

Economic Analysis and Forecasting Draft Discussion Paper

Niagara Region Economic Development Master Plan

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Introduction

This discussion paper consists of an overview of key findings of the Economic Analysis and Forecasting review work undertaken as part of the Research, Consultation and Master Plan Development phase of the Economic Development Master Plan for Niagara project. It is intended to provide the reader with an understanding of the Niagara economy based on available background data.

This paper is organized into the following sections:

- Section 1: Demographic and Labour Force Trends;
- Section 2: Commuting Trends;
- Section 3: Economic Base and Sector Analysis;
- Section 4: Economic Outlook;
- Section 5: Export Activity.

Section 1: Niagara Demographic and Labour Force Trends

Population Levels and Growth

Niagara's 2016 population level was 447,888, which is 3.8% higher than its 2011 population level. The Niagara percentage population growth between 2011 and 2016 was slightly lower than Ontario (4.6%) and Canada (5.0%). Population growth varied by municipality in Niagara with the highest growth occurring in Niagara Falls (5,074) and population decrease (118) occurring in Port Colborne. Population levels and growth by municipality in Niagara are shown in the following exhibit.

Exhibit 1. Population Growth in Niagara Municipalities

Community	2011 Population	2016 Population	2011 - 2016 Change	2011-2016 % Pop. Growth	% of Niagara Population 2011	% of Niagara Population 2016
St. Catharines	131,400	133,113	1,713	1.3%	30.5%	29.7%
Niagara Falls	82,997	88,071	5,074	6.1%	19.2%	19.7%
Welland	50,631	52,293	1,662	3.3%	11.7%	11.7%
Fort Erie	29,960	30,710	750	2.5%	6.9%	6.9%
Grimsby	25,325	27,314	1,989	7.9%	5.9%	6.1%
Lincoln	22,487	23,787	1,300	5.8%	5.2%	5.3%
Thorold	17,931	18,801	870	4.9%	4.2%	4.2%
Port Colborne	18,424	18,306	-118	-0.6%	4.3%	4.1%
Niagara-on-the-Lake	15,400	17,511	2,111	13.7%	3.6%	3.9%
Pelham	16,598	17,110	512	3.1%	3.8%	3.8%
West Lincoln	13,837	14,500	663	4.8%	3.2%	3.2%
Wainfleet	6,356	6,372	16	0.3%	1.5%	1.4%
Niagara Region	431,346	447,888	16,542	3.8%	100.0%	100.0%

Source: Statistics Canada 2016 Census

Age Distribution

Niagara has an older population compared to Ontario and Canada. The median age of the Niagara population in 2016 was 45.7 years, compared to 41.3 years in Ontario and 41.2 years in Canada. Niagara has a higher portion of seniors with the population aged 65 and over in 2016 accounting for 21.4% of the total population. In comparison, seniors accounted for only 16.7% of the population in Ontario and 16.9% in Canada. Niagara's portion of the population 85 years and over (3.1%) is slightly higher than Ontario and Canada (2.2%).

Niagara has a lower portion of population in the prime working age group (25 to 44 years) at 22.2% compared to 25.7% for Ontario in 2016. See Exhibit 2 for the distribution of the population by age cohort.

Exhibit 2: Population by Age Distribution

Age Cohort	Niagara Population	Niagara Percent	Ontario Percent	Canada Percent
0 to 14 years	66,760	14.9%	16.4%	16.6%
15 to 19 years	25,710	5.7%	6.0%	5.8%
20 to 24 years	28,155	6.3%	6.7%	6.4%
25 to 29 years	25,130	5.6%	6.5%	6.5%
30 to 34 years	24,005	5.4%	6.4%	6.6%
35 to 39 years	23,950	5.3%	6.3%	6.5%
40 to 44 years	26,150	5.8%	6.5%	6.4%
45 to 49 years	29,145	6.5%	7.0%	6.7%
50 to 54 years	35,335	7.9%	7.9%	7.6%
55 to 59 years	34,995	7.8%	7.4%	7.5%
60 to 64 years	32,715	7.3%	6.3%	6.5%
65 years +	95,845	21.4%	16.7%	16.9%
Prime Working Age Group (25 to 44 Yrs.)	99,235	22.2%	25.7%	26.1%
Median Age		45.7	41.3	41.2

Source: Statistics Canada 2016 Census

Educational Attainment

Niagara has lower educational attainment levels compared to Ontario and Canada. A lower portion of the Niagara population aged 25 to 64 years in 2016 had a postsecondary certificate, diploma or degree compared to Ontario and Canada - 60% compared to around 65%. Niagara has a notably smaller portion of population aged 25 to 64 years who have attained a university certificate, diploma or degree at the bachelor level of higher – 20.7% compared to 31.9% and 28.5% for Ontario and Canada respectively. A higher portion (29.1%) of the Niagara population have College, CEGEP or non-university certificates or diplomas compared to Ontario (24.7%) and Canada (22.4%). See Exhibit 3.

Exhibit 3: Highest Educational Attainment – Population Aged 25 – 64 years

Highest certificate, diploma or degree	Niagara Number	Niagara Percent	Ontario Percent	Canada Percent
Population aged 25 – 64 years	229,125			
No certificate, diploma or degree	23,365	10.2%	10.4%	11.5%
Secondary (high) school diploma or equivalency certificate	68,355	29.8%	24.5%	23.7%
Postsecondary certificate, diploma or degree	137,400	60.0%	65.1%	64.8%
Apprenticeship or trades certificate or diploma	19,245	8.4%	6.2%	10.8%
Trades certificate or diploma other than Certificate of Apprenticeship or Certificate of Qualification	9,140	4.0%	3.0%	6.0%
Certificate of Apprenticeship or Certificate of Qualification	10,105	4.4%	3.1%	4.7%
College, CEGEP or other non-university certificate or diploma	66,645	29.1%	24.7%	22.4%
University certificate or diploma below bachelor level	4,000	1.7%	2.4%	3.1%
University certificate, diploma or degree at bachelor level or above	47,515	20.7%	31.9%	28.5%
Bachelor's degree	32,850	14.3%	21.0%	19.0%
University certificate or diploma above bachelor level	3,230	1.4%	2.1%	1.9%
Degree in medicine, dentistry, veterinary medicine or optometry	1,275	0.6%	0.9%	0.8%
Master's degree	9,010	3.9%	6.9%	5.9%
Earned doctorate	1,155	0.5%	1.0%	0.9%

Source: Statistics Canada 2016 Census

Compared to Ontario, a lower portion of the population aged 25 to 64 years in Niagara have attained postsecondary diploma, degree or certificate in business, management and public administration; or mathematics, computer and information sciences (lower by about two percentage points or more). Niagara has higher portion of its population with a postsecondary diploma, degree or certificate in health and related fields, and personal; protective and transportation services – about 3 percentage points higher than Ontario.

Exhibit 4: Major Field of Study, Population 25 – 64 Years

Major Field of Study	Niagara Total	Niagara Percent	Ontario Percent	Canada Percent
Education	8,745	6.4%	5.2%	5.9%
Visual and performing arts; and communications technologies	5,050	3.7%	4.1%	3.8%
Humanities	6,430	4.7%	5.7%	5.0%
Social and behavioural sciences and law	16,380	11.9%	13.8%	11.6%
Business; management and public administration	26,635	19.4%	21.8%	22.0%
Physical and life sciences and technologies	3,815	2.8%	4.0%	3.7%
Mathematics; computer and information sciences	4,365	3.2%	5.4%	4.6%
Architecture; engineering; and related technologies	27,535	20.0%	18.7%	20.6%
Agriculture; natural resources and conservation	3,010	2.2%	1.8%	2.2%
Health and related fields	23,765	17.3%	14.1%	14.3%
Personal; protective and transportation services	11,640	8.5%	5.5%	6.3%
Total Persons with Postsecondary diploma, degree or certificate	137,390	100.0%	100.0%	100.0%

Source: Statistics Canada 2016 Census

Labour Force

There were 226,595 persons in the Niagara labour force in 2016 which represents a participation level of around 61% of those 15 years of age and older (which is slightly lower than the participation rate for Ontario at 64.7%). The portion of the Niagara labour force that was employed in 2016 was 209,890 (92.6%). Niagara's unemployment rate was 7.4%, which is the same as the Ontario unemployment rate in that year. The size of the Niagara labour force increased by only 2.4% between 2011 and 2016, compared to a 4.0% increase in Ontario.

The percentage of the Niagara labour force by sector is comparable to Ontario and Canada for most sectors. Those sectors where there is a two percentage point or higher difference are noted below, with data shown in Exhibit 5:

- A total of 11.2% of the Niagara labour force were employed in the accommodations and food services sector in 2016, compared to 6.9% and 7.0% in Ontario and Canada respectively;
- Only 4.7% of the Niagara labour force were employed in the professional, scientific and technical services sector in 2016, compared to 8.1% and 7.3% in Ontario and Canada respectively;
- The arts, entertainment and recreation sector accounted for 4.1% of the Niagara labour force employment in 2016, compared to 2.1% in both Ontario and Canada;

- The finance and insurance sector only accounted for 3.0% of jobs of the Niagara labour force in 2016, which is lower than 5.5% in Ontario (although only 1.3 percentage points lower than Canada).

Exhibit 5: Labour Force by Sector

NAIC/Sector	Niagara Number	Niagara-Percent	Ontario Percent	Canada Percent
44-45 Retail trade	27,325	12.3%	11.2%	11.6%
62 Health care and social assistance	25,920	11.7%	10.8%	11.7%
72 Accommodation and food services	24,915	11.2%	6.9%	7.0%
31-33 Manufacturing	21,100	9.5%	9.8%	8.7%
61 Educational services	16,455	7.4%	7.6%	7.4%
23 Construction	16,065	7.2%	6.8%	7.5%
56 Administrative and support; waste management and remediation services	11,900	5.4%	4.9%	4.4%
91 Public administration	10,685	4.8%	6.0%	6.2%
54 Professional; scientific and technical services	10,505	4.7%	8.1%	7.3%
81 Other services (except public administration)	10,025	4.5%	4.3%	4.5%
48-49 Transportation and warehousing	9,440	4.3%	4.7%	4.8%
71 Arts; entertainment and recreation	9,100	4.1%	2.1%	2.1%
41 Wholesale trade	7,805	3.5%	3.9%	3.6%
52 Finance and insurance	6,715	3.0%	5.5%	4.3%
11 Agriculture; forestry; fishing and hunting	5,790	2.6%	1.5%	2.4%
53 Real estate and rental and leasing	3,425	1.5%	2.1%	1.8%
51 Information and cultural industries	2,845	1.3%	2.5%	2.3%
22 Utilities	1,370	0.6%	0.7%	0.7%
21 Mining; quarrying; and oil and gas extraction	515	0.2%	0.5%	1.5%
55 Management of companies and enterprises	180	0.1%	0.2%	0.2%
Total (excludes not applicable category)	222,080	100.0%	100.0%	100.0%

Source: Statistics Canada 2016 Census

Niagara has a notably larger portion of its labour force employed in sales and services jobs (29.1%) compared to Ontario and Canada (both at 23.4%). It has a lower portion in business, finance, and administration occupations; as well as natural and applied sciences and related occupations. See Exhibit 6.

Exhibit 6: Labour Force by Occupation

Occupation Classification	Niagara Number	Niagara Percent	Ontario Percent	Canada Percent
0 Management occupations	23,885	10.8%	11.3%	11.0%
1 Business; finance and administration occupations	29,220	13.2%	16.1%	15.7%
2 Natural and applied sciences and related occupations	10,120	4.6%	7.4%	7.0%
3 Health occupations	15,885	7.2%	6.4%	6.8%
4 Occupations in education; law and social; community and government services	23,585	10.6%	11.9%	11.7%
5 Occupations in art; culture; recreation and sport	5,485	2.5%	3.2%	3.1%
6 Sales and service occupations	64,735	29.1%	23.4%	23.4%
7 Trades; transport and equipment operators and related occupations	33,180	14.9%	13.3%	14.6%
8 Natural resources; agriculture and related production occupations	5,785	2.6%	1.6%	2.3%
9 Occupations in manufacturing and utilities	10,200	4.6%	5.2%	4.5%
All occupations (excludes not applicable category)	222,080	100.0%	100.0%	100.0%

Source: Statistics Canada 2016 Census

The 'jobs to labour force' ratio is a measure of 'complete communities' and is used to measure and track the opportunity for workers to hold a job in their community. The ratio is calculated by dividing the number of jobs in a community by the labour force residing in that community. Generally, communities strive to have a balanced jobs to labour force ratio of close to 1:1. Larger urban centres tend to have higher jobs to labour force ratios as they are economic centres attracting large inflows of labour.

The 'jobs to labour force' ratio varies by community throughout Niagara. At an overall regional level, Niagara has a slightly less than optimal ratio of jobs to labour force with a ratio of 0.94 jobs to every person in the labour force. Niagara has a high number of jobs to labour force in the management of companies and enterprises sector with 1,462 jobs but only 180 of the Niagara labour force working in that sector, as shown below.

