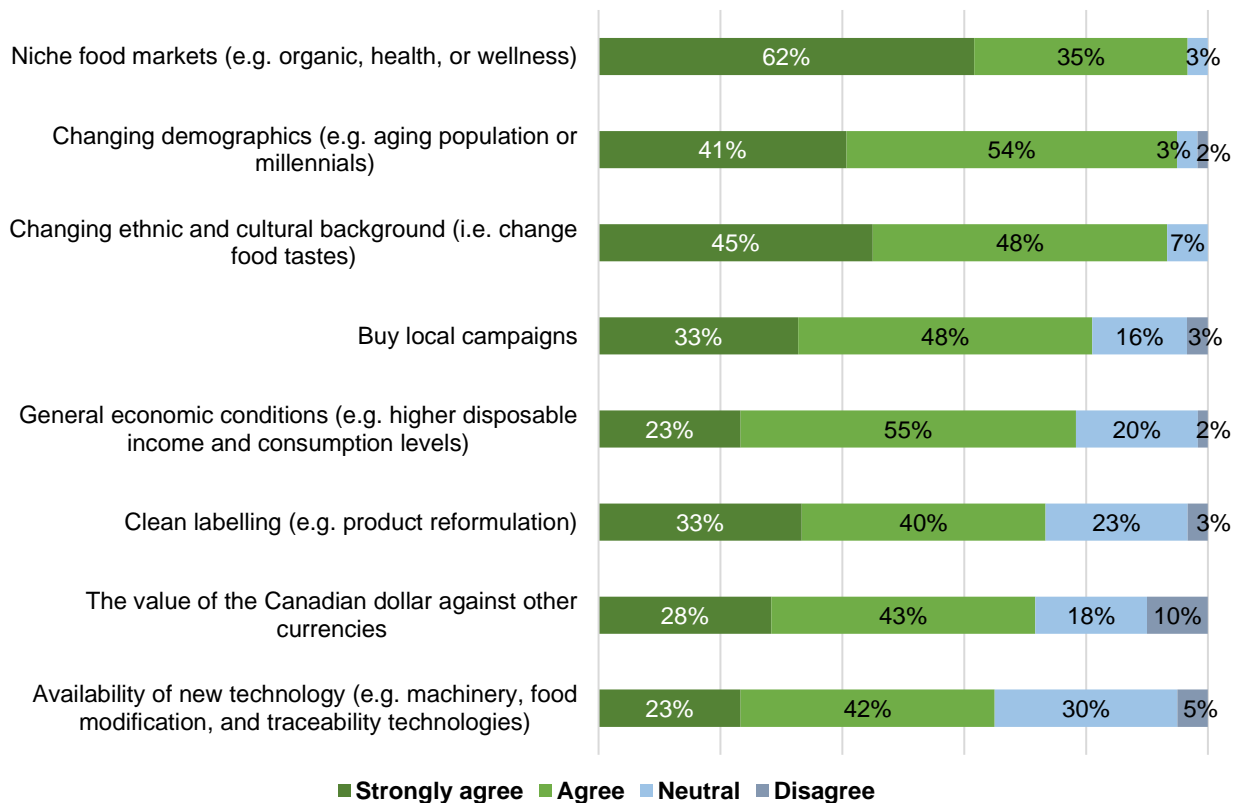
<http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

lags behind all other major food processing provinces, including Quebec (\$51.72), Alberta (\$54.55), and Ontario (\$64.38).¹¹³

Opportunities

Figure 31 summarizes survey respondents' level of agreement with each of the opportunities presented in the survey. Survey respondents felt that niche food markets was the most significant opportunity, followed by changing demographics and changing ethnic and cultural background. Free trade agreements were also identified as an opportunity for the Industry, through industry input and a review of secondary sources.

Figure 31: Which of the following are opportunities for the food and beverage processing industry in BC?



The opportunities for the Industry are described below.

1. **Niche food markets.** Almost all survey respondents agreed that niche food markets are an opportunity for the Industry. An advantage of the Industry is that it has a local market that is highly diverse in terms of ethnicity, culture, and lifestyle. Such diversity complements the small size of BC's food and beverage processors, which have capacity levels more suitable for niche market sizes. Niche food markets can include products that are natural, organic, convenient/prepared, gluten and lactose free, as well as natural health supplements.

¹¹³ Centre for Study of Living Standards, "A Detailed Analysis of the Productivity performance of Canadian Food Manufacturing," 2011, available here: <http://www.csls.ca/reports/csls2011-07.pdf>

2. **Changing demographics.** The Industry has the opportunity to capitalize on changing demographics, locally and internationally. Ninety-five percent of survey respondents agreed that changing demographics are an opportunity for the Industry. For example, the “baby-boomer” generation has a higher level of disposable income than previous generations do and is expected to change some of the consumer demand patterns.¹¹⁴ The aging population may drive demand for higher-end food products, small portions, and healthy foods, including functional food and nutraceuticals.¹¹⁵
3. **Changing ethnic and cultural background.** BC’s ethnically diverse population has supported the production of ethnic food products. These food products include Halal and Kosher, and other foods from Asia or Europe. In addition, many immigrants to BC have strong ties to their native countries, which simultaneously may help to bring their cultures and cuisines to BC, and creates greater potential for exports of BC products to their home countries. For example, one roundtable panelist noted that their business has the advantage of having people with multiple languages and backgrounds working for their company, including Cantonese, Mandarin, Tagalog, and English.
4. **Buy local campaigns.** According to a report published by Agriculture and Agri-Food Canada, Canadians are increasingly subscribing to the buy local philosophy, due to concerns over imported food, and targeted programs by industry and government.¹¹⁶ In BC, a \$6 million buy local program has helped promote local BC products.¹¹⁷ A survey conducted by Mustel Group found that nine out of ten people surveyed said it is at least somewhat important to buy locally grown or produced foods, with 45 percent listing it as very important.¹¹⁸
5. **General economic conditions.** Over 75 percent of survey respondents felt that the improving economic conditions are an opportunity for the Industry. Global trends such as a rising world population, higher incomes, and increasing demand for protein and healthy food are supporting overall demand for BC’s products.
6. **Clean labelling.** Clean label initiatives for food products can include fewer ingredients, recognized ingredients, minimally processed, plain language, ethically sourced, organic, free of allergens, and non-GMO.¹¹⁹ Innova Market Insights reported that about 20 percent of new products, globally, enter the market with a clean label strategy.¹²⁰ Clean labelling is an opportunity for processors to differentiate themselves against competitors.

