

YOUTH IN NIAGARA: Highly Skilled, Highly Mobile

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The purpose of this report is to build on the research identified in the Niagara Community Observatory's October 2017 policy brief: *Youth Employment in Niagara: Mapping the Opportunities*. Mobilizing data from the 2016 Census, this report will explore Niagara's youth population through the following themes: population, education, and occupation.

A common point of reference will also be established for further work on two of the recommendations from the *Youth Employment in Niagara* policy brief. The first of these recommendations was to create an expert panel on youth employment in Niagara and the second was to shed light on the need to support the synchronization of youth skills with the region's growing sectors. Though the analyses provided in this report are insufficient to invite specific policy actions or recommendations, they do provide a clear and current snapshot of Niagara's assets in terms of our youth workforce, the youth workforce of Niagara's neighbours, and the employment sectors most likely to hire youth. The resulting snapshot provides a basis from which recommendations can be made.

We find that, overall, Niagara's population has increased by 3.8 per cent between 2011 and 2016. Although the total number of youth has remained consistent between these years, their proportion of the population at both a local and provincial level has decreased. With regard to educational attainment, 64.2 per cent of youth age 25 to 29 years have

completed post-secondary education. Examining the educational programs youth have completed allows us to obtain a picture of the available skill set of the potential youth labour force at a local level.

Finally, an analysis of job demand in the Niagara region indicated that "entry-level" jobs (i.e., requiring fewer than two years of experience; a potential proxy measure for youth employment) are most highly concentrated in Niagara Falls, St. Catharines, and Welland (comprising 72.4 per cent of job postings) even though they house only 61.1 per cent of Niagara's population.

These results have implications and call for future research across a minimum of two topics: challenging a culture of hiring through the hidden job market and supporting regional transit in Niagara. Job aggregation software, though effective, is only able to provide a measure of public-facing job demand. Thus, to obtain a complete sense of in-demand jobs and skills within the region, this report offers ideas on supporting local businesses with additional human resources tools to make hiring practices more public and more measurable. Second, given that the majority (72.4 per cent) of job postings are in Niagara Falls, St. Catharines, and Welland, but these municipalities only comprise 61.1 per cent of Niagara's population, regional transit and transportation networks could be mobilized to provide access to jobs. With the goal of increasing accessibility to available jobs, research should examine whether

regional transit routes are accommodating a labour force that must commute via public transit from elsewhere in Niagara.

Methodology

While historical trends would offer the best context for understanding the advantages and challenges relating to Niagara’s youth, there are significant limitations to making such a comparison. Due to methodological changes between the 2011 National Household Survey and the 2016 Census, detailed historical comparisons of education and employment data are not possible.

Preliminary attempts to compare the 2016 Census data with the 2006 Census revealed significant drift in occupational and industrial classifications. This is to be expected considering that the jobs of 2016 are quite different than those of the 1991 Standard Occupational Classification employed by the 2006 Census. To that end, we have included provincial-level comparisons, as well as comparisons to migration hotspots identified by the Niagara Workforce Planning

Board in their second Region Building paper, *Labour Mobility – Who’s Coming, Who’s Going*.

For the purposes of this report, youth are defined as those individuals between the ages of 15 (i.e. the earliest an individual can legally work in Ontario) and 29. Five-year cohorts within the broader youth definition provide additional clarity into age groups that can loosely categorize youth as either still engaged in secondary education, attending a post-secondary institution/beginning a trades apprenticeship, or making their first forays into the workforce.

As the census has released limited data on the employment patterns of Francophone and Indigenous youth, with an expectation of more data to come in 2018, this report does not offer any significant insights on these groups at this time. However, if Francophone and/or Indigenous youth were residing within the Niagara region during the 2016 Census’ enumeration, their data would be included within the overall scope of this report.