Exhibit 7: Number of Jobs to Labour Force in Niagara, 2016

NAICS	Description	Jobs	Labour Force	Jobs to Labour Force Ratio
11	Agriculture, forestry, fishing and hunting	4,924	5,970	0.82
21	Mining, quarrying, and oil and gas extraction	309	515	0.60
22	Utilities	1,375	1,370	1.00
23	Construction	15,760	16,065	0.98
31-33	Manufacturing	18,297	21,100	0.87
41	Wholesale trade	8,025	7,805	1.03
44-45	Retail trade	27,245	27,325	1.00
48-49	Transportation and warehousing	6,684	9,440	0.71
51	Information and cultural industries	2,045	2,845	0.72
52	Finance and insurance	5,935	6,715	0.88
53	Real estate and rental and leasing	4,582	3,425	1.34
54	Professional, scientific and technical services	8,703	10,505	0.83
55	Management of companies and enterprises	1,462	180	8.12
56	Administrative and support, waste management and remediation services	12,077	11,900	1.01
61	Educational services	14,489	16,455	0.88
62	Health care and social assistance	24,829	25,920	0.96
71	Arts, entertainment and recreation	8,666	9,100	0.95
72	Accommodation and food services	25,333	24,915	1.02
81	Other services (except public administration)	9,806	10,025	0.98
91	Public administration	10,265	10,685	0.96
X0	Unclassified	3,300	4,335	0.76
	Total	214,110	226,595	0.94

Source: EMSI 2018.1 Dataset, Statistics Canada 2016 Census

Income

The average total household income in Niagara in 2015 was \$81,842 which represents a 13% increase from 2010, not taking into account inflation. This can be compared to an average total household income of \$97,856 in Ontario, which is a 14.1% increase from 2005, not considering inflation. A comparison of household income levels in Niagara against benchmark regions is provided later in this discussion paper.

Section 2: Commuting Trends

The Niagara region employed resident labour force was 209,890 in 2016, of which 171,345 persons worked at a usual place of work. An additional 22,940 worked at 'no fixed place of work' (such as landscapers and truck drivers); 13,955 persons worked at home; and 1,650 worked outside of Canada.

Statistics Canada reports on estimated commuting flows of persons 15 years of age or older that worked at a usual place of work in 2016 based on a 25% sample and flows of 20 persons or more.

The majority of jobs at usual places of work in Niagara were held by people living in Niagara. The largest inflow of workers from outside Niagara were from Hamilton (4,350) and Haldimand county (1,045). Data on place of residence of persons working at usual places of work in Niagara in 2016 is provided in Exhibit 8.

Commuting flows were estimated for 169,005 persons in the Niagara employed resident labour force in 2016 (98.6% of the total number of Niagara employed labour force with a usual place of work). The communities with the largest share of the Niagara resident labour force working in those communities were St. Catharines (48,250), Niagara Falls (34,425), Welland (14,195), Hamilton (11,840) and Niagara-on-the-Lake (9,710). About 84% or 144,320 (of the Niagara employed resident labour force that worked at usual places of work had jobs in Niagara. Under 25,000 persons worked outside of Niagara, with about half (48%) working in Hamilton. Data on commuting flows of the employed resident labour force with a usual place of work in 2016 is provided in Exhibit 9.

Exhibit 8: Municipality of Residence of Persons Commuting to Niagara for Work, 2016

Municipality	St. Catharines	Niagara Falls	Welland	NOTL	Lincoln	Fort Erie	Grimsby	Thorold	Port Colborne	Pelham	West Lincoln	Wainfleet	Total
Burlington	240	75	40	40	105		165	35					700
Fort Erie	950	1,895	455	225	70	5,670	30	195	375	35		25	9,925
Grimsby	600	115	85	95	680		2,710	60			230		4,575
Haldimand County	105	110	125		105	25	145	35	60	40	240	55	1,045
Hamilton	1,345	255	165	210	565	50	1,275	110	25	20	330		4,350
Lincoln	1,350	285	135	165	2,805	25	925	80	25	60	145		6,000
Mississauga	170	70	25	20	20	20	35						360
Niagara Falls	5,035	22,070	1,040	1,830	360	725	210	1,070	220	155	70		32,785
NOTL	1,365	840	105	2,325	100	65	45	120					4,965
Oakville	90	40		20	40		60						250
Pelham	1,515	600	1,110	200	215	45	100	380	120	1,140	80	30	5,535
Port Colborne	645	515	1,010	65	95	505		130	2,705	70	25	100	5,865
St. Catharines	29,800	4,435	1,280	3,785	2,040	315	825	1,980	210	265	240	35	45,210
Thorold	3,100	1,200	395	510	280	65	105	1,250	50	125	25		7,105
Toronto	215	140	55	85	45		30	30					600
Wainfleet	235	175	375	55	80	25	55	70	280	90	80	370	1,890
Welland	3,300	2,220	8,130	415	355	465	130	885	765	765	200	100	17,730
West Lincoln	355	75	75	40	390		440	80		155	1,125		2,735
Totals	50,415	35,115	14,605	10,085	8,350	8,000	7,285	6,510	4,835	2,920	2,790	715	151,625

Note: Totals exclude flows under 20 persons

Source: Statistics Canada - 2016 Census. Catalogue Number 98-400-X2016325.

Exhibit 9: Commuting Flow of Niagara Labour Force by Place of Work, 2016 Census

Municipality of Work	Municipality of Residence												Total
	St. Catharines	Niagara Falls	Welland	Grimsby	Fort Erie	Lincoln	Thorold	Port Colborne	Pelham	West Lincoln	NOTL	Wainfleet	
St. Catharines	29,800	5,035	3,300	600	950	1,350	3,100	645	1,515	355	1,365	235	48,250
Niagara Falls	4,435	22,070	2,220	115	1,895	285	1,200	515	600	75	840	175	34,425
NOTL	3,785	1,830	415	95	225	165	510	65	200	40	2,325	55	9,710
Hamilton	2,400	685	665	3,405	155	1,605	310	125	345	1,805	130	210	11,840
Lincoln	2,040	360	355	680	70	2,805	280	95	215	390	100	80	7,470
Thorold	1,980	1,070	885	60	195	80	1,250	130	380	80	120	70	6,300
Welland	1,280	1,040	8,130	85	455	135	395	1,010	1,110	75	105	375	14,195
Grimsby	825	210	130	2,710	30	925	105		100	440	45	55	5,575
Toronto	675	405	130	345	85	160	85	75	145	90	160	45	2,400
Burlington	670	215	155	1,345	65	635	110	45	70	375	60	35	3,780
Mississauga	540	180	130	490	45	210	30	60	50	150	85	20	1,990
Oakville	435	195	120	580	40	290	50			95	80		1,885
Fort Erie	315	725	465		5,670	25	65	505	45		65	25	7,905
Pelham	265	155	765		35	60	125	70	1,140	155		90	2,860
West Lincoln	240	70	200	230		145	25	25	80	1,125		80	2,220
Port Colborne	210	220	765		375	25	50	2,705	120			280	4,750
Brampton	115	90	35	80	25	60	20			25	25		475
Milton	100	30	20	90		50	20			30			340
Vaughan	70	40				40							150
Kitchener	70												70
Markham	65										20		85
Haldimand County	65	35	85	45	40	60		95	95	240		170	930
Cambridge	65	40	20		20								145
Brantford	60		20	50						35			165
Guelph	50		25	25						25			125
Waterloo	50	20											70
Ottawa	45	20	25										90
Richmond Hill	35												35
Wainfleet	35		100		25			100	30			370	660
London	30	30					30						90
Halton Hills		20		25									45
	50,750	34,790	19,160	11,030	10,400	9,110	7,760	6,265	6,240	5,605	5,525	2,370	169,005

Source: Statistics Canada - 2016 Census. Catalogue Number 98-400-X2016325.

Section 3: Economic Base and Sector Analysis

Niagara – Job Growth in the Last Fifteen Years within Ontario and Canada Contexts

The total number of jobs in Niagara increased from 203,651 in 2003 to 222,202 in 2018, which is a growth of 9.1%. This is significantly lower than job growth in Canada and Ontario (roughly 22% each) over that period. There was significant job loss in Niagara in the aftermath of 2008 - 2009 Great Recession, particularly in the manufacturing sector. Between 2008 and 2013, Niagara lost over 8,400 of its total jobs, and its job level in 2013 (201,866) was lower than in 2003 (203,651). See Exhibit 1.

While Niagara had job growth in several services sectors between 2003 and 2018, the region suffered large job losses in the manufacturing sector as mentioned, which adversely impacted the total employment level in the region. Over the fifteen year period, the manufacturing sector in Niagara lost about 34% (9,802) of its jobs, which is a notably higher percentage job loss for this sector compared to Ontario (24.2%) and Canada (20.2%) over the period. The job loss in the manufacturing sector over this period was part of a broader trend towards restructuring of the sector, automation, and movement of some jobs to more cost competitive offshore locations. The loss of manufacturing sector jobs in Niagara also changed the relative importance of manufacturing as a job-intensive sector in the region: the manufacturing sector in Niagara accounted for 14.0% of jobs in the region in 2003, but that decreased to only 8.4% in 2018.

A decline in the manufacturing sector in Niagara has been underway for many years. For example, based on data from the Statistics Canada Labour Force Survey, the manufacturing sector accounted for around 47,300 jobs in the St. Catharines – Niagara CMA in 1987. By 1995, manufacturing jobs in the CMA had decreased to 32,700.

Over the fifteen year period between 2003 and 2018, there has been a decrease in the number of jobs in the agriculture, forestry, fishing and hunting sector in Niagara with a loss of 1,293 jobs. The percentage job loss in this sector at 21.3% is roughly midpoint of the percentage job loss in Ontario (18.9%) and Canada (23.3%).

The information and cultural Industries sector, a relatively small sector in Niagara, lost 441 jobs or 17.8% of sector jobs between 2003 and 2018. In comparison, the number of jobs in this sector increased by 15.5% and 9.4% in Ontario and Canada respectively over the fifteen year period.

Two other sectors that had some job loss in Niagara over the fifteen year period compared to significant job growth in Ontario and Canada were the transportation and warehousing sector with a 6.3% job loss compared to 28.7% and 25.6% job growth in Ontario and Canada respectively; and the finance and insurance sector with 13.5% job loss in Niagara, compared to 39.3% and 31.2% job growth in Ontario and Canada respectively.

Like Ontario and Canada, job growth has occurred in services sectors in Niagara, although generally to a lesser extent than in Ontario and Canada. See Exhibit 10.

Exhibit 10: Job Growth in Niagara Compared to Ontario and Canada, 2003 - 2018

NAICS	Description	2003 Jobs	2008 Jobs	2013	2018 Jobs	Change 2003 - 2018	Niagara % Change 2003 - 2018	Ontario % Change 2003 - 2018	Canada % Change 2003 - 2018
11	Agriculture, forestry, fishing and hunting	6,083	6,175	4,877	4,790	-1,293	-21.3%	-18.9%	-23.3%
21	Mining, quarrying, and oil and gas extraction	195	290	254	332	138	70.6%	53.5%	36.2%
22	Utilities	1,354	931	1,276	1,419	65	4.8%	9.5%	11.5%
23	Construction	13,162	15,759	15,153	16,466	3,304	25.1%	48.2%	55.7%
31-33	Manufacturing	28,593	21,179	17,025	18,791	-9,802	-34.3%	-24.2%	-20.2%
41	Wholesale trade	8,241	8,710	8,200	8,282	42	0.5%	10.9%	7.1%
44-45	Retail trade	23,738	26,711	26,020	27,666	3,928	16.5%	17.0%	16.2%
48-49	Transportation and warehousing	7,502	7,370	6,857	7,026	-476	-6.3%	28.7%	25.6%
51	Information and cultural industries	2,472	2,506	1,897	2,031	-441	-17.8%	15.5%	9.4%
52	Finance and insurance	6,598	6,313	5,825	5,705	-893	-13.5%	39.3%	31.2%
53	Real estate and rental and leasing	3,237	3,144	4,473	4,425	1,189	36.7%	48.7%	39.4%
54	Professional, scientific and technical services	7,698	8,361	8,009	9,119	1,420	18.5%	37.4%	38.6%
55	Management of companies and enterprises	1,266	1,372	1,749	1,470	204	16.1%	-12.2%	1.2%
56	Administrative & support, waste management/remediation	11,055	12,180	11,561	12,247	1,192	10.8%	24.6%	28.8%
61	Educational services	11,712	13,779	13,303	14,965	3,252	27.8%	33.5%	27.9%
62	Health care and social assistance	19,120	19,842	22,061	26,756	7,636	39.9%	53.7%	44.5%
71	Arts, entertainment and recreation	8,974	8,678	7,745	9,038	64	0.7%	30.8%	31.6%
72	Accommodation and food services	21,610	24,610	23,007	27,278	5,668	26.2%	40.9%	33.2%
81	Other services (except public administration)	10,420	11,041	9,900	9,810	-610	-5.9%	5.8%	6.0%
91	Public administration	9,195	9,226	9,869	10,748	1,553	16.9%	22.6%	22.1%
X0	Unclassified	1,428	2,100	2,804	3,839	2,411	168.9%	202.4%	209.7%
	Total Jobs	203,651	210,277	201,866	222,202	18,551	9.1%	22.4%	21.7%

Source: EMSI, 2018.1 Dataset

The level of job growth in Niagara over the past fifteen years has varied by community with the highest job growth occurring in Niagara Falls (5,205) and Welland (5,172) as shown in Exhibit 11. The highest percentage job growth occurred in West Lincoln, Grimsby, and Welland. Fort Erie and Wainfleet were the only two of the twelve municipalities in the region to lose jobs over the fifteen year period (297 and 314 jobs respectively). The job loss in Fort Erie was particularly high between 2003 and 2013 when the number of jobs decreased from 13,508 to 11,988. However, there was significant growth in the community between 2013 and 2018, with an increase of 1,223 jobs.