¹¹⁴ Agriculture and Agri-Food Canada, “An Overview of the Canadian Agriculture and Agri-Food System,” 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹¹⁵ Agriculture and Agri-Food Canada, “An Overview of the Canadian Agriculture and Agri-Food System,” 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹¹⁶ Agriculture and Agri-Food Canada, “An Overview of the Canadian Agriculture and Agri-Food System,” 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹¹⁷ Ministry of Agriculture, “The BC Agrifood and Seafood Strategic Growth Plan,” available here:

<http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

¹¹⁸ As reported in the Abbotsford News: Jeff Nagel, “Strong Appetite to defend farmland, buy local: poll,” [BC Local News], May 6, 2011, available here: <http://www.abbynews.com/news/121419044.html>

¹¹⁹ Randy Shore, “Food companies turn to ‘clean labelling,’” [Vancouver Sun], March 3, 2016, available here: <http://www.vancouversun.com/technology/food+companies+turn+clean+labelling/11764078/story.html>

¹²⁰ As reported in the Vancouver Sun: Randy Shore, “Food companies turn to ‘clean labelling,’” [Vancouver Sun], March 3, 2016, available here: <http://www.vancouversun.com/technology/food+companies+turn+clean+labelling/11764078/story.html>. Additional Innova Market Insights can be found here (accessed June 8, 2016): http://www.innovadatabase.com/Content/DownloadTrendReports/special_report_2015.pdf

- 7. Lower value of the Canadian dollar against other currencies.** The depreciating Canadian dollar against other currencies (especially the United States dollar) has helped support some of the processors in the Industry. A lower dollar makes BC's exports relatively less expensive, and therefore supports their consumption in jurisdictions outside of Canada. In addition, the depreciating dollar makes it less attractive to import food products from the United States due to their relatively high cost. This has incentivized consumers to buy locally produced goods. Seven out of ten survey respondents felt that the low value of the Canadian dollar is an opportunity for the Industry. While the value of the Canadian dollar can provide opportunities for many companies, it can also threaten others, which will be discussed in the next section.
- 8. Availability of new technology.** New technologies are allowing some of BC's processors to increase productivity, to automate tasks, and to develop new products through research and development. Almost two-thirds of respondents to MNP's survey of BCFPA members felt that new technology is an opportunity for the Industry.
- 9. Free trade agreements.** BC is partner to a number of free trade agreements which were recently ratified or are in concluding negotiations. This includes agreements with some of BC's largest trading partners, such as the United States, Europe, Korea, and other Asia-Pacific countries. Specifically, the Comprehensive Economic and Trade Agreement with the European Union, and the Trans-Pacific Partnership with Asia-Pacific countries have concluded negotiations and are expected to come into force in the next few years.¹²¹ Both of these agreements are likely to reduce trade barriers (e.g. tariffs) for Canada's exports of primary and manufactured goods, including many agri-food products.¹²² These agreements may produce new market opportunities for BC's food and beverage products by reducing tariffs to export to those countries, as well as standardizing regulations around food and beverage processing.

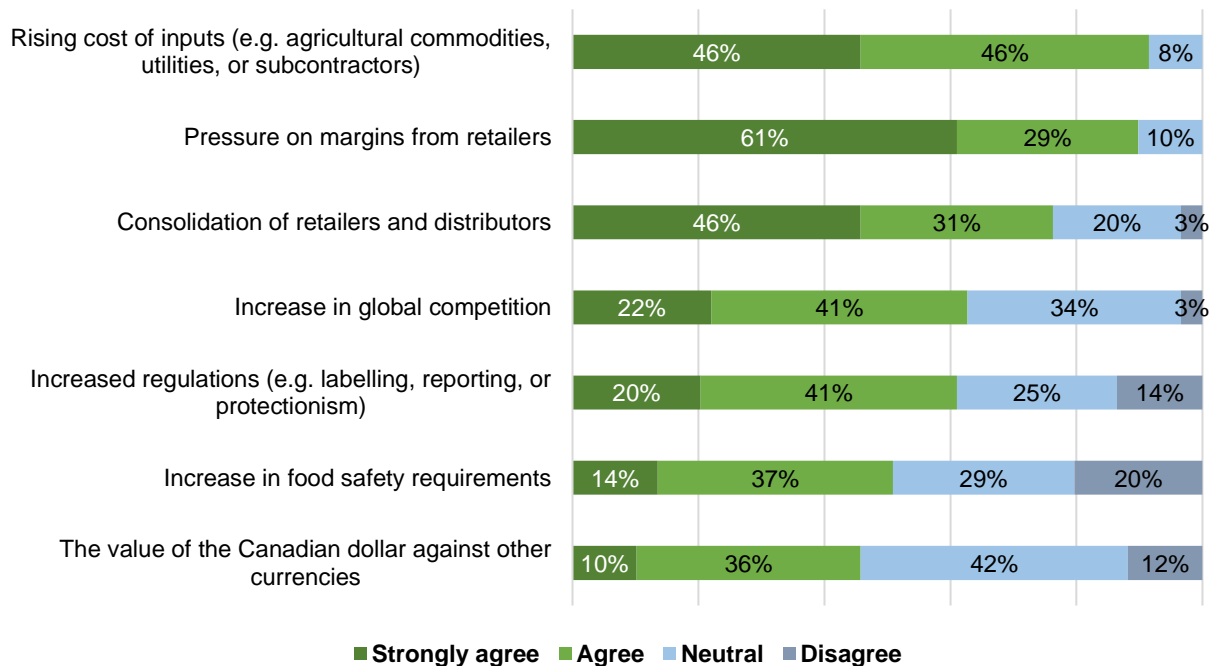
¹²¹ Global Affairs Canada, "Canada's Free Trade Agreements," available here (accessed June 14, 2016): <http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/fta-ale.aspx?lang=eng>

¹²² Livingston International, "Understanding Canada's New Free Trade Deals," available here: <http://www.livingstonintl.com/wp-content/uploads/2015/09/TPP-FTA-White-Paper.pdf>

Threats

Figure 32 summarizes survey respondents' level of agreement with each of the threats presented in the survey. Survey respondents felt that rising cost of inputs was the most significant threat, followed by pressure on margins from retailers and consolidation of retailers and distributors.