Table 1: Historical Youth Population, Niagara Region.¹

Age Group	Youth 2011	Youth % 2011	Youth 2016	Youth % 2016	5-year % change
15 to 19 years	28,490	6.6%	25,710	5.7%	-9.8%
20 to 24 years	27,225	6.3%	28,155	6.3%	3.4%
25 to 29 years	23,170	5.4%	25,130	5.6%	8.5%
Youth total	78,885	18.3%	78,995	17.6%	0.1%

Demographic Shifts

In 2016,² the Niagara region was home to 447,885 residents. This figure is a 3.8 per cent increase from the 2011 Census.³ Within this population, youth represented 78,995 people or 17.6 per cent of the overall population. As population data were drawn from the mandatory short-form census in 2011, and not the National Household Survey, we are able to offer

historical comparisons between Niagara’s youth population in 2011 and 2016.

As illustrated in Table 1, the youth population in Niagara has remained relatively consistent between 2011 and 2016 in terms of absolute value. Proportionally, however, youth represented a smaller

¹Statistics Canada. 2017. *Niagara, RM Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001 and Statistics Canada - 2011 Census. Catalogue no. 98-311-XCB2011023.*

²Statistics Canada, *2016 Census of Population, Statistics Canada Catalogue no. 98-400-x2016004*

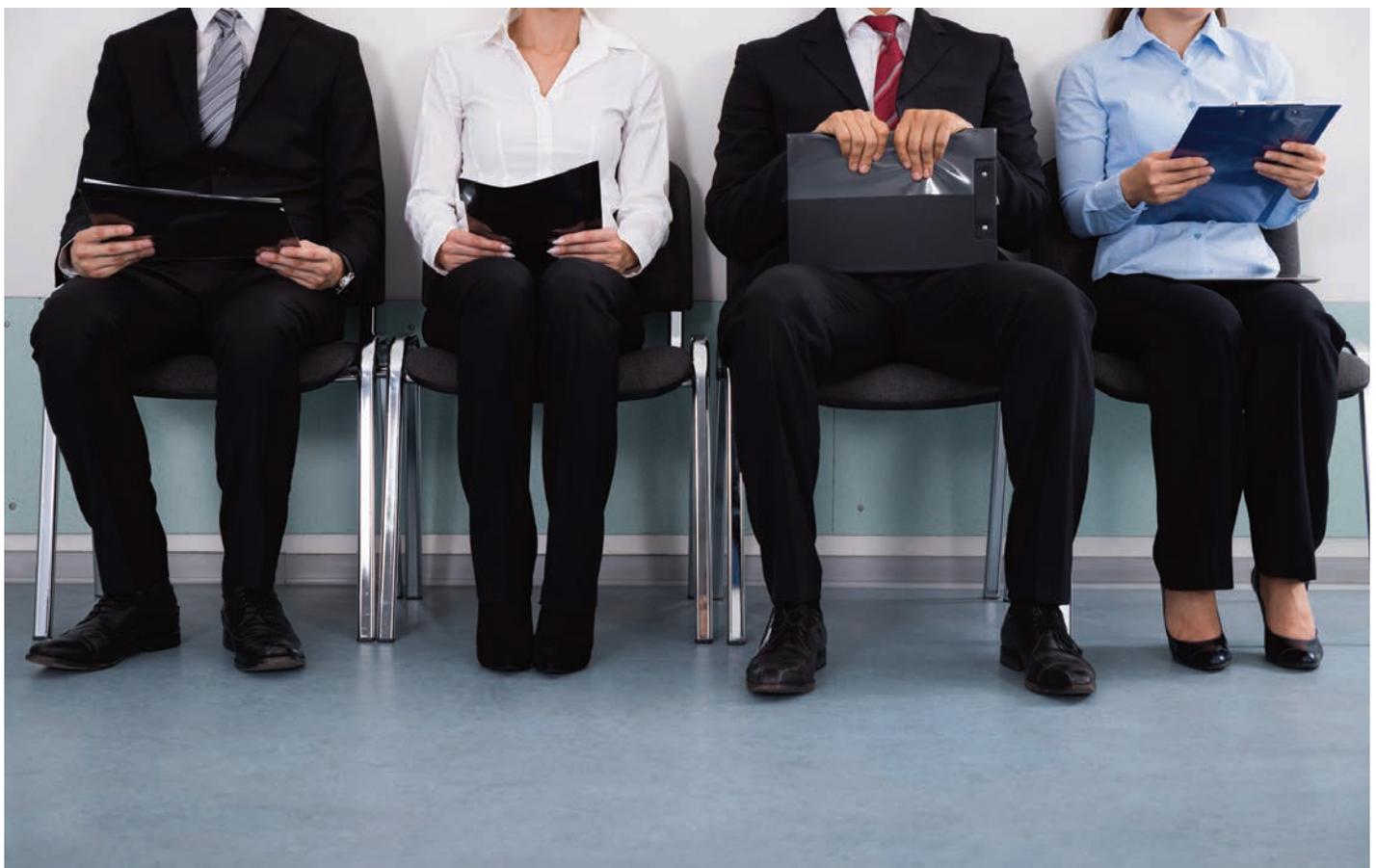
³Statistics Canada. 2017. *Niagara, RM Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001.*