The share of jobs by community in Niagara has shifted slightly between 2003 and 2018. In particular, the largest community, St. Catharines, has a lower share of jobs in the region in 2018 (31.4%) compared to 2003 (33.6%); Welland’s share of jobs increased from 10.9% in 2003 to 12.3% in 2018.

Exhibit 11: Job Growth by Community in Niagara – 2003 to 2018

Community	2003	2008	2013	2018	2003-2018 Change	2003-2018 Change	% Share of Niagara Jobs 2003	% Share of Niagara Jobs 2018
St. Catharines	68,378	69,889	65,415	69,870	1,492	2.2%	33.6%	31.4%
Niagara Falls	43,639	46,117	44,893	48,844	5,205	11.9%	21.4%	22.0%
Welland	22,183	24,262	23,576	27,355	5,172	23.3%	10.9%	12.3%
Niagara-on-the-Lake	11,822	12,279	11,038	13,062	1,240	10.5%	5.8%	5.9%
Fort Erie	13,508	12,756	11,988	13,211	-297	-2.2%	6.6%	5.9%
Lincoln	11,357	9,971	11,215	12,774	1,417	12.5%	5.6%	5.7%
Grimsby	7,975	9,075	8,762	9,977	2,002	25.1%	3.9%	4.5%
Thorold	8,456	8,375	7,631	8,782	326	3.9%	4.2%	4.0%
Port Colborne	6,802	7,107	6,769	6,946	144	2.1%	3.3%	3.1%
Pelham	4,317	4,659	4,521	5,094	777	18.0%	2.1%	2.3%
West Lincoln	3,703	4,526	4,898	5,089	1,386	37.4%	1.8%	2.3%
Wainfleet	1,512	1,262	1,160	1,198	-314	-20.8%	0.7%	0.5%
Niagara Region	203,652	210,278	201,866	222,202	18,550	9.1%	100.0%	100.0%

Source: EMSI, 2018.1 Dataset

Niagara – Job Changes in 2013 to 2018

A review of data on job levels and growth in Niagara over the last five years provides insight on recent changes in the economic base. Niagara has had strong job growth over the past five years with a 10.1% increase in the number of jobs, which is slightly higher than the percentage job increase in Ontario (9.4%) and higher than the percentage job increase in Canada (6.5%) between 2013 and 2018.

Data on the changes in the number of jobs by sector in Niagara between 2013 and 2018 and location quotients are provided in Exhibit 12. Location quotients are used to compare the relative concentration of each sector in a community to a reference area (in this case Ontario). The comparison uses a simple ratio of sector employment to total employment. The provincial average for each sector has a location quotient of 1. A location quotient higher than 1 indicates a higher employment concentration in that sector than the provincial average, while less than 1 indicates the concentration is lower than the provincial average. Greater location quotient variances mean higher or lower employment concentrations than provincial averages. In essence, location quotients allow us to identify which sectors are over- or under-represented relative to the province as a whole. High location quotients are indicative of a region's or community's sector specialization. Sectors with high location quotients are usually 'traded' or export sectors that bring new money into a region or community rather than just a recirculation of money already in a local economy.

Some of the key findings for Niagara from a review of data at the 2 digit NAIC level are:

- The most significant sectors as measured by location quotients are: agriculture, forestry, fishing, and hunting (1.94); arts, entertainment and recreation (1.92); and accommodation and food services (1.75).
- Manufacturing has a location quotient of 0.92, which is slightly below the Ontario average; however, Niagara had higher percentage job growth in this sector compared to Ontario over the five year period – 10.4% compared to 2.5%.
- The management of companies and enterprises sector has a location quotient of 1.40, which is slightly above the provincial average. However the sector lost 16.0% of its jobs between 2013 and 2018, which is higher than the percentage job loss in this sector in Ontario over that period (10.5%);
- Niagara has particularly low location quotients for information and cultural industries; finance and insurance; and professional, scientific and technical services sectors – roughly half the Ontario average.

A review of data for selected sectors is provided on the following pages. The discussion includes an overview of job levels and percentage job growth, location quotients and shift share analysis. Shift share¹ is a regional analysis method that is used to estimate how much of regional job growth can be

¹ For further information on shift share analysis, please see http://www.economicmodeling.com/wp-content/uploads/2007/10/emsi_understandingshiftshare.pdf

attributed to national trends and how much is due to unique regional factors or competitive advantages. Three measures are used in shift share analysis when analysing sector growth within a region such as Niagara: national growth effect (how much of the regional sector growth is explained by growth in the national economy), expected change (based on growth of sector at the national level) and regional competitiveness effect (which is calculated by taking the regional growth and subtracting the national growth). In the following sections, we note how the job growth by sector and subsector in Niagara compares to the level of job growth that would have been expected based on shift share analysis.

Exhibit 12: Job Growth by Sector in Niagara (2013 – 2018)

NAICS	Description	2013 Jobs	2018 Jobs	2013 - 2018 Change	Niagara 2013 - 2018 % Change	Ontario 2013 - 2018 % Change	LQ
11	Agriculture, forestry, fishing and hunting	4,877	4,790	-87	-1.8%	-17.2%	1.94
21	Mining, quarrying, and oil and gas extraction	254	332	78	30.7%	14.5%	0.41
22	Utilities	1,276	1,419	143	11.2%	2.1%	1.04
23	Construction	15,153	16,466	1,313	8.7%	12.7%	1.13
31-33	Manufacturing	17,025	18,791	1,766	10.4%	2.5%	0.92
41	Wholesale trade	8,200	8,282	82	1.0%	9.1%	0.75
44-45	Retail trade	26,020	27,666	1,646	6.3%	6.1%	1.17
48-49	Transportation and warehousing	6,857	7,026	169	2.5%	10.9%	0.71
51	Information and cultural industries	1,897	2,031	134	7.1%	8.0%	0.41
52	Finance and insurance	5,825	5,705	-120	-2.1%	8.2%	0.53
53	Real estate and rental and leasing	4,473	4,425	-48	-1.1%	12.5%	0.84
54	Professional, scientific and technical services	8,009	9,119	1,110	13.9%	12.6%	0.54
55	Management of companies and enterprises	1,749	1,470	-279	-16.0%	-10.5%	1.40
56	Administrative and support, waste management/remediation services	11,561	12,247	686	5.9%	4.1%	0.99
61	Educational services	13,303	14,965	1,662	12.5%	9.8%	0.99
62	Health care and social assistance	22,061	26,756	4,695	21.3%	16.7%	1.08
71	Arts, entertainment and recreation	7,745	9,038	1,293	16.7%	23.6%	1.92
72	Accommodation and food services	23,007	27,278	4,271	18.6%	19.6%	1.75
81	Other services (except public administration)	9,900	9,810	-90	-0.9%	0.0%	1.06
91	Public administration	9,869	10,748	879	8.9%	5.0%	0.82
X0	Unclassified	2,804	3,839	1,035	36.9%	35.0%	1.00
	Total	201,866	222,202	20,336	10.1%	9.4%	

Source: EMSI, 2018.1 Dataset

Agriculture

The percentage decrease in the number of jobs in the agriculture, forestry, fishing and hunting sector in Niagara over the past five years has been low (1.8%) compared to the significant decrease in the number of jobs in this sector in Ontario (17.2%).

Farms (NAIC 1111) is a significant subsector in Niagara and accounts for the vast majority of jobs in the agriculture, forestry, fishing and hunting sector at 4,750 jobs (out of 4,790 jobs in the broader sector in 2018). The number of jobs lost in the farming sector in Niagara between 2013 and 2018 was 82, which is significantly lower than the expected change based on shift share analysis (473).

Farms have a location quotient of 2.1 in Niagara, which is over two times the Ontario average.

Further information on the agriculture sector will be provided later in this discussion paper, using data from the Census of Agriculture.

Manufacturing

There have been significant job gains in the manufacturing sector in Niagara over the last five years with an increase of 1,766 jobs or 10.4% between 2013 and 2018, which is higher than the job growth in this sector in Ontario (2.5%) and Canada (1.5%).

The job growth in manufacturing in Niagara was considerably higher than expected using shift share analysis. Specifically, the expected change was only 251 jobs. Niagara's job growth in this sector beyond the level expected was 1,515 jobs.

Some of the most significant manufacturing subsectors are discussed below.

Beverage Manufacturing

Beverage manufacturing (NAIC 3121) is the largest manufacturing subsector in Niagara at the 4 digit NAIC level, with the majority of jobs being in wine production. Beverage manufacturing accounted for 2,519 jobs in Niagara in 2018 which is a 56.6% growth from 2013 (compared to a 20.5% growth in Ontario). This represents a growth of 910 jobs over the period which is close to double the expected change based on shift share analysis (471).

The beverage manufacturing segment in Niagara has high location quotient level at 4.87, which is about 5 times the Ontario average.

Motor Vehicle Manufacturing

The motor vehicle manufacturing subsector accounted for 2,048 jobs in Niagara in 2018 which is an increase of 439 jobs or 27.3% from 2017. This is a growth of 243 more jobs than expected based on shift share analysis. In comparison, the number of jobs in this subsector increased by 14.3% in Ontario between 2013 and 2018.

The motor vehicle manufacturing subsector in Niagara has a location quotient of 1.82, which is close to double the Ontario average.

Architectural and Structural Metals Manufacturing

Another significant manufacturing subsector in Niagara is architectural and structural metals manufacturing with 1,269 jobs in 2018 and an increase of 385 jobs (43.6%) between 2013 and 2018, compared to a 3% job growth in Ontario. Niagara's job growth in this subsector was marginally higher than expected based on shift share analysis (19 more jobs).

The location quotient for this segment is 1.93 which is about two times the Ontario average.

Manufacturing – Highest Growth Subsectors

Several manufacturing subsectors in Niagara have had job growth at much higher percentage levels than Ontario as shown in Exhibit 13. About half of these have location quotients that are roughly two times the provincial average or higher.

Exhibit 13: Highest Manufacturing Growth Segments in Niagara 2013 - 2018

NAICS	Description	2013 Jobs	2018 Jobs	2013 - 2018 Change	2013 - 2018 % Change	Ontario 2013 - 2018 % Change	LQ
3121	Beverage manufacturing	1,609	2,519	910	56.6%	20.5%	4.87
3361	Motor vehicle manufacturing	1,609	2,048	439	27.3%	14.3%	1.82
3323	Architectural and structural metals manufacturing	884	1,269	385	43.6%	3.0%	1.93
3312	Steel product manufacturing from purchased steel	392	586	194	49.5%	-6.3%	5.13
3261	Plastic product manufacturing	491	668	177	36.0%	9.3%	0.51
3262	Rubber product manufacturing	282	427	145	51.4%	-0.8%	2.55
3339	Other general-purpose machinery manufacturing	678	814	136	20.1%	5.3%	1.79
3272	Glass and glass product manufacturing	209	341	132	63.2%	-22.1%	3.57
3363	Motor vehicle parts manufacturing	528	640	112	21.2%	15.9%	0.32
3259	Other chemical product manufacturing	87	194	107	123.0%	23.2%	1.14
3335	Metalworking machinery manufacturing	429	531	102	23.8%	12.2%	1.01
3341	Computer and peripheral equipment manufacturing	24	101	77	320.8%	-2.4%	1.12
3255	Paint, coating and adhesive manufacturing	108	180	72	66.7%	5.1%	1.71
3364	Aerospace product and parts manufacturing	271	341	70	25.8%	9.3%	0.93
3328	Coating, engraving, cold and heat treating and allied activities	281	348	67	23.8%	10.6%	1.86
3253	Pesticide, fertilizer and other agricultural chemical manufacturing	49	99	50	102.0%	16.7%	2.74

Source: EMSI, 2018.1 Dataset

Tourism

The Tourism sector includes businesses, products and activities that cater to visitors, however, many of these also serve local residents and can be considered as part of the quality of place amenities such as restaurants, cultural and heritage attractions and activities, sporting and recreational facilities, etc. Accommodation facilities generally are used by visitors rather than local residents or local businesses, however, a portion of those facilities such as boardrooms, banquet halls and restaurants may also be used by the local businesses and population. Tourism is not a distinct sector in the North American Industry Classification (NAIC) system, but portions of what could be considered to be tourism-related

are included in specific NAIC codes within NAIC 71 - Arts, Entertainment and Recreation, NAIC 72 - Accommodation and Food Services, NAIC 48 – Transportation, and others.

As mentioned previously, the arts, entertainment and recreation sector in Niagara is one of the three most significant sectors as measured by location quotient at 1.92. The sector’s percentage job growth between 2013 and 2018 was 16.7% (1,293 jobs), which was lower than the job growth in this sector in Ontario (23.6%). Based on shift share analysis, the job growth in the sector in Niagara was about 39 jobs lower than expected.