Figure 32: Which of the following are threats to the food and beverage processing industry in BC?



The threats facing the Industry are described below.

- 1. Rising cost of inputs.** One of the key obstacles for the Industry is the costs of production, such as raw materials, labour, and other input costs. Over the last decade, Canada has seen relatively high grain and oilseed prices, as well as record cattle and hog prices.¹²³ While these prices support the primary agricultural producers, it increases input costs for food and beverage processors. According to the roundtable panelists, input costs such as packaging, fuel, and utilities have risen consistently, putting pressure on profit margins.¹²⁴ Over 90 percent of survey respondents felt that the rising cost of inputs are a threat to the Industry. These rising costs put BC's industry at a disadvantage to some international competitors that have greater economies of scale as well as lower capacity, labour, land, and input costs.¹²⁵

¹²³ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹²⁴ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

¹²⁵ Ministry of Agriculture, "The BC Agrifood and Seafood Strategic Growth Plan," available here: <http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/strategic-growth-plan.pdf>

2. **Increased pressure on margins from retailers as well as consolidation of retailers and distributors.** According to a report by Agriculture and Agri-Food Canada, there has been a trend toward retail and distribution consolidation in BC, with several major food retailers and distributors dominating the provincial marketplace.¹²⁶ This can be a risk for small and medium sized food and beverage processors, which may not have the capacity to supply at a large scale. There can also be pressure to lower costs on food and beverage producers by large retailers, and bargaining power of small and medium sized establishments is often limited.¹²⁷ One roundtable panelist provided an example of the impact of retail consolidation. The panelist's company supplied both Sobeys and Safeway, with Safeway providing better margins. When Sobeys acquired Safeway, all margins were standardized to the Sobeys level, which had an immediate impact on the profitability of their operation.¹²⁸
3. **Increase in global competition.** Almost two-thirds of survey respondents agree that global competition in food and beverage processing is a key threat to the Industry. Global competition comes in the form of increased production of foreign-made products, as well as foreign protectionism and subsidies for foreign agricultural commodities and processed products. In many foreign jurisdictions, food and beverage production and distribution are regulated by multiple levels of government and may not be standardized across international jurisdictions.¹²⁹ Being compliant with domestic and international regulations therefore requires access to overseas distribution channels, and may be a barrier to small processors in BC. In addition, the roundtable panelists noted that some products imported into Canada do not meet the Canadian standards required in domestic production plants.¹³⁰
4. **Increased regulations, including food safety requirements.** Regulatory burden was reported to be a key threat to the Industry. According to the survey, the key concern is that global food and beverage processing regulations are not uniform, and therefore BC-based companies must meet domestic requirements as well as international requirements for the markets to which they export.
5. **The value of the Canadian dollar against other currencies.** While a low value of the Canadian dollar against other currencies can help support exports and domestic consumption of locally produced goods, the low Canadian dollar can also increase costs for producers. Many processors in BC are importers of ingredients, primarily from the US. Consequently, input costs may rise quickly and unpredictably, and may put increased pressure on margins.¹³¹ One roundtable panelist noted that their company buys 90 percent of its ingredients from the US. This has put margins under significant pressure as the Canadian dollar depreciates.¹³²

¹²⁶ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹²⁷ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹²⁸ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

¹²⁹ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹³⁰ Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

¹³¹ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

¹³² Roundtable Discussion with Food and Beverage Processors in BC, FoodProWest, May 19, 2016.

9. OVERVIEW OF PROGRAMS FOR THE INDUSTRY

British Columbia offers food and beverage processors numerous programs in areas including market development, market preparedness, innovation, food safety, and industry knowledge.

Table 7 summarizes programs available to food and beverage processors across the province, by focus area. It also outlines each program's funding and delivery agencies, key objectives, eligibility criteria, and funding models.

Table 7: Programs Available to BC Food and Beverage Processors

Funding Program/ Funding and Delivery Agency	Overview of Funding Program
MARKET DEVELOPMENT	
<p>BC Government's Buy Local Food Program</p> <ul style="list-style-type: none"> Funded by: BC Ministry of Agriculture Delivered by: Investment Agriculture Foundation 	<p>Program Overview: Supports projects aimed at promoting local foods that are grown, raised, harvested, or processed in BC. Eligible activities include but are not limited to developing in-store promotion and advertising, adding the buy local identifier to products' labels, and branding.</p> <p>Eligibly Criteria: Eligible participants include for profit or not for profit organizations that have a head office or are registered in BC and market a food, seafood or beverage product which is either:</p> <ul style="list-style-type: none"> Made entirely from ingredients sourced in BC. Comprised of more than 85 percent of its main ingredients from BC. Processed and packaged entirely in BC. (When the product's main ingredients are available in sufficient quantities in BC, the product must be made entirely from ingredients sourced in BC to be found eligible.) <p>Type of Funding: Non-repayable cost shared contribution.</p> <p>Funding Amount: Up to 50 percent in cash of the total cost of projects up to a maximum of \$75,000. The maximum funding available as a percentage of applicant's reported annual revenue is 30 percent.</p> <p>More information about this program is available at: http://iafbc.ca/funding-opportunities/buy-local/</p>
<p>BC Agri-Food and Seafood Export Program</p> <ul style="list-style-type: none"> Funded by: Growing Forward 2: A federal/provincial initiative Delivered by: Investment 	<p>Program Overview: Supports projects aimed at increasing export sales and expanding international market access through participation in international market development activities. Eligible activities include but are not limited to participating in export focus trade missions, participating in trade shows, developing marketing and promotional materials for export development initiatives, and advertising in foreign media.</p> <p>Eligibility Criteria: Eligible participants include for profit or not for profit organizations that have a head office or are registered in BC and market a food, seafood or beverage product made entirely from ingredients sourced in BC or</p>