Table 2: Historical Youth Population, Ontario.⁴

Age Group	Youth 2011	Youth % 2011	Youth 2016	Youth % 2016	5-year % change
15 to 19 years	863,635	6.7%	811,665	6.0%	-6.0%
20 to 24 years	852,910	6.6%	894,390	6.7%	4.9%
25 to 29 years	815,120	6.3%	874,350	6.5%	7.3%
Youth total	2,531,665	19.7%	2,580,405	19.2%	1.9%

segment of the 2016 population than they did in 2011. These data can then be seen to be consistent with the trend of an aging population within the Niagara region. This trend is also observed at a provincial level, as seen in Table 2. Despite a 1.93 per cent increase in the youth population, the proportion of youth in Ontario fell between 2011 and 2016.

These data show that our current gains are insufficient to maintain a consistent proportion of youth within Niagara or Ontario. An aging population may have implications for future labour force trends, migration, health-care spending, and urban planning.⁵



⁴Statistics Canada. 2017. Ontario Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001 and Statistics Canada - 2011 Census. Catalogue Number 98-311-XCB2011023.

⁵For additional reading on the implications of an aging population see: Foot, David K. *Aging Population: Some Economic and Social Consequences of Population Aging*. Institute for Research on Public Policy, 2008; McQuillan, Kevin. *All the Workers We Need: Debunking Canada's Labour-Shortage Fallacy*. The School of Public Policy SPP Research Papers, 6(16), 2013; Miner, Rick. *People Without Jobs, Jobs Without People: Ontario's Labour Market Future*. Miner Management Consultants, 2010. Waldbrook, Natalie, Rosenberg, Mark W., Brual Janette. *Challenging the Myth of Apocalyptic Aging at the Local Level of Governance in Ontario*. The Canadian Geographer 57(4), 2013

Youth Educational Attainment

Educational attainment measures an individual's highest completed level of educational training. Figure 1 provides an overview of educational attainment for the Niagara region as well as for the three age groups we have identified within our youth cohort.

Figure 1 reflects what one would expect to see in terms of educational attainment given our demographics.

The 15-to-19 age group largely represents students still in secondary school (thus the high proportion of individuals without any formal educational attainment). The 20-to-24 age group maps to youth engaged in post-secondary training or at a point of entry into the labour force. And the 25-to-29 age group represents a youth labour force that has largely completed education and training and is now fully engaged in the labour force.

Figure 1: Educational Attainment for the Population Age 15 and Over and Select Youth Age Groups.⁶