Niagara had relatively high percentage job growth in most of the industry segments within the arts, entertainment and recreation sector between 2013 and 2018 compared to Ontario. Job growth was lower in Niagara for heritage institutions (at 9.1% compared to 44.3% in Ontario). Like Ontario, Niagara lost jobs in gambling industries but had a higher percentage job loss (35.3%) compared to Ontario (21%) between 2013 and 2018. Five of the eight subsectors in the arts, entertainment and recreation sector (NAIC 71) in Niagara, as noted in Exhibit 14, have location quotients of around 2.5 or higher, with the highest being gambling industries with a location quotient of 5.7.

The one subsector in the accommodation and food services sector (NAIC 72) that has a job concentration notably above average is traveller accommodations with a location quotient of 4.8 – so roughly five times above the provincial average, which is an indication of the strength of the overnight tourism segment in Niagara.

Exhibit 14: Number of Jobs in Key Tourism-related Industry Segments in Niagara, 2013 - 2018

NAICS	Description	2013 Jobs	2018 Jobs	2013 - 2018 Change	2013 - 2018 % Change	Ontario 2013 - 2018 % Change	LQ
7111	Performing arts companies	581	896	315	54.2%	-8.3%	2.45
7112	Spectator sports	308	546	238	77.3%	15.7%	2.50
7113	Promoters (presenters) of performing arts, sports and similar events	161	305	144	89.4%	47.2%	0.97
7115	Independent artists, writers and performers	524	949	425	81.1%	17.2%	1.12
7121	Heritage institutions	928	1,012	84	9.1%	44.3%	4.04
7131	Amusement parks and arcades	282	605	323	114.5%	28.1%	4.01
7132	Gambling industries	3,106	2,011	- 1,095	-35.3%	-21.0%	5.71
7139	Other amusement and recreation industries	1,849	2,651	802	43.4%	42.8%	1.21
7211	Traveller accommodations	7,527	8,673	1,146	15.2%	16.7%	4.83
7212	Recreational vehicle (RV) parks and recreational camps	74	38	-36	-48.6%	14.8%	0.19
7223	Special food services	556	719	163	29.3%	21.1%	0.62
7224	Drinking places (alcoholic beverages)	548	347	-201	-36.7%	-20.1%	1.38
7225	Full-service restaurants and limited-service eating places	14,289	17,492	3,203	22.4%	21.2%	1.44
4871	Scenic & Sightseeing transportation - land	41	<10	<10	-	-	-
4872	Scenic & Sightseeing transportation – water	89	216	127	143.0%	96.5%	8.2

Source: EMSI, 2018.1 Dataset

Health Care and Social Assistance

There has been significant growth in the health care and social assistance sector in Niagara over the last five years, with a job growth of 21.3%. This has also been a growth sector in Ontario with a job growth of 16.7% between 2013 and 2018, partly fueled by the health and social assistance needs of an aging population.

The job growth in Niagara in the health care and social assistance sector between 2013 and 2018 was 686 jobs which is 115 more jobs than expected based on shift share analysis.

Only two subsectors in the health care and social assistance sector have location quotients that are approaching twice the provincial average – nursing care facilities and residential developmental handicap, mental health and substance abuse facilities, with location quotients of about 1.7 each. See Exhibit 15.

Exhibit 15: Job Growth in Health Care and Social Assistance Industry Segments

NAICS	Description	2013 Jobs	2018 Jobs	2013 - 2018 Change	2013 - 2018 % Change	Ontario 2013 - 2018 % Change	LQ
6211	Offices of physicians	1,803	2,482	679	37.7%	19.4%	1.00
6212	Offices of dentists	1,695	1,988	293	17.3%	18.9%	1.27
6213	Offices of other health practitioners	1,483	1,973	490	33.0%	32.6%	0.93
6214	Out-patient care centres	748	1,140	392	52.4%	19.5%	1.06
6215	Medical and diagnostic laboratories	337	419	82	24.3%	28.8%	1.02
6216	Home health care services	860	1,168	308	35.8%	24.5%	1.16
6219	Other ambulatory health care services	161	105	-56	-34.8%	12.0%	0.53
6221	General medical and surgical hospitals	5,008	5,685	677	13.5%	10.5%	0.94
6222	Psychiatric and substance abuse hospitals	0	0	0	0.0%	-0.8%	0.00
6223	Specialty (except psychiatric and substance abuse) hospitals	0	0	0	0.0%	14.7%	0.00
6231	Nursing care facilities	2,720	3,566	846	31.1%	23.7%	1.72
6232	Residential developmental handicap, mental health and substance abuse facilities	1,602	1,445	-157	-9.8%	-0.6%	1.69
6233	Community care facilities for the elderly	1,289	1,671	382	29.6%	13.1%	1.23
6239	Other residential care facilities	526	518	-8	-1.5%	-7.4%	1.02
6241	Individual and family services	1,857	2,457	600	32.3%	28.8%	1.16
6242	Community food and housing, and emergency and other relief services	103	104	1	1.0%	39.9%	0.85
6243	Vocational rehabilitation services	400	386	-14	-3.5%	1.5%	1.18
6244	Child day-care services	1,471	1,647	176	12.0%	14.7%	0.85

Source: EMSI, 2018.1 Dataset

Professional, Scientific and Technical Services

The number of jobs in the professional, scientific and technical services in Niagara increased by 13.9% between 2013 and 2018, which is slightly higher than the Ontario job growth (12.6%) in this sector over that period. The growth in the number of jobs in this sector in Niagara between 2013 and 2018 was 1,100, which is 390 more jobs than expected based on shift share analysis.

A notably high percentage job growth occurred in one subsector of professional, scientific and technical services sector in Niagara – specialized design services, with a 173% job growth compared to 52.1% growth in Ontario. However, this is a relatively small sector, with a lower than average location quotient at 0.67.

Almost all of the subsectors in the professional, scientific and technical services sector have location quotients that are significantly below the Ontario average, with only one being close to average – the accounting, tax preparation, bookkeeping and payroll services subsector has a location quotient of 0.85.

Exhibit 16: Job Growth in Niagara’s Professional, Scientific and Technical Services Sector

NAICS	Description	2013 Jobs	2018 Jobs	2013 - 2018 Change	2013 - 2018 % Change	Ontario 2013 - 2018 % Change	LQ
5411	Legal services	902	961	59	6.5%	7.0%	0.56
5412	Accounting, tax preparation, bookkeeping and payroll services	1,429	1,739	310	21.7%	12.6%	0.85
5413	Architectural, engineering and related services	1,766	1,818	52	2.9%	5.7%	0.74
5414	Specialized design services	202	552	350	173.3%	52.1%	0.67
5415	Computer systems design and related services	1,040	1,173	133	12.8%	31.9%	0.26
5416	Management, scientific and technical consulting services	1,014	1,046	32	3.2%	0.8%	0.46
5417	Scientific research and development services	271	203	-68	-25.1%	-36.8%	0.37
5418	Advertising, public relations, and related services	493	603	110	22.3%	17.4%	0.45
5419	Other professional, scientific and technical services	892	1,023	131	14.7%	13.4%	0.75

Source: EMSI, 2018.1 Dataset

Agriculture Sector

An overview of the Agriculture sector in Niagara is provided in this section. Detailed information on the sector is available through the Census of Agriculture and the Region of Niagara report, Niagara Agriculture Economic Impact Report, dated April 19, 2018.

Agriculture is a very important sector in Niagara. Niagara’s agriculture sector had gross farm receipts of in excess of \$838 million in 2015, which is a 15.5% increase from 2010. Niagara’s farms accounted for 12.6% of gross farm revenues in Southern Ontario in 2015, compared to 13.8% in 2011.

Niagara had 1,827 farms in 2016, with a decrease of 187 farms or 9.3% in the number of farms from 2011. Together five of the twelve municipalities in Niagara account for about 77% of the farms in the region. These include West Lincoln, Lincoln, Niagara-on-the-Lake, Wainfleet and Pelham. The number of farms by municipality in Niagara is shown in the following exhibit.

Exhibit 17: Number of Farms by Municipality

Community	2011	2016	Change	% Change
West Lincoln	444	391	-53	-11.9%
Lincoln	395	364	-31	-7.8%
Niagara-on-the-Lake	352	329	-23	-6.5%
Wainfleet	178	167	-11	-6.2%
Pelham	174	161	-13	-7.5%
St. Catharines	75	83	8	10.7%
Thorold	54	73	19	35.2%
Grimsby	105	72	-33	-31.4%
Fort Erie	77	68	-9	-11.7%
Port Colborne	72	61	-11	-15.3%
Niagara Falls	88	58	-30	-34.1%
Welland	-	-	-	-
Niagara Region	2,014	1,827	-187	-9.3%

Source: Census of Agriculture, 2016

Niagara has few very large farms, with around 88% of farms under 240 acres. Only 25 farms or about 1.4% of total farms in Niagara are 1,120 acres or more. The average size of farm varies across the region, with a high of 235 acres in Wainfleet to a low of 47 acres in St. Catharines. See Exhibit 18.

Exhibit 18: Number of Farms by Size

Total Farm Area	Niagara	Percent
Farms under 10 acres	359	19.6%
Farms 10 to 69 acres	858	47.0%
Farms 70 to 129 acres	228	12.5%
Farms 130 to 179 acres	90	4.9%
Farms 180 to 239 acres	79	4.3%
Farms 240 to 399 acres	97	5.3%
Farms 400 to 559 acres	46	2.5%
Farms 560 to 759 acres	22	1.2%
Farms 760 to 1,119 acres	23	1.3%
Farms 1,120 to 1,599 acres	7	0.4%
Farms 1,600 to 2,239 acres	9	0.5%
Farms 2,240 to 2,879 acres	6	0.3%
Farms 2,880 to 3,519 acres	0	0.0%
Farms 3,520 acres and over	3	0.2%
Total	1,827	100.0%

Source: Census of Agriculture, 2016

Niagara has a diverse agricultural base, with farms across numerous farm type classifications. The largest as measured by number of farms include: fruit and tree nut farming; oil and grain farming; greenhouse, nursery, and floriculture production; and soybean farming. These categories account for between 180 and 547 farms, with the largest being fruit and tree nut farming. There have been decreases and increases in number of farms in some categories between 2011 and 2016 as shown in the below exhibit.

Exhibit 19: Number of Farms in Niagara Classified by NAIC Codes

Description/NAIC Codes	2011	2016	Change
Fruit and tree nut farming [1113]	637	547	-90
Oilseed and grain farming [1111]	316	326	10
Greenhouse, nursery and floriculture production [1114]	283	254	-29
Soybean farming [111110]	196	180	-16
Other animal production [1129]	231	178	-53
Poultry and egg production [1123]	164	175	11
Other crop farming [1119]	159	142	-17
Floriculture production [111422]	156	128	-28
Broiler and other meat-type chicken production [112320]	111	118	7
Horse and other equine production [112920]	160	112	-48
Nursery and tree production [111421]	104	96	-8
Cattle ranching and farming [1121]	104	91	-13
Hay farming [111940]	108	85	-23
Vegetable and melon farming [1112]	64	73	9
Other vegetable (except potato) and melon farming [111219]	64	73	9
Other grain farming [111190]	65	66	1
Beef cattle ranching and farming, including feedlots [112110]	53	52	-1
All other miscellaneous crop farming [111999]	42	45	3
Wheat farming [111140]	9	42	33
Dairy cattle and milk production [112120]	51	39	-12
Corn farming [111150]	45	36	-9
Chicken egg production [112310]	31	35	4
Animal combination farming [112991]	33	34	1
Other food crops grown under cover [111419]	23	27	4
Sheep and goat farming [1124]	38	24	-14
Apiculture [112910]	24	20	-4
Hog and pig farming [1122]	18	17	-1
Sheep farming [112410]	27	15	-12
Turkey production [112330]	9	10	1
Goat farming [112420]	11	9	-2
All other poultry production [112399]	10	8	-2
All other miscellaneous animal production [112999]	11	7	-4
Fruit and vegetable combination farming [111993]	9	7	-2
Fur-bearing animal and rabbit production [112930]	3	5	2
Tobacco farming [111910]	0	4	4
Mushroom production [111411]	0	3	3
Poultry hatcheries [112340]	1	2	1
Combination poultry and egg production [112391]	2	2	0
Oilseed (except soybean) farming [111120]	0	1	1
Dry pea and bean farming [111130]	1	1	0
Maple syrup and products production [111994]	0	1	1
Total number of farms	2014	1827	-187

Source: Census of Agriculture, 2016

While the various different types of farming contribute to the Niagara economy, Niagara is especially well known for fruit farming, particularly grape production as input to wine-making and wine tourism in the region. A total of 386 farms in Niagara in 2016 were classified in the Census of Agriculture as 'grape farms'. This is 55 farms fewer than in 2011. However, the number of hectares used in grape growing in Niagara increased by 99 hectares over that period, with 6,366 hectares being used in grape growing in 2016.

Much of the grape growing in Niagara takes place in two municipalities: Niagara-on-the-Lake with 186 vineyards in 2016 and 3,772 hectares of land used for growing grapes; and Lincoln with 143 vineyards in 2016, with 1,835 hectares of land used for growing grapes. Together, these municipalities account for 88% of the hectares of land used for grape growing in Niagara.

The next largest segment of the fruit, berries and nut farming in Niagara is peach farming with 1,894 hectares in 2016. The number of farms and hectares by segment in the fruit, berries and nuts classification is shown in the following exhibit.