Funding Program/ Funding and Delivery Agency	Overview of Funding Program
Agriculture Foundation	<p>comprised of more than 85 percent of its main ingredients from BC. Fishers (harvesters) are not eligible for funding under this program.</p> <p>Type of Support: Non-repayable cost shared contribution.</p> <p>Funding Amount: Up to 50 percent in cash of the total cost of projects, to a maximum of \$50,000.</p> <p>More information about this program is available at: http://iafbc.ca/funding-opportunities/export/</p>
MARKET PREPARDNESS	
<p>BC Agri-Food and Seafood Market Readiness Seminars and Workshops Programs</p> <ul style="list-style-type: none"> • Funded by: Growing Forward 2: A federal/provincial initiative • Delivered by: BC Ministry of Agriculture 	<p>Program Overview: A number of one-day workshops and seminars aimed at educating participants on domestic marketing and various export topics ranging from trade terminology and principles of international marketing to global supply chain management and shipping regulations and requirements. A two-day workshop is also offered, which covers the basics of business and market planning and offers networking opportunities for eligible participants.</p> <p>Eligibility Criteria: Eligible participants must have a head office or be registered in BC and be from one or more of the following groups: seafood associations and processors, agri-food sector producers and processors, non-timber forest resource harvesters, exporters, and industry associations/organizations. Fishers are not eligible for this program.</p> <p>Type of Support: Educational and professional development.</p> <p>Funding Amount: Not applicable.</p> <p>More information about this program is available at: http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/market-development-and-trade/workshops-and-seminars</p>
<p>BC Agri-Food and Seafood Market Development Preparedness Program</p> <ul style="list-style-type: none"> • Funded by: Growing Forward 2: A federal/provincial initiative • Delivered by: Price Waterhouse Coopers (PWC) 	<p>Program Overview: Provides support to agri-food and seafood processors, exporters, and industry organizations in conducting primary and secondary market research. Support for marketing training is also provided through this program.</p> <p>Eligibility Criteria: Applicants must have a head office in BC or be registered in BC and market products grown or processed in BC. Eligible applicants include:</p> <ul style="list-style-type: none"> • BC agri-food and seafood processors and exporters and industry organizations/associations. • BC agri-food primary producers. • Non-timber forest resource harvesters and wild crafters. <p>Type of Support: Non-repayable cost shared contribution.</p> <p>Funding Amount: Up to \$50,000 over the lifetime of the program.</p> <p>More information about this program is available at: http://iafbc.ca/funding-opportunities/innovation/</p>

Funding Program/ Funding and Delivery Agency	Overview of Funding Program
INNOVATION	
<p>Canada-BC Agri-Innovation Program</p> <ul style="list-style-type: none"> Funded by: Growing Forward 2: A federal/provincial initiative Delivered by: Investment Agriculture Foundation 	<p>Program Overview: Supports late stage research and pilot projects that lead to the commercialization and/or adoption of innovative products, technologies and practices. Eligible activities include, but are not limited to, projects that support the advancements in plant, animal and food science, energy and waste management, as well as new product development and commercialization.</p> <p>Eligibility Criteria: Eligible participants include agri-food sector producers and processors, industry associations/organizations, retail and food service businesses, input, technology and support services providers, academic institutions, and/or other organizations and private sector businesses.</p> <p>Type of Support: Non repayable cost shared contribution.</p> <p>Funding Amount: Funding provided is not specified.</p> <p>More information about this program is available at: http://iafbc.ca/funding-opportunities/innovation/</p>
<p>Agri-Food (Technology) Venture Acceleration Program</p> <ul style="list-style-type: none"> Funded by: BC Ministry of Agriculture Delivered by: Sumas Regional Consortium for High Tech 	<p>Program Overview: An accelerator program for early-stage agri-food tech startups and entrepreneurs, aimed at maximizing industry commercialization and growth. The program provides one-on-one coaching, training, and access to capital opportunities and networking possibilities for eligible candidates.</p> <p>Eligibility Criteria: By registering with the Sumas Regional Consortium for High Tech (SRCTec). SRCTec members pay a fee of \$250, non-members pay \$500.</p> <p>Type of Support: Educational and professional development.</p> <p>Funding Amount: Not applicable.</p> <p>More information about this program is available at: http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/entrepreneurship-and-commercialization</p>
<p>BC FoodWorks</p> <ul style="list-style-type: none"> Funded by: Growing Forward 2: A federal/provincial initiative Delivered by: Ethos Career Management Group 	<p>Program information and application details will become available later in 2016.</p>
<p>BioEnterprise BC</p> <ul style="list-style-type: none"> Funded by: Growing Forward 2: A federal/provincial initiative 	<p>Program Overview: An accelerator program aimed at supporting high-growth agri-food and seafood businesses (including food processors and agri-tech companies). Participants are provided with a variety of benefits, including but not limited to advanced commercialization and market analysis services, funding guidance, and access to an extensive international investor, business, and science advisory network.</p>