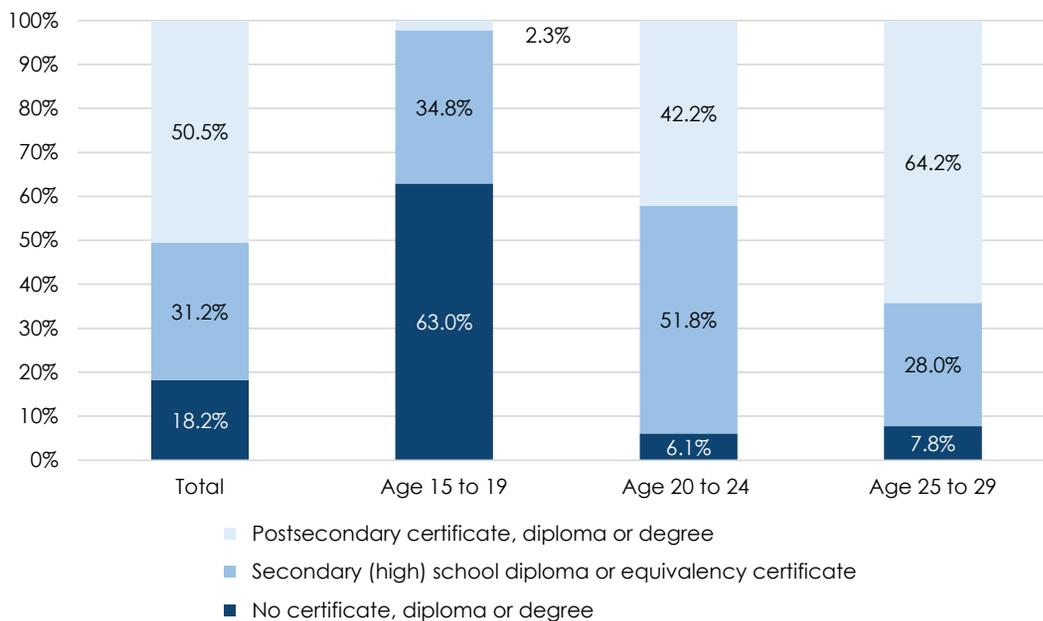


Table 3: Major Field of Study for Niagara Residents Age 25 to 29.⁷

Major Field of Study	25 to 29 Age Cohort
Health and related fields	18.2%
Business, management, and public administration	16.8%
Social and behavioral sciences, and law	15.2%
Architecture, engineering, and related technologies	15.2%
Personal, protective, and transportation services	10.2%
Humanities	6.3%
Education	5.2%
Visual and performing arts, and communications technologies	4.8%
Physical and life sciences, and technologies	3.5%
Agriculture, natural resources, and conservation	2.4%
Mathematics, computer, and information sciences	2.2%

⁶Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016242.

⁷Ibid.

This oldest youth cohort, with a 64.2 per cent post-secondary completion rate (representing approximately 16,005 individuals) for youth age 25 to 29, offers a considerable advantage in terms of completed education and training compared to a regional benchmark that sees 50.5 per cent of the working-age population holding a post-secondary qualification. Table 3 drills down on the 25-to-29 age group, to show their major post-secondary fields of study.

When considering Table 3, it is important to note that census data reports on individuals who are living within the Niagara region at the time of the census. It can be seen as an indicator of local labour supply, but not a measure of the number of jobs that exist in

Niagara. It is entirely possible that individuals who reside in Niagara are commuting out of Niagara for employment.

It is equally important to understand that an individual's field of study is not a guarantee of employment within a related occupation or industry - a theme that will be explored later in this report. Recognizing that Niagara's economy and workforce does not exist in a vacuum, Table 4 examines the major fields of study in the Southern Ontario regions where Niagara sees the most in- and out-migration of permanent residents. These regions were identified in Niagara Workforce Planning Board's report *Labour Mobility - Who's Coming, Who's Going*.

Table 4: Major Field of Study Per Capita for Residents Age 25 to 29.⁸

Major Field of Study (Age 25-29)	Post-secondary completion per 1000 residents age 15 and over						
	Niagara	Hamilton	Haldimand-Norfolk	Halton	Peel	Waterloo	Toronto
Health and related fields	7.83	10.28	7.10	6.04	8.08	8.67	8.60
Business, management and public administration	7.23	9.25	4.77	10.27	14.34	9.81	19.45
Social and behavioral sciences, and law	6.54	8.31	4.27	7.83	9.14	8.39	14.21
Architecture, engineering, and related technologies	6.53	9.09	9.21	5.69	8.36	10.65	9.19
Personal, protective and transportation services	4.41	3.47	3.11	2.58	3.17	3.58	2.89
Humanities	2.70	3.67	1.72	2.47	3.43	3.85	5.01
Education	2.22	2.29	2.11	2.21	2.18	1.96	2.29
Visual and performing arts, and communications technologies	2.09	2.71	1.39	2.72	2.24	2.45	6.57
Physical and life sciences, and technologies	1.52	2.83	1.05	2.47	3.29	3.27	3.93
Agriculture, natural resources, and conservation	1.05	0.87	1.05	0.67	0.58	1.15	0.76
Mathematics, computer, and information sciences	0.96	1.42	0.33	1.89	3.07	3.44	3.75
Other fields of study	0.00	0.02	0.00	0.00	0.00	0.08	0.01

