



Appendix:
**Tables and Charts showing Level and Change of Employment by Skill Group for
each Industry Sector, by Type of Census Division, Ontario, 2006 and 2016**

Ray D. Bollman
November 25, 2019

Introduction	2
All sectors	3
Overview by sector	6
Tables and charts for each sector	8
NAICS 11: Agriculture, forestry, fishing and hunting	7
NAICS 21: Mining, quarrying and oil and gas extraction	9
NAICS 22: Utilities	11
NAICS 23: Construction	14
NAICS 31-33: Manufacturing	17
NAICS 41: Wholesale trade	20
NAICS 44-45: Retail trade	23
NAICS 48-49: Transportation and warehousing	26
NAICS 51: Information and cultural industries	29
NAICS 52: Finance and insurance	32
NAICS 53: Real estate and rental and leasing	35
NAICS 54: Professional, scientific and technical services	38
NAICS 56: Administrative and support, waste management and remediation services	41
NAICS 61: Educational service	44
NAICS 62: Health care and social services	47
NAICS 71: Arts, entertainment and recreation	50
NAICS 72: Accommodation and food services	53
NAICS 81: Other (personal) services	56
NAICS 91: Public Administration	59



Introduction

This appendix accompanies Fact Sheets in the *Focus on Rural Ontario* series published by the Rural Ontario Institute.

In most sections, there are four items

- A table showing the level and change in employment by skill group for each type of census division for Ontario, 2006 and 2016
- A brief note pointing to selected highlights
- A chart that shows the change in the location quotient (where a positive change shows that the share of employment in a given skill group increased, relative to the Ontario average share).
- A table showing the top 10 occupations in the given industry sector, both at the Ontario level and within non-metro census divisions of Ontario.

The type of enterprises included in each industry sector can be view in:

Statistics Canada. (2017) **North American Industry Classification System (NAICS): 2017** (Ottawa: Statistics Canada, Catalogue no. 12-501) (<http://www5.statcan.gc.ca/olc-cel/olc.action?objId=12-501-X&objType=2&lang=en&limit=0>).

The type of occupations included in each occupational group can be viewed in:

Statistics Canada. (2012) **National Occupational Classification (NOC): 2011** (Ottawa: Statistics Canada, Catalogue no. 12-583-X) (<http://www.statcan.gc.ca/subjects-sujets/standard-norme/noc-cnp/2011/index-indexe-eng.htm>).

The classification of each occupation to a skill group can be viewed in:

Employment and Skills Development Canada (2011). National Occupational Classification Matrix 2011
(<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>).

Skill Group A usually requires a university education; **Skill Group B** usually requires a college education or apprenticeship training; **Skill Group C** usually requires a secondary school or occupation-specific training; **Skill Group D** usually requires on-the-job training; and **Skill Group O** includes management occupations and self-employed individuals.

Cautionary caveat: We are using the delineation of skills as delineated by Employment and Skills Development Canada that is based on the level of educational attainment usually required for a given occupation. However, non-metro workers know that heavy equipment mechanics (Skill Group “B”) are ‘not’ less skilled than teachers (Skill Group “A”) – the required skills are simply different.