Funding Program/ Funding and Delivery Agency	Overview of Funding Program
<ul style="list-style-type: none"> Delivered by: BioEnterprise BC 	<p>Eligibility Criteria: Not Available.</p> <p>Type of Support: Educational and professional development.</p> <p>Funding Amount: Not applicable.</p> <p>More information about this program is available at: http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/entrepreneurship-and-commercialization</p>
FOOD SAFETY	
<p>Post-Farm Food Safety & Traceability Program</p> <ul style="list-style-type: none"> Funded by: Growing Forward 2: A federal/provincial initiative Delivered by: Details will become available in late June 2016 	<p>Program information and application details will become available later in 2016.</p>
<p>Traceability Speaker Program</p> <ul style="list-style-type: none"> Funded by: Growing Forward 2: A federal/provincial initiative Delivered by: BC Ministry of Agriculture 	<p>Program Overview: Provision of speaker funding for agricultural and seafood organizations to educate their membership in various topics such as traceability principles, systems, technologies, or infrastructure.</p> <p>Eligibility Criteria: First-come, first serve basis for speakers focusing on one or more of the following topics:</p> <ul style="list-style-type: none"> General traceability. Premises/location identification. Movement reporting. Product identification. <p>Type of Support: Grant can be applied for in advance of next speaker event, or as a reimbursement for prior event.</p> <p>Funding Amount: Up to 100 percent of associated costs to a maximum of \$3,500 per event, or \$10,000 per sector.</p> <p>More information about this program is available at: http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/growing-forward-2/traceability-speaker-funding</p>

Funding Program/ Funding and Delivery Agency	Overview of Funding Program
INDUSTRY KNOWLEDGE / OTHER	
<p>The Food and Beverage Processing Initiative</p> <ul style="list-style-type: none"> Funded by: Agriculture and Agri-Food Canada and the BC Ministry of Agriculture Delivered by: Investment Agriculture Foundation 	<p>Program Overview: Supports projects aimed at the development of the food, beverage and nutraceutical processing industry.</p> <p>Eligibility Criteria: Funding is available for projects that match one or more of the following strategic priorities:</p> <ul style="list-style-type: none"> Enhance the competitive position of BC food and beverage processors. Build BC's reputation as a leader in health and lifestyle-oriented products. Build business relationships and collaboration with value chain partners. Enhance communications and coordination among industry stakeholders. <p>Type of Support: Non-repayable cost shared contribution.</p> <p>Funding Amount: Funding provided is not specified.</p> <p>More information about this program is available at: http://iafbc.ca/funding-opportunities/innovation/</p>
<p>Industrial Research Assistance Program (IRAP)</p> <ul style="list-style-type: none"> Funded by: Federal Government of Canada Delivered by: National Research Council 	<p>Program Overview: Innovation assistance program aimed towards small and medium-sized enterprises to aid in the undertaking of technological innovation.</p> <p>Eligibility Criteria: Participants must:</p> <ul style="list-style-type: none"> Be a small or medium-sized enterprise in Canada, incorporated, and profit oriented. Have 500 or fewer full-time equivalent employees. Have the objective to grow and generate profit through the creation and commercialization of technology driven, innovative, new or improved products, services, or processes in Canada. <p>Type of Support: Research oriented grants.</p> <p>Funding Amount: Funding provided is not specified.</p> <p>More information about this program is available at: http://www.nrc-cnrc.gc.ca/eng/irap/services/financial_assistance.html</p>

10. CONCLUSION

The BC Industry is a major contributor to the provincial economy.

The BC food and beverage processing industry is a major contributor to the BC economy. In 2013, the Industry generated approximately \$8.5 billion in total revenues, making it the second largest manufacturing industry in the province.¹³³

The economic impacts of the Industry are comparable with many of the provinces other largest sectors. The following are comparisons of the Industry's impacts with three important industries in BC:

- **Mining.** The direct employment supported by the Industry (28,684 FTEs) in 2013 was roughly three times that generated by the BC mining industry (10,720 FTEs).¹³⁴
- **High End Television Series.** The total employment created by the BC food and beverage processors (65,271 FTEs) in 2013 was equivalent to the employment that would be created from the production of approximately 58 high-end television series in BC.
- **New Home Construction.** The total employment supported by the Industry (65,271 FTEs) in 2013 was roughly equivalent to the total employment supported by the construction of all new homes in the province that year (approximately 27,000 housing starts).¹³⁵

The BC Industry is comprised mainly of small companies that are focused on value added and niche products.

The Industry consists mainly of small companies that are focused on value added and niche products. There are currently over 1,100 food and beverage processing firms located throughout the province, with over 90 percent employing fewer than 100 staff.¹³⁶ Compared with similar jurisdictions across Canada, the Industry is more focused on value added and niche markets. BC is highly diverse in terms of ethnicity, culture, and lifestyle. Such diversity complements the small size of BC's food and beverage processors, which have capacity levels more suitable for niche market sizes. Niche food markets can include products that are natural, organic, convenient/prepared, gluten and lactose free, as well as natural health supplements. In addition, many immigrants to BC have strong ties to their native countries, which has resulted in the introduction of new cultures and cuisines to BC, and which has created greater potential for exports of BC products to immigrants' home countries

¹³³ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (Accessed: April 8, 2016).

¹³⁴ PWC, Looking Forward - The Mining Industry in British Columbia 2015, available here: <http://www.pwc.com/ca/en/mining/publications/pwc-mining-industry-british-columbia-2016-en.pdf>

¹³⁵ Canadian Home Builders' Association, "British Columbia Economic Impacts of New Home Construction," available here: <http://chbafiles1.ca/impacts/3.%20British%20Columbia.%20New%20Residential%20Construction.pdf>. Housing start data is from Statistics Canada, "Housing Starts, by Province," CANSIM 027-0009, available here: <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/manuf05-eng.htm>

¹³⁶ Statistics Canada. Table 552-0003 - Canadian business counts, location counts with employees, by employment size and North American Industry Classification System (NAICS), December 2013, (accessed: April 27, 2016).

The BC Industry faces labour shortages and is in need of a labour market strategy.

The Industry is characterized by a variety of positions and labour needs, including both skilled and unskilled labour. According to the survey of BCFPA members and roundtable panelists, the key positions that are experiencing shortages include technical trades, supervisors, managers, and machine operators. Industry representatives stressed the need for a labour market strategy to address the current and future needs of the Industry.

The BC Industry lags behind other major food processing provinces in terms of productivity.