⁸*Ibid* and authors' calculations

Table 4 attempts to control for regional population sizes through a per-capita measure of educational achievement. For example, this table indicates that Niagara has 7.83 youth age 25 to 29 with a degree or diploma in the health-related fields for every thousand residents age 15 and older. Hamilton, in contrast, has 10.28 youth age 25 to 29 with post-secondary training in health and related fields for every thousand working age residents. Although these measures do not imply a direct demand for jobs in their fields, particularly since the census is measuring where people live and not where they work, they can be taken as a rough bellwether of job demand.

These data are significant in that they invite a broader conversation on the subject of talent recruitment and labour mobility within the Niagara region and the regions where we know there is a significant pattern of migration. Recognizing that the youth workforce is one that is both highly-skilled and highly-mobile, the above table illustrates the geographies that could be targeted for talent attraction.⁹

While the data presented in this table are limited to major fields of study within the Classification of Instructional Program (CIP) framework, it is possible to expand the scope of this analysis to all 49 instructional programs within the first level of the CIP.

Table 5: Occupation of Employment for Youth and Working Age Populations.¹¹

Occupation	Youth (15-29) Employment	Working Age (15+) Employment
Management occupations	2,050	20,270
Business, finance and administration occupations	3,375	24,795
Natural and applied sciences and related occupations	1,560	8,520
Health occupations	2,485	13,875
Occupations in education, law and social, community and government services	3,190	20,450
Occupations in art, culture, recreation, and sport	1,405	4,505
Sales and service occupations	21,675	55,805
Trades, transport and equipment operators, and related occupations	5,125	27,270
Natural resources, agriculture, and related production occupations	1,810	4,565
Occupations in manufacturing and utilities	1,545	8,160
All occupations	44,225	188,215

Youth Occupation of Employment

Using data from the 2016 Census, we can gain an understanding of youth employment patterns for residents of the St. Catharines-Niagara Census Metropolitan Area (or CMA).¹⁰ These data reflect all those individuals who lived in the St. Catharines-Niagara CMA, who were at least 15 years of age and reported working at some point between January of 2015 and May of 2016. As seen in Table 5, the resident youth workforce represented 23.5 per cent of all employed individuals residing in the CMA during the census May 2016 reference period.

In terms of total employment, 21,675 youth in Niagara reported employment in sales and service occupations. Those individuals represented 38.8 per cent of the

⁹For a comprehensive review of historical and current youth migration patterns, see: Niagara Community Observatory, *The Young Are the Restless*, March 5, 2009, and Adam Durrant and Thalia Semplonius, *Region Building Series #2: Labour Mobility - Who's Coming and Who's Going*, Fall 2017.

¹⁰The St. Catharines-Niagara Census Metropolitan Area (CMA) includes all municipalities within the Niagara region except for West Lincoln and Grimsby. Grimsby is part of Hamilton's CMA and West Lincoln is in non-CMA Ontario. 2016 Census profiles report 14,710 people in Grimsby's labour force and 8,050 in West Lincoln's labour force. These definitions are set by Statistics Canada and are beyond the control of the authors of this report.

¹¹Source: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016295.