Exhibit 20: Number of Farms and Hectares in Niagara - Fruit, Berries and Nuts

Segment	# Farms 2011	# Farms 2016	Change	# Hectares 2011	# Hectares 2016	Change	% Change
Grapes	441	386	-55	6,267	6,366	99	1.6%
Peaches	188	156	-32	2,314	1,894	-420	-22.2%
Plums and prunes	182	144	-38	369	344	-25	-7.3%
Apples	153	134	-19	259	309	50	16.2%
Cherries (sour)	43	36	-7	351	276	-75	-27.2%
Cherries (sweet)	140	112	-28	160	104	-56	-53.8%
Strawberries	37	35	-2	55	64	9	14.1%
Apricots	66	51	-15	34	40	6	15.0%
Raspberries	57	47	-10	25	12	-13	108.3%
Cranberries	0	0	0	0	0	0	-
Blueberries	21	15	-6	-	9	-	-
Saskatoons	2	4	2	-	1	-	-
Other fruit, berries and nuts	94	98	4	319	325	6	1.8%
Total	720	624	-96	10,483	10,073	-410	-4.1%

Source: Census of Agriculture, 2016

Jobs by Sector in Niagara Municipalities

The concentration of jobs by sector varies by community across the region. St. Catharines, being the largest community in the region, has the largest number of jobs in most sectors. There are relatively high concentrations of jobs in specific sectors in other communities. An overview of some of the key findings from reviewing data on number of jobs and location quotients by sector in communities in Niagara is provided below:

- The communities with a high concentration of jobs in agriculture as measured by location quotients are West Lincoln, Wainfleet, Lincoln, Niagara-on-the-Lake, and Pelham, with location quotients ranging from around 6.6 to close to 13.0.

- The communities with relatively high location quotients in the manufacturing sector are Fort Erie, Lincoln, West Lincoln, and Port Colborne, with location quotients ranging from 1.5 to around 1.7. St. Catharines' location quotient for the manufacturing sector is average, although it accounts for the largest number of manufacturing jobs in the region (5,857 out of 18,791, or about 31%). Niagara Falls accounts for the next highest number of jobs in this sector (2,720), followed by Lincoln, Fort Erie, and Welland (with the number of manufacturing jobs for these three communities ranging from 1,768 to 1,829).
- Niagara Falls has the highest number of jobs in tourism-related sectors: 12,939 jobs in accommodation and food services (about 21% of sector jobs in the region) and location quotient of about 3.8. St. Catharines has 5,717 jobs in this sector, followed by Welland and Niagara-on-the-Lake (with 2,804 and 1,609 sector jobs respectively). Aside from Niagara Falls, communities with the highest location quotients in this sector include: Niagara-on-the-Lake (1.76), Port Colborne (1.47) and Welland (1.46). Niagara Falls also has the highest number of jobs in the arts, entertainment and recreation sector with 4,614 jobs or about 51% of sector jobs in the region. Half the communities in Niagara have high location quotients for this sector: Niagara Falls, Niagara-on-the-Lake, Fort Erie, Lincoln, Pelham, and Wainfleet.

Data on number of jobs by sector in each community in Niagara is provided in Exhibit 21.

Exhibit 21: Jobs by Municipality and Sector

NAICS	Description	St. Catharines	Niagara Falls	Welland	NOTL	Fort Erie	Lincoln	Grimsby	Thorold	Port Colborne	Pelham	West Lincoln	Wainfleet
11	Agriculture, forestry, fishing and hunting	761	169	84	950	37	1,379	96	40	39	387	732	117
21	Mining, quarrying, and oil and gas extraction	<10	111	0	<10	<10	104	0	0	113	0	0	<10
22	Utilities	201	185	83	447	104	<10	54	273	0	0	59	<10
23	Construction	3,991	4,031	2,036	935	1,091	914	865	1,095	263	359	666	221
31-33	Manufacturing	5,857	2,720	1,768	1,210	1,826	1,829	1,084	383	1,113	166	796	39
41	Wholesale trade	2,096	1,654	701	717	442	944	604	391	284	167	216	67
44-45	Retail trade	10,556	4,861	3,733	1,552	1,413	961	1,262	749	1,185	863	477	54
48-49	Transportation and warehousing	1,797	1,180	754	610	758	466	271	347	268	17	513	45
51	Information and cultural industries	831	331	384	46	108	29	103	145	21	27	<10	<10
52	Finance and insurance	2,085	1,022	796	163	368	173	306	123	236	320	111	0
53	Real estate and rental and leasing	1,474	786	685	161	342	105	356	209	197	88	23	0
54	Professional, scientific and technical services	3,386	1,377	833	669	693	464	326	480	268	462	159	<10
55	Management of companies and enterprises	1,163	113	50	41	71	<10	<10	<10	0	0	<10	14
56	Administrative and support, waste management and remediation services	4,065	2,027	2,248	299	851	1,091	378	779	258	154	54	45
61	Educational services	6,492	1,599	3,008	747	524	594	536	365	378	261	333	128
62	Health care and social assistance	9,820	4,639	3,939	855	1,195	1,616	1,699	1,115	873	663	264	78
71	Arts, entertainment and recreation	1,350	4,614	308	978	755	426	148	19	96	212	<10	133
72	Accommodation and food services	5,717	12,939	2,804	1,609	928	879	762	386	717	336	177	24
81	Other services (except public administration)	3,152	1,669	1,479	353	628	278	750	434	270	442	278	76
91	Public administration	3,837	1,949	1,175	507	854	309	212	1,302	240	90	140	133
X0	Unclassified	1,237	870	486	215	221	198	164	144	127	80	82	15
	Total	69,870	48,844	27,355	13,062	13,211	12,774	9,977	8,782	6,946	5,094	5,089	1,198

Source: EMSI, 2018.1 Dataset

Number of Enterprises in Niagara

Based on Canada Business Counts data, Niagara had a total of 12,576 enterprises with employees in December 2017. More than double this number (26,289) had no employees.

The majority of enterprises can be considered small businesses or microenterprises:

- 6,322 are microenterprises (1-4 employees), accounting for about half of enterprises in Niagara that have employees;
- Another 5,987 (48%) can be considered small businesses (5 to 99 employees);
- 242 can be considered as medium-sized enterprises (100 to 499 employees);
- Only 25 are large enterprises (500 or more employees).

When enterprises in the indeterminate category are considered as well as very small or part-time businesses with gross revenues of less than \$30,000 (which are not represented in the Canada Business Counts database), it is clear that the vast majority of enterprises in Niagara are micro or small enterprises as measured by number of employees.

The large enterprises in Niagara are within the following sectors/subsectors (listed by NAIC codes):

Manufacturing:

336330 - Motor vehicle steering and suspension components (except spring) manufacturing (1)

336310 - Motor vehicle gasoline engine and engine parts manufacturing (1)

326220 - Rubber and plastic hose and belting manufacturing (1)

Retail Trade:

453220 - Gift, novelty and souvenir stores (1)

445120 - Convenience stores (1)

Transportation:

483115 - Deep sea, coastal and Great Lakes water transportation (except by ferries) (1)

Finance and Insurance:

522130 - Local credit unions (1)

Administrative and Support:

561420 - Telephone call centres (2)

561722 - Janitorial services (except window cleaning) (1)

Educational Services:

611110 - Elementary and secondary schools (3)

611310 – Universities (1)

Health Care Services:

621494 - Community health centres (1)

622111 - General (except paediatric) hospitals (3)

Accommodations:

721111 – Hotels (2)

721113 – Resorts (2)

Public Administration:

913910 - Other local, municipal and regional public administration (3)

See Exhibit 22 for data on number of enterprises in Niagara in 2017 by sector and number of employees.

Change in Number of Enterprises in Niagara – 2014 to 2017

The number of enterprises with employees in Niagara increased by 522 between 2014 and 2017, with most of the increase being in micro-enterprises and small businesses as shown in Exhibit 23. An earlier-years comparison cannot be done due to Statistics Canada significant methodology changes in business counts in 2014. The largest increase in number of enterprises with employees was in the construction sector (160) and in professional, scientific and technical services (99, of which 81 were micro enterprises with 1 to 4 employees).

Exhibit 22: Number of Enterprises in Niagara by Sector and Number of Employees, Dec. 2017

Sector	Indeterminate	Total With Employees	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
11 - Agriculture, forestry, fishing and hunting	1,057	501	221	99	78	68	20	12	3	0
21 - Mining, quarrying, and oil and gas extraction	11	12	4	3	3	2	0	0	0	0
22 - Utilities	87	19	8	3	1	4	3	0	0	0
23 - Construction	2,392	1,594	901	393	174	95	21	7	3	0
31-33 - Manufacturing	491	624	196	127	92	120	58	23	5	3
41 - Wholesale trade	465	509	220	102	89	67	19	10	2	0
44-45 - Retail trade	1,210	1,626	578	424	341	183	55	33	10	2
48-49 - Transportation and warehousing	980	478	298	57	54	40	17	9	2	1
51 - Information and cultural industries	230	157	68	50	20	13	3	3	0	0
52 - Finance and insurance	1,647	417	215	87	74	26	10	1	3	1
53 - Real estate and rental and leasing	6,874	453	316	71	37	25	4	0	0	0
54 - Professional, scientific and technical services	2,324	977	706	128	93	36	8	4	2	0
55 - Management of companies and enterprises	263	41	11	6	8	7	4	5	0	0
56 - Administrative and support, waste management and remediation activities	801	551	278	118	77	47	14	10	4	3
61 - Educational services	199	127	52	29	16	19	3	2	2	4
62 - Health care and social assistance	1,214	1,276	678	295	157	86	30	18	8	4
71 - Arts, entertainment and recreation	460	243	76	77	32	37	13	5	3	0
72 - Accommodation and food services	618	1,098	242	252	233	237	90	21	19	4
81 - Other services (except public administration)	1,642	1,167	732	256	107	52	18	1	1	0
91 - Public administration	2	20	1	1	2	2	2	7	2	3
Unclassified	3,322	686	521	101	37	21	4	1	1	0
Total	26,289	12,576	6,322	2,679	1,725	1,187	396	172	70	25

Source: Statistics Canada, Canada Business Counts, December 2014 and 2017

Exhibit 23: Change in the Number of Enterprises in Niagara by Sector and Number of Employees, 2014 to 2017

Sector	Indeterminate	Total With Employees	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
11 - Agriculture, forestry, fishing and hunting	19	-14	-9	-4	-7	-5	3	5	3	0
21 - Mining, quarrying, and oil and gas extraction	-5	1	0	1	1	-1	0	0	0	0
22 - Utilities	33	-1	-2	0	0	1	0	0	0	0
23 - Construction	223	160	69	60	23	0	8	0	0	0
31-33 - Manufacturing	44	-5	-5	0	-9	9	4	1	-6	1
41 - Wholesale trade	3	-25	-3	-12	-12	1	-5	5	1	0
44-45 - Retail trade	2	47	-14	19	30	12	1	0	-1	0
48-49 - Transportation and warehousing	90	56	60	-10	10	-4	3	-2	-1	0
51 - Information and cultural industries	34	14	12	27	-20	-5	0	0	0	0
52 - Finance and insurance	395	36	13	13	36	-28	2	0	0	0
53 - Real estate and rental and leasing	964	8	8	8	-9	5	-3	-1	0	0
54 - Professional, scientific and technical services	108	99	81	-4	21	-2	2	2	-1	0
55 - Management of companies and enterprises	-332	-40	-33	-6	0	1	0	-1	-1	0
56 - Administrative and support, waste management and remediation activities	54	22	28	-3	1	-5	4	-2	0	-1
61 - Educational services	49	6	-8	4	3	5	0	2	0	0
62 - Health care and social assistance	145	3	20	-24	-8	6	7	1	1	0
71 - Arts, entertainment and recreation	26	4	-46	34	8	6	3	-1	0	0
72 - Accommodation and food services	43	40	-3	5	-3	46	-4	-5	3	1
81 - Other services (except public administration)	299	-54	-57	0	2	4	3	-5	-1	0
91 - Public administration	-1	-1	-2	0	1	-1	1	0	0	0
Unclassified	762	166	113	41	7	8	-3	0	0	0
Total	2,955	522	222	149	75	53	26	-1	-3	1

Source: Statistics Canada, Canada Business Counts, December 2014 and 2017

Benchmarking

Niagara region was benchmarked against selected benchmark regions to show its relative situation. These regions were selected in consultation with the project Working Group for the Niagara Economic Development Strategy Master Plan project:

- Waterloo region (consisting of the cities of Waterloo, Cambridge, Kitchener; and townships of North Dumfries, Wellesley, Wilmot and Woolwich);
- Essex county (consisting of Windsor, and towns of Amherstburg, Essex, Kingsville, LaSalle, Lakeshore, Tecumseh; Municipality of Leamington; and Pelee township);
- Hamilton – city;
- Buffalo-Cheektowaga Niagara Falls MSA, New York – consisting of Erie County (including the city of Buffalo) and Niagara County (including Niagara Falls);
- Rochester MSA, New York - including Livingston County, Monroe County (including the city Rochester), Ontario County, Orleans County, Wayne County and Yates County.