Industry representatives stated that the Industry is facing challenges in terms of productivity. Published reports reviewed as a part of our study support this perception. For example, according to an analysis of the productivity performance of Canadian food manufacturing completed by the Centre for Study of Living Standards, the Industry has lower labour productivity than that of other major food processing provinces in Canada. At \$40.10 in output per hour worked, BC lags behind provinces such as Quebec (\$51.72), Alberta (\$54.55) and Ontario (\$64.38).¹³⁷ As well, the high cost of new technology and the small scale of most BC food and beverage processors may lessen the incentive for companies to invest in new machinery or technologies that may increase productivity.

The BC Industry faces increased global competition.

Almost two-thirds of survey respondents agreed that global competition in food and beverage processing is a key threat to the Industry. Global competition comes in the form of increased production of foreign-made products, as well as foreign protectionism and subsidies for foreign agricultural commodities and processed products. In many foreign jurisdictions, food and beverage production and distribution are regulated by multiple levels of government and may not be standardized across international jurisdictions.¹³⁸ Being compliant with domestic and international regulations therefore requires access to overseas distribution channels, and may be a barrier to small food processors in BC.

A key concern of Industry representatives was that global food and beverage processing regulations are not uniform, and therefore BC-based companies must meet domestic requirements as well as international requirements for the markets into which they export. In addition, the roundtable panelists noted that some products imported into Canada do not meet the Canadian standards required in domestic production plants.

The BC Industry needs support in the area of research and development and commercialization.

Survey respondents stated that many companies are concerned about innovation. It was noted that the Industry often views innovation as strictly new product development, whereas many other industries and other successful food and beverage processing jurisdictions, view innovation in a broader way that includes processes, people, markets, and products.

Among the comparator provinces, BC is the only one without a food innovation centre. Industry representatives noted that it may be difficult for BC food and beverage processors to be innovative, since

¹³⁷ Centre for Study of Living Standards, "A Detailed Analysis of the Productivity Performance of Canadian Food Manufacturing," 2011, available here: <http://www.csls.ca/reports/csls2011-07.pdf>

¹³⁸ Agriculture and Agri-Food Canada, "An Overview of the Canadian Agriculture and Agri-Food System," 2016, available here: <http://www.agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2016/>

small and medium sized companies often lack the capital necessary to make investments in equipment and technical skills. Industry representatives noted there may be an opportunity for a food innovation centre in BC similar to food innovation centres in other provinces that could support food and beverage processors with research and development and commercialization.

11. APPENDICES



APPENDIX A – SUB-INDUSTRY DEFINITIONS

The following are the Statistics Canada definitions of the sub-industries of the Industry:¹³⁹

- **Animal food manufacturing [NAICS 3111].** This sub-industry group comprises establishments primarily engaged in manufacturing food and feed for animals, including pets.
- **Grain and oilseed milling [NAICS 3112].** This sub-industry group comprises establishments primarily engaged in milling grains and oilseeds, refining and blending fats and oils, and making breakfast cereal products.
- **Sugar and confectionery product manufacturing [NAICS 3113].** This sub-industry group comprises establishments primarily engaged in manufacturing sugar and confectionery products.
- **Fruit and vegetable preserving and specialty food manufacturing [NAICS 3114].** This sub-industry group comprises establishments primarily engaged in manufacturing frozen fruits and vegetables, frozen entrées and side dishes of several ingredients except seafood, and fruits and vegetables preserved by pickling, canning, dehydrating and similar processes.
- **Dairy product manufacturing [NAICS 3115].** This sub-industry group comprises establishments primarily engaged in manufacturing dairy products. Establishments primarily engaged in manufacturing substitute products are included.
- **Meat product manufacturing [NAICS 3116].** This sub-industry group comprises establishments primarily engaged in manufacturing meat products.
- **Seafood product preparation and packaging [NAICS 3117].** This sub-industry group comprises establishments primarily engaged in canning seafood, including soup, smoking, salting and drying seafood, preparing fresh fish by removing heads, fins, scales, bones and entrails, shucking and packing fresh shellfish, processing marine fats and oils, and freezing seafood. Establishments known as floating factory ships that are engaged in shipboard processing of seafood are included.
- **Bakeries and tortilla manufacturing [NAICS 3118].** This sub-industry comprises establishments primarily engaged in manufacturing bakery products, except cookies and crackers. Establishments classified in this industry may sell to commercial or retail customers, for consumption outside the premises.
- **Other food manufacturing [NAICS 3119].** This sub-industry group comprises establishments, not classified to any other industry group, primarily engaged in manufacturing food.
- **Beverage and tobacco product manufacturing [NAICS 312].** This sub-industry group comprises establishments primarily engaged in manufacturing beverages and tobacco products.¹⁴⁰

¹³⁹ Statistics Canada, “North American Industry Classification System (NAICS)” 2012, available here: <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=118464&CVD=118466&CPV=311&CST=01012012&CLV=2&MLV=5>

¹⁴⁰ While tobacco manufacturing is generally not categorised as a sub-industry of the food and beverage processing industry, Statistics Canada only reports data for beverage and tobacco manufacturing at an aggregate level. Therefore, for purposes of this study, we have assumed both the beverage and tobacco manufacturing to be classified as sub-industries of the BC food and beverage manufacturing industry.

APPENDIX B – DATA SOURCES

This appendix lists the key data sources that MNP consulted during this study. Supplementary references are included in the footnotes throughout the report.

SECONDARY RESEARCH

The secondary sources used in this report are cited throughout the report. A selection of important information sources are provided below:

- Statistics Canada, <http://www.statcan.gc.ca>
- Agriculture and Agri-Food Canada, <http://www.agr.gc.ca>
- Innovation, Science and Economic Development Canada, www.ic.gc.ca
- BC Stats, www.bcstats.gov.bc.ca
- BC Ministry of Agriculture, gov.bc.ca/agri

PRIMARY RESEARCH

MNP conducted an online survey of BCFPA members as well as a roundtable panel with senior management of food and beverage organizations representing the Industry.

Online Survey

MNP conducted an online survey from April 20th to May 5th, 2016. All BCFPA members were encouraged to respond, and the survey received 62 responses. The survey specifically asked questions on the strengths, weaknesses, opportunities and threats facing the Industry, as well as member's participation in government support programs.