Table 6: Location Quotient of Youth and Overall Workforce.¹²

Occupation	Age 15 to 19	Age 20 to 24	Age 25 to 29	Total Employment
Management occupations	0.68	0.92	1.07	0.92
Business, finance, and administration occupations	0.64	0.60	0.62	0.80
Natural and applied sciences, and related occupations	0.63	0.70	0.59	0.61
Health occupations	1.02	1.16	1.20	1.11
Occupations in education, law and social, community, and government services	0.56	0.74	0.85	0.89
Occupations in art, culture, recreation, and sport	0.73	0.76	0.69	0.76
Sales and service occupations	1.13	1.20	1.29	1.29
Trades, transport and equipment operators, and related occupations	0.69	1.01	1.19	1.11
Natural resources, agriculture, and related production occupations	1.28	1.44	1.45	1.57
Occupations in manufacturing and utilities	0.47	0.85	1.09	0.87

total employed workforce within that major occupation group. To understand if that figure is significant, this report has applied a modified location quotient calculation to benchmark Niagara's youth employment against Ontario's.

The location quotient measures a share of economic activity for a sub-region (e.g. Niagara) relative to a larger region (e.g. Ontario). This allows for an understanding of how concentrated a given activity is

within a region. While location quotients can use national-level frameworks, this analysis is focused on a provincial context. Therefore, if a given occupation has a location quotient of 1.0, then the level of employment can be seen as proportional to what we would find in Ontario as a whole. A higher number indicates a greater concentration of employment (e.g. a location quotient of 2.0 would indicate double the provincial concentration of employment.) Table 6 explores the youth location

¹²Statistics Canada Table 98-400-X2016295 and authors' calculations.

quotients and compares them to those for the overall workforce.

Green highlighted cells in the table illustrate areas where Niagara's youth show a concentration of employment in Niagara. Of note is that youth between the ages of 25 and 29 show identical employment concentrations as the overall workforce in sales and service occupations. This means that both Niagara's general workforce and youth workforce are more concentrated in these occupations than what we would expect to see at a provincial level. Given the well-known economic strengths of the Niagara region (e.g. tourism, attractions, accommodations, agriculture) the high LQs seen in Table 6 are not surprising.

The Challenge of Measuring "Youth" Job Demand

Until recently, measuring labour and job demand was something of a challenging proposition. Data tools from Statistics Canada and other organizations were often focused on labour supply instead of labour demand, and where demand data was available it was often focused through a national or provincial lens. Advances in data aggregation allow for a new capacity to measure job demand without having to rely primarily on survey data. To that end, this report's job-demand data mobilizes public-facing job postings (i.e. those that are generally accessible through an internet connection and not hidden behind pay-walls or private job boards) to produce a snapshot of regional job demand.

Where these data are limited is in their inability to capture job demand that is reflected through referrals and informal networking. Previous analysis from the Niagara Workforce Planning Board indicates that as many as 20 per cent of employers who completed NWPB's Employer One survey reported hiring through this "hidden" job market. A further challenge is reflected in the fact that there is no specific method for targeting "youth" jobs. Outside the confines of

hiring for jobs that are funded through youth-focused programs, such as the Canada Summer Jobs Program, age-targeted hiring would be highly dubious in the face of labour and human rights legislation. To address this challenge, this report has prepared a snapshot of job demand for Niagara that targets "entry level" employment; therein, a job posting requires fewer than two years of experience.

Working with a baseline of 11,995¹³ measurable job postings in Niagara during the 2017 calendar year, 4,058 (33.8 per cent) job postings fell in the "entry level" category. In terms of geography, 72.4 per cent of entry-level job postings were for jobs in Niagara Falls (33.9 per cent), St. Catharines (26.1 per cent), or Welland (12.3 per cent). This concentration of employment opportunities in Niagara's more urban municipalities is not surprising. It invites future research looking into intra-regional commuter flows and the need for regional transit strategies.

Aggregation software allows for a considerable level of detail in terms of occupational and skill demand. While comprehensive four-digit National Occupation Classification (NOC) data can be mined from this software, Table 7 limits the scope of this analysis to measurable entry-level job demand at a one-digit NOC-level.

Among youth age 15 to 29, sales and service jobs accounted for 49.0 per cent of employment. For context, sales and service occupations accounted for 29.6 per cent of total employment for the working-age population in the St. Catharines-Niagara CMA. Once again, it is important to stress that data in Table 7 do not reflect jobs for youth, per se, but jobs which require fewer than two years of work experience. With more than 21,000 youth employed in sales and service occupations in Niagara (Table 5) it is reasonable to infer that youth would be filling entry-level jobs in sales and service occupations, and that, in turn, could shape popular narrative about employment opportunities in Niagara.