Of the Ontario benchmark areas, the 2016 population levels range from 398,953 to 536,917, with Niagara’s 2016 population level being 447,888, which is 87,266 and 89,029 lower than Waterloo region and Hamilton respectively, and is 42,564 higher than Essex county. Niagara’s percentage population growth over the five year period has been roughly midrange at 3.8% with the lowest population growth in Essex county (2.6%) and the highest in Waterloo region (5.5%). Niagara region has the highest median age of the Ontario benchmark regions (45.7 years in 2016), lowest percentage with university degrees, and lowest household income.

Exhibit 24: Population Trends – Ontario Benchmark Areas

Area	Population 2011	Population 2016	Change	% Change	Median Age (2016)	% Postsecondary Completion	% With Degree(s)	Average Total Household Income 2010	Average Total Household Income 2015
Niagara region	431,346	447,888	16,542	3.80%	45.7	60.0%	20.7%	\$72,453	\$81,842
Waterloo region	507,096	535,154	28,058	5.50%	38.5	62.6%	28.7%	\$85,546	\$95,459
Essex county	388,782	398,953	10,171	2.60%	42.4	59.2%	24.0%	\$72,692	\$85,824
Hamilton	519,949	536,917	16,968	3.30%	41.5	61.6%	25.0%	\$84,273	\$87,775

Source: Statistics Canada, Census, 2016

The two New York state benchmark MSAs have larger population levels than the Ontario benchmark areas. The Buffalo-Cheektowaga-Niagara MSA had a population level of over 1.1 million in 2016, which is 0.3% lower than its 2011 population level. Most of the population resides in Erie county, which includes the city of

Buffalo. The Rochester MSA had a population level of over 1 million in 2016, with the largest population level in Monroe county (747,726) which includes the city of Rochester. The population level of the Rochester MSA decreased slightly (0.4%) between 2011 and 2016. The median age in both MSAs is notably lower than in Niagara (39.9 and 40.8 years of age in 2016). See Exhibit 25.

Exhibit 25: Population Trends – New York State Benchmark Areas

Area	2011 Population	2016 Population	% Change	2016 Median Age
Buffalo-Cheektowaga-Niagara MSA	1,135,850	1,132,867	-0.3%	40.8
Erie County (Buffalo)	920,113	921,092	0.1%	40.4
Niagara County (Niagara Falls)	215,736	211,775	-1.8%	42.9
Rochester MSA	1,082,663	1,078,853	-0.4%	39.9
Livingston County	64,859	64,218	-1.0%	40.4
Monroe County (Rochester)	747,696	747,726	0.0%	38.6
Ontario County	108,751	109,827	1.0%	43.3
Orleans County	42,697	41,351	-3.2%	42.6
Wayne County	93,276	90,812	-2.6%	43.4
Yates County	25,383	24,919	-1.8%	41.5

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018

Job levels by 2 digit NAICs and job growth between 2013 and 2018 were reviewed for Niagara against the benchmark regions. Some of the key findings from this review are discussed below.

Agriculture

Niagara has the highest portion of jobs in the agriculture, forestry, fishing and hunting sector (primarily agriculture) of the benchmark regions with 2.2 % of jobs in this sector, being about the same as Essex county (2.1%). This sector accounted for 0.5% to 1.5% of total jobs in other benchmark regions.

While the number of jobs in this sector in Niagara decreased by 1.8% between 2013 and 2018, the number of jobs in this sector decreased at a much higher level in all the Ontario benchmark areas (8.0% to 14.8%). However, the number of jobs in this sector in the two New York state MSAs increased (2.1% and 4.7%).

Manufacturing

Essex county and Waterloo region had a high percentage of jobs in the manufacturing sector at 16.7% and 14.0% respectively. This can be compared to 8.5% for Niagara, which is close to the level in Hamilton, and just slightly lower than the Buffalo-Cheektowaga-Niagara MSA (9.0%) and Rochester MSA (10.4%).

Niagara had the highest increase in the number of manufacturing jobs of benchmark areas between 2013 and 2018 at 10.4% compared to a job loss of between 4.9% to a gain of 3.6% in other benchmark areas.

Tourism-related

Niagara has a slightly higher percentage of jobs than the benchmark regions in tourism-related sectors such as arts, entertainment, and recreation services (4.1% compared to 1.5% to 3% in benchmark regions) and

notably higher percentage in accommodation and food services (12.3% compared to 6.6% to 9.1% in benchmark regions).

Niagara's increase in the number of jobs in the arts, entertainment, and recreation services sector between 2013 and 2018 was 16.7%, which is low compared to Waterloo region (44.5%) and Hamilton (41.6%), but higher than Essex (7.7%). Niagara's percentage job growth in this sector is slightly higher than Buffalo-Cheektowaga-Niagara MSA (12.6%). In comparison, the Rochester MSA lost 4.0% of its jobs in this sector between 2013 and 2018. Niagara's job growth in the accommodation and food services sector (18.6%) is about the same as Waterloo region (18.2%), although higher than the other benchmark areas.

Data on job level, growth and sector share of total jobs at the 2 digit NAIC level is included in the following exhibits.

Exhibit 26: Job Levels and Change – Ontario Benchmark Areas

	Niagara region		Waterloo region		Essex county		Hamilton	
Description	2018 Jobs	% Change 2013 – 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018
Agriculture, forestry, fishing and hunting	4,790	-1.8%	3,784	-14.8%	3,900	-8.0%	2,857	-12.2%
Mining, quarrying, and oil and gas extraction	332	30.7%	210	13.7%	389	5.5%	100	-35.1%
Utilities	1,419	11.2%	573	-15.3%	745	-9.8%	877	1.2%
Construction	16,466	8.7%	23,828	18.8%	10,878	5.5%	20,174	10.2%
Manufacturing	18,791	10.4%	45,075	0.4%	30,295	3.6%	21,617	-4.9%
Wholesale trade	8,282	1.0%	18,294	14.1%	6,396	0.9%	9,428	8.9%
Retail trade	27,666	6.3%	35,955	6.4%	20,172	6.9%	28,399	5.3%
Transportation and warehousing	7,026	2.5%	12,259	4.7%	8,615	-0.1%	9,477	-2.3%
Information and cultural industries	2,031	7.1%	6,597	46.8%	1,499	-7.5%	3,072	-1.2%
Finance and insurance	5,705	-2.1%	19,501	15.2%	5,618	8.3%	7,568	2.7%
Real estate and rental and leasing	4,425	-1.1%	6,009	-4.0%	3,024	16.2%	5,894	11.2%
Professional, scientific and technical services	9,119	13.9%	21,808	21.4%	6,777	8.7%	13,769	11.8%
Management of companies and enterprises	1,470	-16.0%	41	-92.2%	1,046	29.1%	884	-6.4%
Administrative and support, waste management/remediation services	12,247	5.9%	15,595	13.0%	8,617	25.1%	13,868	-10.4%
Educational services	14,965	12.5%	26,816	14.1%	13,733	3.4%	26,334	10.3%
Health care and social assistance	26,756	21.3%	32,084	15.2%	22,973	5.0%	43,049	18.8%
Arts, entertainment and recreation	9,038	16.7%	5,396	44.5%	5,390	7.7%	5,244	41.6%
Accommodation and food services	27,278	18.6%	21,404	18.2%	13,448	11.0%	17,759	13.2%
Other services (except public administration)	9,810	-0.9%	11,242	-12.6%	7,713	-8.7%	12,186	-6.4%
Public administration	10,748	8.9%	10,185	-8.3%	7,042	-6.3%	12,919	7.5%
Unclassified	3,839	36.9%	5,798	37.8%	3,260	31.9%	4,493	32.5%
Total	222,202	10.1%	322,454	10.0%	181,531	5.0%	259,969	6.9%

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Exhibit 27: Job Levels and Change – Niagara Compared to US Benchmark Areas

	Niagara Region		Buffalo-Cheektowaga-Niagara MSA		Rochester MSA	
Description	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018
Agriculture, forestry, fishing and hunting	4,790	-1.8%	2,630	4.7%	8,013	2.1%
Mining, quarrying, and oil and gas extraction	332	30.7%	185	-37.5%	620	23.5%
Utilities	1,419	11.2%	1,463	-7.0%	1,631	1.2%
Construction	16,466	8.7%	23,585	9.9%	24,054	8.1%
Manufacturing	18,791	10.4%	51,838	0.8%	57,115	-4.4%
Wholesale trade	8,282	1.0%	19,980	-1.5%	15,982	-0.5%
Retail trade	27,666	6.3%	63,981	0.6%	56,766	0.0%
Transportation and warehousing	7,026	2.5%	16,197	7.1%	9,935	9.8%
Information and cultural industries	2,031	7.1%	6,981	-7.9%	8,253	-6.5%
Finance and insurance	5,705	-2.1%	29,880	16.9%	15,138	0.0%
Real estate and rental and leasing	4,425	-1.1%	8,357	13.9%	8,558	14.1%
Professional, scientific and technical services	9,119	13.9%	29,716	4.6%	31,644	13.3%
Management of companies and enterprises	1,470	-16.0%	13,120	-2.1%	10,770	-10.9%
Administrative and support, waste management/remediation services	12,247	5.9%	29,706	-12.0%	28,903	3.5%
Educational services	14,965	12.5%	16,196	2.5%	37,079	10.7%
Health care and social assistance	26,756	21.3%	82,451	8.6%	86,538	10.1%
Arts, entertainment and recreation	9,038	16.7%	10,277	12.6%	8,343	-4.0%
Accommodation and food services	27,278	18.6%	52,760	7.8%	39,080	4.4%
Other services (except public administration)	9,810	-0.9%	25,070	6.7%	22,719	3.2%
Public administration	10,748	8.9%	91,620	-0.4%	77,939	-0.6%
Unclassified	3,839	36.9%	1,762	182.4%	1,417	133.4%
Total	222,202	10.1%	577,755	3.5%	550,497	3.4%

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Exhibit 28: Comparison of Benchmark Areas - Share of Total Jobs (2018) by Sector

Description	Niagara region	Waterloo region	Essex county	Hamilton	Buffalo-Cheektowaga-Niagara	Rochester
Agriculture, forestry, fishing and hunting	2.2%	1.2%	2.1%	1.1%	0.5%	1.5%
Mining, quarrying, and oil and gas extraction	0.1%	0.1%	0.2%	0.0%	0.0%	0.1%
Utilities	0.6%	0.2%	0.4%	0.3%	0.3%	0.3%
Construction	7.4%	7.4%	6.0%	7.8%	4.1%	4.4%
Manufacturing	8.5%	14.0%	16.7%	8.3%	9.0%	10.4%
Wholesale trade	3.7%	5.7%	3.5%	3.6%	3.5%	2.9%
Retail trade	12.5%	11.2%	11.1%	10.9%	11.1%	10.3%
Transportation and warehousing	3.2%	3.8%	4.7%	3.6%	2.8%	1.8%
Information and cultural industries	0.9%	2.0%	0.8%	1.2%	1.2%	1.5%
Finance and insurance	2.6%	6.0%	3.1%	2.9%	5.2%	2.7%
Real estate and rental and leasing	2.0%	1.9%	1.7%	2.3%	1.4%	1.6%
Professional, scientific and technical services	4.1%	6.8%	3.7%	5.3%	5.1%	5.7%
Management of companies and enterprises	0.7%	0.0%	0.6%	0.3%	2.3%	2.0%
Administrative and support, waste management/remediation services	5.5%	4.8%	4.7%	5.3%	5.1%	5.3%
Educational services	6.7%	8.3%	7.6%	10.1%	2.8%	6.7%
Health care and social assistance	12.0%	9.9%	12.7%	16.6%	14.3%	15.7%
Arts, entertainment and recreation	4.1%	1.7%	3.0%	2.0%	1.8%	1.5%
Accommodation and food services	12.3%	6.6%	7.4%	6.8%	9.1%	7.1%
Other services (except public administration)	4.4%	3.5%	4.2%	4.7%	4.3%	4.1%
Public administration	4.8%	3.2%	3.9%	5.0%	15.9%	14.2%
Unclassified	1.7%	1.8%	1.8%	1.7%	0.3%	0.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Manufacturing Subsectors

A review was undertaken of the job levels and growth across manufacturing subsectors in Niagara, and this was compared to the benchmark regions. Key findings from this review include:

- Niagara has a high number of jobs in beverage manufacturing (mainly wine-making, with 2,519 jobs in 2018) and a 57% growth from 2013. This is a higher job number than any of the benchmark regions, with the next highest being the Rochester MSA (1,723 and 19% growth) and Essex county with 1,106 jobs and growth of 8.6%.

- Niagara has a high number of jobs in the transportation manufacturing subsector at 3,237 jobs in 2018, and a growth of around 22% from 2013. However, this is low compared to number of jobs in this subsector in some of the other benchmark regions: Waterloo region (9,107 jobs), Essex county (10,486 jobs), and Buffalo-Cheektowaga-Niagara MSA (5,411 jobs).
- The fabricated metal product manufacturing subsector in Niagara also has a relatively high number of jobs at 2,740, but this is significantly lower than Waterloo region (6,534) and the Buffalo-Cheektowaga-Niagara, and Rochester MSAs which have subsector job levels slightly higher than Waterloo region.

Data on the job levels and percentage growth for manufacturing subsectors for the benchmark regions is provided in Exhibits 29 and 30 on the following pages.