Roundtable Panel

MNP hosted a roundtable panel in partnership with the BCFPA at FoodProWest on May 19, 2016. The roundtable participants included senior management of food and beverage organizations representing the Industry.

Table 8: Participants of Roundtable Panel

Name	Organization
1. Alistair Johnston	Canadian Dairy Commission
2. Ken Falk	Fraser Valley Specialty Poultry
3. Rita Cheng	Superior Tofu Ltd.
4. Arran Stephens	Nature's Path Foods Inc.
5. James Pratt	Prosnack Natural Foods Inc.
6. Rick Gagne	Rema Health Products

APPENDIX C – GAPS IN DATA

MNP used 2013 financial data from Statistics Canada in the preparation of this report. However, the data for all sub-industries was not available as it was suppressed by Statistics Canada. The following is a summary of the suppressed data and MNP's approach to estimating them.

Total Revenue

The total revenues for the following sub-industries were suppressed by Statistics Canada:

- Grain and oilseed milling [NAICS 3112]
- Sugar and confectionery product manufacturing [NAICS 3113]
- Fruit and vegetable preserving and specialty food manufacturing [NAICS 3114]

To estimate the total revenues for the sub-industries listed above, MNP followed these steps:

1. MNP took the data from each available sub-industry and summed it. This value was then compared to the total revenue for the food manufacturing industry [NAICS 311]. The residual (i.e. the total food manufacturing industry revenue that was not accounted for in the available sub-industries) was calculated. This residual represents the total revenue across the suppressed sub-industries, NAICS 3112, 3113, and 3114.
2. MNP then estimated what share of the total revenue the suppressed sub-industries have historically (2004 to 2013) had against the total revenue for the food manufacturing industry.
3. This proportion was applied to the residual in order to estimate how the residual should be allocated against the suppressed sub-industries.

Revenue from Goods Manufactured

The total revenues from goods manufactured for the following sub-industries were suppressed by Statistics Canada:

- Grain and oilseed milling [NAICS 3112]
- Sugar and confectionery product manufacturing [NAICS 3113]
- Fruit and vegetable preserving and specialty food manufacturing [NAICS 3114]
- Beverage and tobacco product manufacturing [NAICS 312]

Revenue from goods manufactured was estimated using the same method as total revenue, with one exception. The revenue from goods manufactured for NAICS 312 was estimated by applying the historical (2004 to 2013) ratio of beverage and tobacco product manufacturing revenue to the total for food manufacturing. This ratio was applied to the 2013 value of the revenue of goods manufactured for beverage and tobacco product manufacturing industry [NAICS 312].

Total Expenses

The total expenses for the following sub-industries were suppressed by Statistics Canada:

- Grain and oilseed milling [NAICS 3112]
- Fruit and vegetable preserving and specialty food manufacturing [NAICS 3114]
- Dairy product manufacturing [NAICS 3115]

To estimate the total expenses for the sub-industries listed above, MNP followed these steps:

1. For the suppressed sub-industries, MNP calculated the ratio of historical expenses to historical revenues for the years 2004 to 2013.
2. The historical share of expenses was then applied to the revenue figures to estimate the total expenses for the suppressed sub-industries in 2013.