¹³This figure excludes job postings from kijiji.com

Table 7: 2017 Job Demand by Occupation, Niagara Region.¹⁴

Occupation	% of Job Demand	Number of Job Postings
Sales and service occupations	47.9%	1,945
Business, finance, and administration occupations	14.3%	581
Trades, transport and equipment operators, and related occupations	9.5%	385
Management occupations	6.0%	245
Occupations in education, law and social, community, and government services	5.3%	217
Natural and applied sciences, and related occupations	4.6%	187
Health occupations	3.6%	147
Occupations in manufacturing and utilities	1.8%	75
Occupations in art, culture, recreation, and sport	1.3%	52
Natural resources, agriculture, and related production occupations	1.2%	48



¹⁴CEB, Talent Neuron, Niagara region job postings requiring 0-2 years' experience, 2017. Excluding job demand posted to kijiji.com and 4.3 per cent of job demand where no National Occupation Classification could be assigned to the job posting.

Recommendations and Next Steps

1) Breaking Down the Hidden Job Market

This report recognizes that data from any job aggregation software is never going to offer a complete measurement of total job demand in a given region. Taken at face value, these data show that almost half of all job opportunities in Niagara are in sales and service. For context, sales and service occupations in Niagara had the lowest median hourly income in 2016 at \$14.29 per hour.¹⁵ Within Ontario's 2016 workforce, 35.9 per cent of all employment in sales and service is part-time, the highest level of part-time employment among major occupation groups. Based on the data at hand, these occupations are the most abundantly available for young job seekers.

However, it is equally important to remember that all available data may not show all available opportunities. To that end, this report illustrates the need for more immediate action to promote the available job demand that exists in Niagara. Consider that if roughly one-fifth of employers prefer to hire through informal means, then Niagara's capacity to understand its labour market demands – and speak to the problem of "jobs without people" – could be improved with more support for employers to hire through conventional and measurable means. One potential action would be to support the 71 per cent of Niagara's employers with fewer than nine employees with templates for data-rich job postings. Standardizing the marketing component of the hiring process for small employers could show the value of transparent hiring - particularly as job seekers take advantage of job boards that use data aggregation (e.g. Linking Niagara or Magnet)

while creating a more accurate picture of demand for planning purposes.

2) Regional Transit and Transportation Networks

These data have revealed that in 2016, almost three-quarters of all entry-level job demand was found within the municipalities of Niagara Falls, St. Catharines, and Welland. These three municipalities house 61.1 per cent of the Niagara region's 2016 population. A mobilization of the workforce within the remaining 39.9 per cent of Niagara's population may serve as another method for answering the problem of jobs without people – and particularly jobs without youth. This is a particularly poignant fact in consideration of the demonstrated labour market integration between Grimsby and Hamilton. Robust, efficient, and timely regional transit would provide an opportunity to draw some of Grimsby's commuting labour force back into Niagara.

3) Situating Youth Initiatives Within A Strategy

If there is a single comment to make about the state of youth employment and education in Niagara, and in Ontario as a whole, it is that the challenges facing youth are numerous and regularly in flux. The data presented in this report suggest the need for a broader youth employment and engagement strategy that, at a regional level, establishes a clear framework for addressing the challenges. Such a framework would require considerable capacity-building as well as buy-in from a strong base of stakeholders.



¹⁵EMSI Analyst, Niagara census division, 2017.3 dataset

Statistics Canada. Table 282-0142 - Labour Force Survey estimates (LFS), by National Occupational Classification (NOC) and sex, annual (persons unless otherwise noted)

The Niagara Community Observatory is a think-tank for local public policy at Brock University in St. Catharines, Ont.

This policy brief was done in partnership with the Niagara Workforce Planning Board, one of 26 such boards in Ontario, dedicated to delivering accurate and future-focused workforce data to enhance Niagara's economic prosperity.

An electronic version of this brief can be found at www.brocku.ca/nco and www.niagaraworkforce.ca

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