Exhibit 29: Job Changes in Manufacturing Subsectors in Ontario Benchmark Regions

NAICS	Description	Niagara region		Waterloo region		Essex county		Hamilton	
		2018 Jobs	% Change 2013 – 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 – 2018	2018 Jobs	% Change 2013 - 2018
311	Food manufacturing	1,372	-23.8%	5,812	-10.9%	1,608	-28.4%	2,701	-5.8%
312	Beverage and tobacco product manufacturing	2,519	56.6%	361	42.2%	1,106	8.6%	244	10.5%
3121	Beverage manufacturing	2,519	56.6%	361	49.7%	1,106	8.6%	244	10.5%
321	Wood product manufacturing	490	10.6%	970	4.6%	67	-16.9%	223	-24.2%
322	Paper manufacturing	405	-28.9%	435	-15.7%	51	-17.6%	107	-30.9%
323	Printing and related support activities	504	-19.1%	943	55.4%	1,283	5.8%	383	-23.9%
325	Chemical manufacturing	881	46.1%	845	4.3%	1,961	13.1%	763	-1.5%
326	Plastics and rubber products manufacturing	1,095	41.7%	3,093	21.2%	2,574	-4.9%	360	-16.7%
327	Non-metallic mineral product manufacturing	1,255	-2.8%	958	-7.0%	352	4.7%	560	-37.0%
331	Primary metal manufacturing	875	10.6%	810	9.8%	600	-1.7%	5,500	-5.8%
332	Fabricated metal product manufacturing	2,740	4.6%	6,534	-6.0%	2,001	-14.7%	2,635	-26.5%
3323	Architectural and structural metals manufacturing	1,269	43.6%	1,071	11.4%	962	26.9%	483	-34.0%
333	Machinery manufacturing	1,538	13.3%	4,929	16.9%	6,914	22.9%	1,947	10.7%
334	Computer and electronic product manufacturing	561	-13.3%	5,482	-27.4%	162	-29.1%	234	6.5%
335	Electrical equipment, appliance and component manufacturing	68	-9.3%	559	-38.1%	63	-27.2%	133	-24.9%
336	Transportation equipment manufacturing	3,237	21.5%	9,107	25.7%	10,486	5.4%	3,358	26.6%
3361	Motor vehicle manufacturing	2,048	27.3%	4,846	28.4%	6,315	8.0%	80	20.4%
3362	Motor vehicle body and trailer manufacturing	<10	-	395	-13.4%	57	-	79	7.4%
3363	Motor vehicle parts manufacturing	640	21.2%	2,465	18.5%	3,921	-0.8%	1,875	46.7%
3364	Aerospace product and parts manufacturing	341	25.8%	697	19.7%	130	50.7%	16	-48.3%
3365	Railroad rolling stock manufacturing	40	-7.0%	0	-	<10	-	1,218	7.1%
3366	Ship and boat building	150	-27.2%	<10	-	59	-	89	34.6%
3369	Other transportation equipment manufacturing	16	-	479	36.8%	<10	-	0	-
337	Furniture and related product manufacturing	286	16.3%	1,628	31.8%	410	17.3%	356	70.1%

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Exhibit 30: Jobs Changes in Manufacturing Sector – Niagara Compared to US Benchmark Regions

		Niagara		Buffalo-Cheektowaga-Niagara		Rochester	
NAICS	Description	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018
311	Food manufacturing	1,372	-23.8%	4,862	-7.8%	5,700	11.1%
312	Beverage and tobacco product manufacturing	2,519	56.6%	988	73.9%	1,771	22.4%
3121	Beverage manufacturing	2,519	56.6%	859	68.8%	1,723	19.1%
321	Wood product manufacturing	490	10.6%	782	-14.3%	634	60.1%
322	Paper manufacturing	405	-28.9%	1,422	-15.0%	2,028	11.9%
323	Printing and related support activities	504	-19.1%	2,149	12.3%	2,395	-6.3%
325	Chemical manufacturing	881	46.1%	4,987	5.7%	3,360	-43.7%
326	Plastics and rubber products manufacturing	1,095	41.7%	4,017	2.4%	5,334	6.9%
327	Non-metallic mineral product manufacturing	1,255	-2.8%	2,298	-7.4%	1,150	-1.2%
331	Primary metal manufacturing	875	10.6%	1,608	-8.8%	347	17.6%
332	Fabricated metal product manufacturing	2,740	4.6%	7,046	0.7%	6,989	-10.4%
3323	Architectural and structural metals manufacturing	1,269	43.6%	976	-13.3%	1,240	-7.1%
333	Machinery manufacturing	1,538	13.3%	4,897	-7.8%	8,781	-14.9%
334	Computer and electronic product manufacturing	561	-13.3%	3,193	4.6%	10,298	17.7%
335	Electrical equipment, appliance and component manufacturing	68	-9.3%	2,242	2.5%	899	-8.5%
336	Transportation equipment manufacturing	3,237	21.5%	5,411	31.0%	1,933	4.9%
3361	Motor vehicle manufacturing	2,048	27.3%	2	-	10	-89.0%
3362	Motor vehicle body and trailer manufacturing	<10	-	282	243.9%	127	-10.6%
3363	Motor vehicle parts manufacturing	640	21.2%	3,968	17.5%	1,671	13.7%
3364	Aerospace product and parts manufacturing	341	25.8%	1,005	62.9%	10	-58.3%
3365	Railroad rolling stock manufacturing	40	-7.0%	116	286.7%	28	211.1%
3366	Ship and boat building	150	-27.2%	38	216.7%	17	54.5%
3369	Other transportation equipment manufacturing	16	-	0	-100.0%	71	-26.0%
337	Furniture and related product manufacturing	286	16.3%	786	2.9%	811	0.6%

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Tourism-related Subsectors

Niagara has a large number of jobs in a few tourism-related subsectors:

- It has 2,011 jobs in gambling industries but there has been a significant job loss in this subsector from 2013 (35%). The only benchmark region to have a comparable level of jobs is Essex county (1,917 jobs, with a job loss of 19% from 2013).
- The 'other amusement and recreation industries' subsector has a relatively large number of jobs in Niagara (2,651) but this level is comparable to some of the benchmark regions and lower than others.
- The travellers' accommodation subsector in Niagara accounts for a large number of jobs (8,673) which is significantly higher than the benchmark regions.
- The full-service restaurants and limited-service eating places subsector has the largest number of jobs of tourism-related subsectors in Niagara at 17,492 jobs which is similar to Waterloo, and significantly lower than in the Buffalo-Cheektowaga-Niagara, and Rochester MSAs. However, a large portion of the market for this subsector is the residential market – people residing in the benchmark regions and therefore the higher number of jobs in this subsector in the MSAs is expected given higher population numbers.

Data on the job levels and percentage growth for tourism-related subsectors for the benchmark regions is provided in Exhibits 31 and 32 on the following pages.

Exhibit 31: Job numbers and Growth in Tourism-related Subsectors in Ontario Benchmark Regions

NAICS	Description	Niagara region		Waterloo region		Essex county		Hamilton	
		2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018
7111	Performing arts companies	896	54.2%	449	2.6%	112	-39.2%	290	58.0%
7112	Spectator sports	546	77.3%	269	58.0%	145	38.9%	254	1.9%
7113	Promoters (presenters) of performing arts, sports and similar events	305	89.4%	429	54.0%	99	84.5%	140	80.9%
7114	Agents and managers for artists, athletes, entertainers and other public figures	64	Insf. Data	<10	-	0	-	18	13.6%
7115	Independent artists, writers and performers	949	81.1%	880	18.3%	472	18.6%	1,369	103.7%
7121	Heritage institutions	1,012	9.1%	171	96.5%	159	52.2%	301	38.4%
7131	Amusement parks and arcades	605	114.5%	<10	-	37	20.4%	137	70.7%
7132	Gambling industries	2,011	-35.3%	<10	-	1,917	-19.4%	138	-34.9%
7139	Other amusement and recreation industries	2,651	43.4%	3,181	60.4%	2,448	39.7%	2,597	30.1%
7211	Traveller accommodation	8,673	15.2%	1,750	15.0%	940	31.6%	728	49.2%
7212	Recreational vehicle (RV) parks and recreational camps	38	-48.6%	102	3.1%	201	13.5%	98	-26.7%
7223	Special food services	719	29.3%	1,109	28.7%	563	33.3%	1,599	25.8%
7224	Drinking places (alcoholic beverages)	347	-36.7%	536	-13.2%	366	2.1%	119	-54.3%
7225	Full-service restaurants and limited-service eating places	17,492	22.4%	17,889	19.5%	11,324	8.7%	14,964	11.9%
4871	Scenic and sightseeing transportation, land	<10	-	0	-	<10	-	0	-
4872	Scenic and sightseeing transportation, water	216	142.7%	0	-	<10	-	0	-

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Exhibit 32: Job numbers and Growth in Tourism-related Subsectors in US Benchmark Regions

		Niagara		Buffalo-Cheektowaga-Niagara		Rochester	
NAICS	Description	2018 Jobs	% Change 2013 – 2018	2018 Jobs	% Change 2013 - 2018	2018 Jobs	% Change 2013 - 2018
7111	Performing arts companies	896	54.2%	668	20.6%	431	11.4%
7112	Spectator sports	546	77.3%	1,404	22.3%	940	-0.5%
7113	Promoters (presenters) of performing arts, sports and similar events	305	89.4%	930	55.0%	172	-13.6%
7114	Agents and managers for artists, athletes, entertainers and other public figures	64	Insf. Data	76	33.3%	57	-8.1%
7115	Independent artists, writers and performers	949	81.1%	801	9.7%	934	2.8%
7121	Heritage institutions	1,012	9.1%	792	36.6%	649	-7.3%
7131	Amusement parks and arcades	605	114.5%	186	5.7%	285	10.9%
7132	Gambling industries	2,011	-35.3%	336	-6.9%	30	-33.3%
7139	Other amusement and recreation industries	2,651	43.4%	5,084	3.4%	4,845	-6.6%
7211	Traveller accommodation	8,673	15.2%	5,079	24.8%	2,942	-5.2%
7212	Recreational vehicle (RV) parks and recreational camps	38	-48.6%	247	44.4%	155	18.3%
7223	Special food services	719	29.3%	4,719	1.0%	2,615	2.3%
7224	Drinking places (alcoholic beverages)	347	-36.7%	2,205	8.9%	1,613	6.0%
7225	Full-service restaurants and limited-service eating places	17,492	22.4%	40,507	6.6%	31,732	5.4%
4871	Scenic and sightseeing transportation, land	<10	-	61	-34.4%	34	325.0%
4872	Scenic and sightseeing transportation, water	216	142.7%	139	69.5%	21	-8.7%

Source: Economic Modeling Specialists International (EMSI), customized data extraction, 2018; EMSI, 2018.1 Dataset

Section 4: Economic Outlook

Published employment forecasts for Niagara, communities within the region and the St. Catharines-Niagara CMA are, for the most part, short term forecasts. There are also differences between the starting baseline employment numbers between the sources, with the EMSI reported employment levels being slightly higher than those reported by the Conference Board of Canada. For example, the 2017 employment number used in the Conference Board of Canada forecast for the St. Catharines-Niagara CMA is 198,100. Based on the EMSI data, the 2017 employment level for the CMA was 204,276. The Conference Board of Canada forecasted 2018 employment level was 204,900, while the EMSI reported employment level for the CMA in 2018 was 207,136. The Conference Board Metropolitan Outlook for the St. Catharines-Niagara CMA forecasts an employment level of 211,500 for 2022, which can be compared to a much higher EMSI forecast of 219,396 for the CMA in 2022.

A discussion of some of the forecast data from these two sources and how the outlook compares to Ontario and Canada is provided below. Total employment in the CMA is forecasted by the Conference Board of Canada to increase by 6.8% between 2017 and 2022, which is higher than the job growth forecasted for Ontario (5.9%) and Canada (4.9%) over this period. Relatively high job growth is forecasted in population serving sectors such as health care and social assistance and sectors that serve residents and tourists such as arts, entertainment and recreation and accommodation and food services. Relatively high growth is also expected in construction.

Exhibit 33: Forecasted Employment Growth in the St. Catharines – Niagara CMA ('000)

Sector	2017	2022	Change	2017 to 2022 % Change	Per Annum Average % Change
Construction	13.0	16.3	3.3	25.4%	5.1%
Health care and social assistance	24.7	29.9	5.2	21.1%	4.2%
Arts, entertainment, and recreation	7.8	9.1	1.3	16.7%	3.3%
Information and cultural industries	1.9	2.2	0.3	15.8%	3.2%
Accommodation and food services	24.4	28.1	3.7	15.2%	3.0%
Wholesale and retail trade	31.4	33.8	2.4	7.6%	1.5%
Transportation and warehousing	8.2	8.2	0	0.0%	0.0%
Finance, insurance, real estate, business, building and support services	19.5	19.5	0	0.0%	0.0%
Professional, scientific, and technical services	9.5	9.5	0	0.0%	0.0%
Public administration	8.5	8.5	0	0.0%	0.0%
Educational services	12.8	12.6	-0.2	-1.6%	-0.3%
Manufacturing	21.0	20.1	-0.9	-4.3%	-0.9%
Primary and utilities	5.7	5.1	-0.6	-10.5%	-2.1%
Other services (except for public administration)	10.0	8.4	-1.6	-16.0%	-3.2%
Total employment	198.1	211.5	13.4	6.8%	1.4%

Source: Conference Board of Canada, Metropolitan Outlook 2, St. Catharines-Niagara - Winter 2018

Employment forecasts are available for Niagara region from the EMSI Analyst program. The data is not immediately comparable to the Conference Board of Canada forecasts.