APPENDIX D – GLOSSARY OF ECONOMIC TERMS

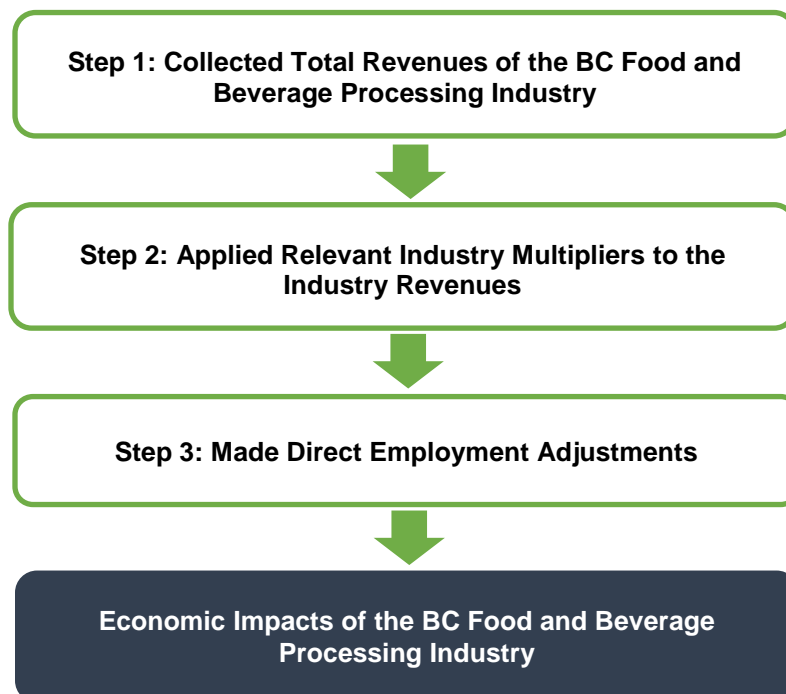
Table 9: Glossary of Economic Terms

Term	Definition
Direct Impacts	<ul style="list-style-type: none"> Direct impacts are the economic impacts of a sector that are due to changes to front end businesses that receive operating revenue as a direct consequence of a sector. Direct impacts are related to original purchases or “direct sales” from primary suppliers. <p><i>Example: In the case of food and beverage processing, direct impacts are related to the spending that food and beverage processors make when purchasing goods and services from their suppliers, for example, purchasing agricultural products from BC producers.</i></p>
FTE	<ul style="list-style-type: none"> FTE means full-time equivalent employee.
GDP	<ul style="list-style-type: none"> Gross domestic product (GDP) is the “value added” to the economy (the unduplicated total value of goods and services).
Government Tax Revenue	<ul style="list-style-type: none"> Government tax revenue is the total amount of tax revenues generated for different levels of government, including municipal, provincial and federal taxes.
Indirect Impacts	<ul style="list-style-type: none"> Indirect impacts are due to changes in the activity of an industry’s suppliers. Indirect impacts include the spending that food and beverage processors’ suppliers make when purchasing goods and services from their own suppliers (i.e. secondary suppliers) in order to meet the demand generated by the food and beverage processing industry. <p><i>Example: When food and beverage processors spend money on raw agricultural products, producers in turn purchase inputs such as feed, seeds and fuel to meet food and beverage processors’ demand. This spending by producers reflects the indirect impacts of food and beverage processing spending on agricultural products.</i></p>
Induced Impacts	<ul style="list-style-type: none"> Induced impacts are due to shifts in spending on goods and services as a consequence of the payroll of the directly and indirectly affected businesses. In the case of food and beverage processing, induced impacts reflect the additional spending by the employees of the processors’ suppliers (primary suppliers) and their suppliers’ suppliers (secondary suppliers). <p><i>Example: Using the example from above, the additional wages received by producers’ employees, feed companies’ employees, seed companies’ employees and fuel manufacturers’ employees “induce” spending. For example, these employees make consumer purchases at the grocery store or gas station. The jobs and income that result from these consumer purchases are considered induced impacts.</i></p>
Nominal GDP	<ul style="list-style-type: none"> Nominal GDP is the “value added” to the economy (the unduplicated total value of goods and services) that has not been adjusted for inflation.
Output	<ul style="list-style-type: none"> Output is the total gross value of all business revenue. This is the broadest measure of economic activity.

APPENDIX E – ECONOMIC IMPACT METHODOLOGY AND ASSUMPTIONS

A step-by-step overview of MNP's economic impact approach is described below.

Figure 33: Steps to Estimating the Economic Impacts of the BC Food and Beverage Processing Industry



Step 1: Collected Total Revenues of the BC Food and Beverage Processing Industry

The first step to estimate the economic impacts of the Industry was to collect data on the total revenue of the Industry as a whole and by sub-industry from Statistics Canada. The Industry generated approximately \$8.5 billion in total revenues in 2013.¹⁴¹

Table 10 outlines the total revenues by sub-industry in 2013.

Table 10: Total Revenues by Sub-Industry in 2013

Sub-Industries	Total Revenue (\$ millions)	% of Total
Meat product manufacturing	\$1,734	20%
Beverage and tobacco product manufacturing	\$1,684	20%
Dairy product manufacturing	\$1,137	13%
Animal food manufacturing	\$775	9%
Bakeries and tortilla manufacturing	\$595	7%
Seafood product preparation and packaging	\$461	5%
Fruit and vegetable manufacturing	\$401	5%
Sugar and confectionery product manufacturing	\$317	4%
Grain and oilseed milling	\$98	1%
Other food manufacturing	\$1,301	15%
Total	\$8,503	100%

Source: Statistics Canada, Annual Survey of Manufacturers and Logging, 2013.

The total revenues for the following sub-industries were suppressed by Statistics Canada:

- Grain and oilseed milling [NAICS 3112]
- Sugar and confectionery product manufacturing [NAICS 3113]
- Fruit and vegetable preserving and specialty food manufacturing [NAICS 3114]

To estimate the total revenues for the sub-industries listed above, MNP calculated their historical share of the total industry revenues. The historical share was applied to the total industry revenue for 2013 to produce the estimate. Please see Appendix C for more details.

¹⁴¹ Statistics Canada. Table 301-0008 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (accessed: April 8, 2016).

Step 2: Applied Relevant Industry Multipliers to the Industry Revenues

The economic impacts of the Industry were estimated using an economic impact model developed with Statistics Canada's 2010 multipliers. MNP mapped total revenues for each sub-industry to appropriate provincial industry multipliers published by Statistics Canada. The model produced estimates of direct, indirect and induced economic impacts, including output, GDP, employment, and government revenues.

Statistics Canada only published combined direct/indirect GDP, employment and government revenue multipliers for the following sub-industries at the provincial level:

- Grain and oilseed milling [NAICS 3112]
- Dairy product manufacturing [NAICS 3115]
- Seafood product preparation and packaging [NAICS 3117]
- Other food manufacturing [NAICS 3119]
- Beverage and tobacco product manufacturing [NAICS 312]

As information is available on direct and indirect output, we have used this allocation to approximate direct and indirect multipliers for GDP, employment and government revenue for the sub-industries listed above.

Step 3: Made Direct Employment Adjustments

MNP used the direct employment reported by Statistics Canada's Survey of Employment, Payrolls and Hours (SEPH) to report on the direct full time equivalents of the BC food and beverage processing industry. Statistics Canada's SEPH estimates are believed to be the best measure for direct employment in the Industry.

Please note that SEPH data is for employment and not necessarily full-time equivalent jobs. However, it is assumed that the SEPH employment data is equal to the full-time equivalent jobs. This is supported by the average number of hours worked per week for each sub-industry in Canada, which is approximately 35 hours.¹⁴²

¹⁴² Statistics Canada. Table 281-0033 - Principal statistics for manufacturing industries, by North American Industry Classification System (NAICS), 2013 (accessed: April 8, 2016). Note that BC data is suppressed and therefore Canadian data was used.

APPENDIX F – ABOUT MNP

MNP is one of the leading chartered accountancy and business advisory firm in Canada. Founded in 1945, MNP has grown from a single office in Manitoba to more than 75 offices and 3,000 team members across Canada. MNP is a member of Praxity AISBL, a global alliance of independent firms, which enables us to access a broad range of sector specific expertise worldwide.

At MNP, our professionals are the driving force behind our success. They continue to demonstrate our culture and values which is integral to the way we conduct business, both internally and externally. As such, MNP is proud to be recognized as one of the *50 Best Employers in Canada* by *Maclean's* magazine.



ABOUT MNP'S FOOD AND AGRICULTURE ECONOMICS TEAM

MNP's Food and Agriculture Economics Practice consists of a team of dedicated members that have a successful track record of conducting industry studies, market research studies, and economic impact engagements in the agriculture and food and beverage processing sector. Our team consults on a range of agri-food related topics and has carried out assignments across Canada for businesses, industry associations, and government.