Based on the EMSI data, the number of jobs in Niagara is forecasted to increase by about 5.1% between 2018 and 2023.

Exhibit 34: Forecasted Job Growth in Niagara

NAICS	Description	2018 Jobs	2023 Jobs	Change	% Change	Average per annum % change
62	Health care and social assistance	26,756	30,366	3,611	13.5%	2.7%
72	Accommodation and food services	27,278	29,063	1,785	6.5%	1.3%
23	Construction	16,466	17,527	1,061	6.4%	1.3%
61	Educational services	14,965	15,835	870	5.8%	1.2%
44-45	Retail trade	27,666	28,437	771	2.8%	0.6%
31-33	Manufacturing	18,791	19,373	582	3.1%	0.6%
54	Professional, scientific and technical services	9,119	9,655	537	5.9%	1.2%
71	Arts, entertainment and recreation	9,038	9,551	513	5.7%	1.1%
41	Wholesale trade	8,282	8,616	334	4.0%	0.8%
56	Administrative and support, waste management and remediation services	12,247	12,572	325	2.7%	0.5%
91	Public administration	10,748	11,065	317	3.0%	0.6%
X0	Unclassified	3,839	4,069	230	6.0%	1.2%
48-49	Transportation and warehousing	7,026	7,212	186	2.6%	0.5%
53	Real estate and rental and leasing	4,425	4,594	168	3.8%	0.8%
22	Utilities	1,419	1,535	116	8.2%	1.6%
51	Information and cultural industries	2,031	2,088	57	2.8%	0.6%
52	Finance and insurance	5,705	5,755	50	0.9%	0.2%
21	Mining, quarrying, and oil and gas extraction	332	355	23	6.8%	1.4%
81	Other services (except public administration)	9,810	9,788	-22	-0.2%	0.0%
55	Management of companies and enterprises	1,470	1,426	-44	-3.0%	-0.6%
11	Agriculture, forestry, fishing and hunting	4,790	4,676	-114	-2.4%	-0.5%
	Total	222,202	233,559	11,357	5.1%	1.0%

Source: EMSI 2018.1 Data set

Longer term employment forecasts for Niagara are available from the Municipal Comprehensive Review (MCR) for the Region of Niagara. The Preferred Growth Option in the MCR is predicated on focusing growth in settlement areas where it can be best serviced. Forecasts of employment by municipality have been prepared as part of the MCR but these will need to be refined taking into account servicing and employment lands supply, and any final amendments to the Growth Plan. The forecasts of employment numbers by year in the MCR were prepared before the 2016 Census data and other data was available and therefore the allocations by year may change once base year information is revised in updates to the forecasts. The number of jobs in Niagara was forecasted to reach 213,830 in 2021 (which is significantly lower than the number of jobs that EMSI has estimated for Niagara in 2018 – 222,202). The total number of jobs estimated for the Region in 2041 is 265,020, which is an increase of 42,818 jobs or around 19% from the estimated 2018 job level based

on EMSI. The projected share of jobs by municipality in 2041 is generally similar to the estimated 2016 share in the MCR forecast and the 2018 share based on EMSI.

Exhibit 35: MCR Strategic Growth Option - Employment Forecasts

Municipality	2,016	2,021	2,031	2,041	Change	2041 Share
Fort Erie	12,460	13,270	14,920	17,240	4,780	6.5%
Grimsby	9,870	10,780	12,380	14,630	4,760	5.5%
Lincoln	11,280	11,870	13,040	14,600	3,320	5.5%
Niagara Falls	45,360	47,790	52,060	57,720	12,360	21.8%
Niagara-on-the-Lake	13,010	13,720	14,660	16,030	3,020	6.0%
Pelham	4,540	4,880	5,750	6,930	2,390	2.6%
Port Colborne	5,770	5,900	6,350	7,000	1,230	2.6%
St. Catharines	62,660	65,530	71,480	80,240	17,580	30.3%
Thorold	8,070	8,480	9,390	10,660	2,590	4.0%
Wainfleet	1,300	1,350	1,470	1,650	350	0.6%
Welland	23,590	24,490	26,220	28,760	5,170	10.9%
West Lincoln	5,150	5,770	7,270	9,560	4,410	3.6%
Niagara Region	203,060	213,830	234,990	265,020	61,960	

Source: Niagara Municipal Comprehensive Review, Phase 3 Summary Report, Nov. 2016

Based on Ontario's Long Term Report on the Economy, there are a number of trends that are expected to continue in the future and impact the level of employment and job sector growth. These include:

- Economic growth is expected to continue, but at a slower pace in the future, and this is primarily attributed to slower growth in the working age population, particularly with the retirement of the baby boom generation with a large portion retiring into the late 2020's. It is expected that the core working age group pace of growth will increase by 2031 but will still be lower than it has been historically;
- Employment is projected to grow at a slower pace than in the past. While the number of jobs in Ontario increased by an average growth of 1.4% per annum between 1982 and 2015, based on a medium growth scenario, job growth in Ontario is expected to average at 1.2% between 2016 and 2020, and 0.8% per annum between 2021 and 2041. The average annual projected employment growth rate by the Ministry of Finance for the period 2016 and 2040 as noted in Ontario's Long Term Report on the Economy is 0.9 percent. As noted in that report, this is slightly higher than the forecast by the Conference Board of Canada (0.8 percent) and slightly lower than the Institute for Policy Analysis at the University of Toronto (1.0 percent). However, these are small difference and the forecasts are generally comparable in terms of the long term growth of the economy in Ontario;
- Transformative technologies will create opportunities as well as challenges and could result in job loss due to automation in some industry segments;
- Increases in non-standard forms of employment such as part-time, contract and temporary work;
- Growth in the number of older workers continuing to work longer, and self-employment;
- Labour productivity is expected to continue to grow at its long-term historical pace;

- The shift from goods-producing sectors, particularly manufacturing, to service producing sectors is expected to continue, although at a slower pace. In Ontario, the manufacturing sector accounted for 17.5% of total jobs in 1996, but only 10.7% in 2016. Data on the shift towards services sectors is shown below.

Exhibit 36: Percentage Employment Share of Ontario Major Sectors

Sector	1996	2006	2016	Change 1996- 2016
Goods-Producing Sector	26.4	24.6	20.3	-6.1
Manufacturing	17.5	15.4	10.7	-6.8
Other Goods-Producing Industries	8.9	9.1	9.5	0.6
Private Services Producing Sector	51.7	53.8	55.5	3.8
Wholesale and Retail Trade	15.0	15.7	14.8	-0.2
Transportation and Warehousing	4.7	4.6	4.7	0.0
Information and Cultural	2.7	2.7	2.1	-0.6
Financial Services	5.2	5.4	5.8	0.6
Real Estate, Rental and Leasing	2.0	1.9	2.1	0.1
Professional, Scientific and Technical Services	6.1	7.0	8.5	2.4
Management, Administrative and Support	3.4	4.5	4.7	1.3
Arts, Entertainment, and Recreation	1.8	2.2	2.4	0.6
Accommodation and Food Services	6.0	5.8	6.5	0.5
Other Services	4.7	4.0	3.9	-0.8
Public Sector Services	21.9	21.6	24.2	2.3
Education	6.6	6.9	7.2	0.6
Health Care and Social Assistance	9.7	9.8	12.0	2.3
Public Administration	5.6	4.8	5.0	-0.6

Note: Other Goods-producing sectors include agriculture, fishing, forestry, mining, utilities and construction
Source: Ontario's Long Term Report on the Economy, using data from Statistics Canada, Labour Force Survey

Section 5: Export Activity

The total value of exports from Niagara in 2016 exceeded \$4.1 billion in 2016, which represents a growth of 13.9% from 2011. In comparison, the value of exports increased by 19.8% in Ontario over this period. Overwhelmingly, the majority of exports from Niagara are from establishments in the manufacturing sector, which accounted for close to 91% of the value of exports from Niagara in 2016. The manufacturing sector's share of export value in 2016 was about two percentage points lower than in 2011. Some sectors, while still having a low share of the overall value of Niagara exports, have shown significant growth between 2011 and 2016, such as agriculture; transportation and warehousing; finance and insurance; and wholesale trade. Some sectors have had a decrease in the levels of exports between 2011 and 2016 as shown below.

The manufacturing commodity group with the highest value of exports by Niagara companies is machinery, boilers, mechanical appliances, engines and parts. This commodity group accounted for about 39% of the value of Niagara exports in 2016. This was followed by nickel and articles thereof, at 16%. The following two commodity groups each accounted for just over 6% of the total – vehicles, parts and accessories thereof; and plastics and articles thereof.

Exhibit 37: Total Value of Exports by Industry Sector, Niagara Region, 2011 to 2016

Sector	2011	2016	% Change	% Total 2011	% Total 2016
Manufacturing	\$3,358,224,100	\$3,728,310,300	11.0%	92.99%	90.67%
Wholesale Trade	\$138,956,400	\$197,161,800	41.9%	3.85%	4.79%
Agriculture, forestry, fishing and hunting	\$47,082,200	\$109,247,600	132.0%	1.30%	2.66%
Transportation and warehousing	\$1,309,000	\$19,366,600	1379.5%	0.04%	0.47%
Construction	\$17,768,300	\$12,988,800	-26.9%	0.49%	0.32%
Admin Support, waste management, remediation	\$10,794,300	\$9,660,200	-10.5%	0.30%	0.23%
Retail trade	\$11,475,200	\$7,955,200	-30.7%	0.32%	0.19%
Professional, scientific & technical services	\$7,269,900	\$6,527,400	-10.2%	0.20%	0.16%
Other services (except public admin.)	\$2,410,100	\$5,533,000	129.6%	0.07%	0.13%
Arts, entertainment and recreation	\$7,126,900	\$4,646,400	-34.8%	0.20%	0.11%
Management of companies and enterprises	\$2,211,000	\$3,759,800	70.0%	0.06%	0.09%
Real estate rental and leasing	\$6,384,400	\$3,744,400	-41.4%	0.18%	0.09%
Finance and insurance	\$64,900	\$1,672,000	2476.3%	-	0.04%
Information and cultural industries	\$170,500	\$1,185,800	595.5%	-	0.03%
Educational services	\$85,800	\$216,700	152.6%	-	0.01%
Accommodation and food services	\$1,100	\$69,300	6200.0%	-	-
Public administration	\$5,500	\$7,700	40.0%	-	-
Mining, oil and gas extraction	\$9,900	\$5,500	-44.4%	-	-
Health care and social assistance	\$2,200	\$1,100	-50.0%	-	-
Total	\$3,611,351,700	\$4,112,059,600	13.9%	100.00%	100.00%

Source: Niagara Economic Development, Niagara Export Trade Overview

Niagara accounted for a small portion of export trade in Ontario at 2.17% in 2016, which is slightly lower than its share in 2011 (2.28%).

The number of exporters in Niagara region was 613 in 2016, which is an increase of 33 firms or 5.7% from 2011. The largest number of exporters are in the manufacturing sector accounting for about 40% of the total value number of exporting establishments in Niagara in 2016; followed by wholesale trade, accounting for about 19% of exporting businesses; and agriculture sector accounting for about 13% of exporting businesses. A comparison of the number of exporting enterprises by sector is shown in Exhibit 38.

Exhibit 38: Total Number of the Exporting Establishments by Industry Sector, Niagara Region

Sector	2011	2016	Change	% Total 2011	% Total 2016
Manufacturing	239	243	4	41.2%	39.6%
Wholesale Trade	117	119	2	20.2%	19.4%
Agriculture	69	77	8	11.9%	12.6%
Retail trade	36	46	10	6.2%	7.5%
Construction	16	22	6	2.8%	3.6%
Transportation and warehousing	13	18	5	2.2%	2.9%
Professional, scientific & technical services	20	16	-4	3.4%	2.6%
Other services (except public admin.)	16	15	-1	2.8%	2.4%
Admin Support, waste management remediation	10	11	1	1.7%	1.8%
Arts, entertainment and recreation	8	11	3	1.4%	1.8%
Management of companies and enterprises	6	-	-	1.0%	
Real estate rental and leasing	15	14	-1	2.6%	2.3%
Finance and insurance	-	-	-	-	-
Information and cultural industries	6	-	-	1.0%	-
Educational services	-	-	-	-	-
Accommodation and food services	-	-	-	-	-
Public administration	-	-	-	-	-
Mining, oil and gas extraction	-	-	-	-	-
Health care and social assistance	-	-	-	-	-
Total	580	613	33	100.0%	100.0%

Note: establishment estimates counts of less than 5 are suppressed for confidentiality purposes and shown as '-'

Source: Niagara Economic Development, Niagara Export Trade Overview

The primary destination for Niagara exports is North America, accounting for about \$3.9 billion in 2016 or about 95% of the value of exports from Niagara in 2016. This is followed by Asia and Europe, with each accounting for about 1.7%.