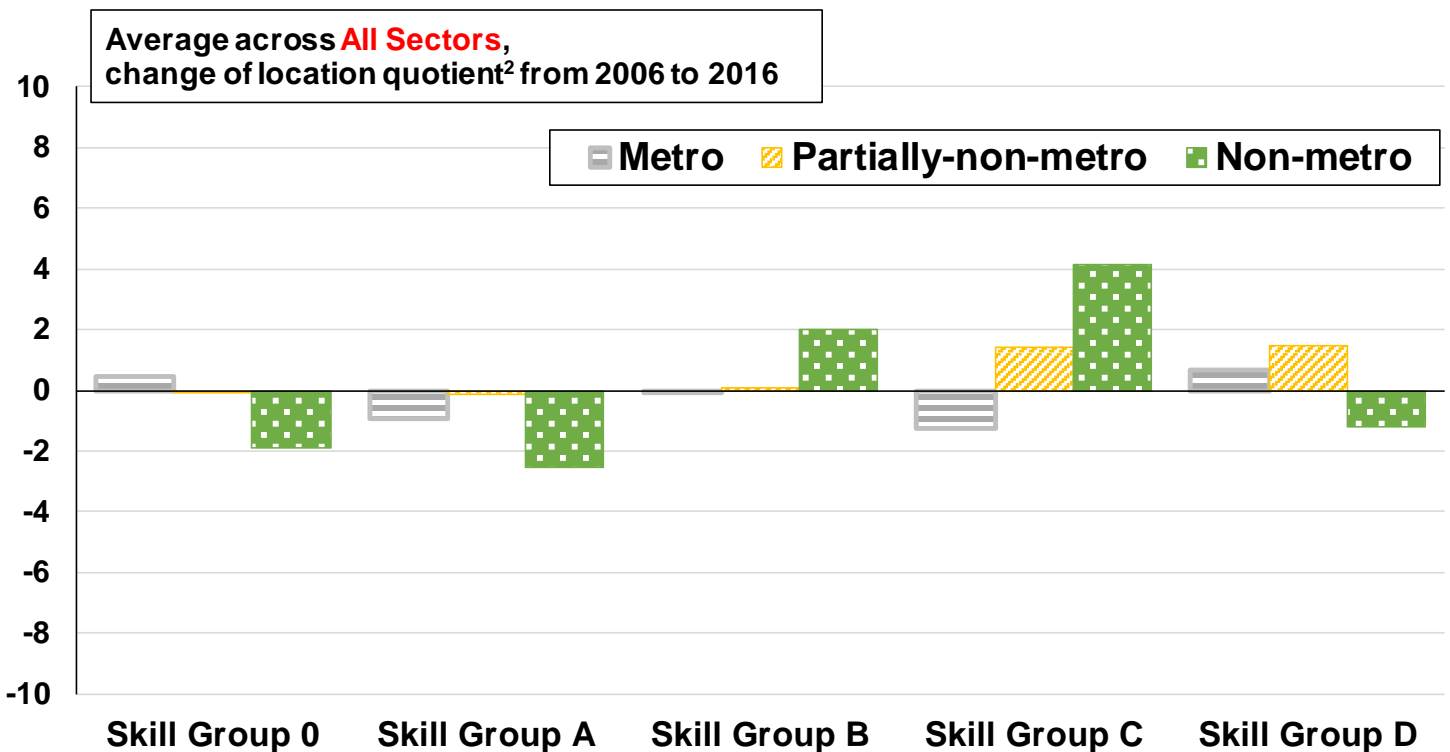


ALL SECTORS

Notes:

- From 2006 to 2016, employment increased in each type of census division – but there was only at 1% increase in non-metro census divisions.
- Within each type of census division, the largest rate of increase in employment was in the Skill Group “A”.
- Growth in Skill Group “A” was lowest in non-metro census divisions which generated the finding that the location quotient declined, relative to the Ontario average change (i.e., the change in the share of non-metro employment in Skill Group “A” declined, relative to the Ontario average). This may be interpreted as a deskilling in non-metro census divisions, relative to Ontario as a whole.
- For Ontario as a whole, 4 of the top 10 occupations in 2016 were delineated as Skill Group “A” occupations. In non-metro census divisions, only 1 of the top 10 occupations was delineated as a Skill Group “A” occupation (i.e., secondary and elementary school teachers).

On average, across **All Sectors**, the share of non-metro employment in Skill¹ Groups “B” & “C” increased relative to the Ontario average, 2006 to 2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in all industry sectors in Ontario, 2016

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- All industry sectors						
A	217	Computer and information systems professionals	133	175	31	3.9
A	111	Auditors, accountants and investment professionals	114	153	34	3.4
C	642	Retail salespersons	123	137	11	3.0
B	122	Administrative and regulatory occupations	97	130	34	2.9
A	403	Secondary and elementary school teachers and educational counsellors	91	120	31	2.7
C	141	General office workers	119	119	1	2.7
C	751	Motor vehicle and transit drivers	94	109	16	2.4
D	673	Cleaners	82	106	30	2.4
A	112	Human resources and business service professionals	71	102	44	2.3
B	421	Paraprofessional occupations in legal, social, community and education services	65	94	43	2.1
Top 10 occupations: Non-metro² census divisions -- All industry sectors						
C	751	Motor vehicle and transit drivers	33	32	-4	3.4
D	673	Cleaners	26	29	12	3.1
C	642	Retail salespersons	30	28	-7	3.1
A	403	Secondary and elementary school teachers and educational counsellors	27	27	0	2.9
B	421	Paraprofessional occupations in legal, social, community and education services	19	21	13	2.3
D	661	Cashiers	21	21	4	2.3
D	671	Food counter attendants, kitchen helpers and related support occupations	19	21	10	2.3
C	341	Assisting occupations in support of health services	17	21	22	2.3
C	141	General office workers	21	21	-3	2.2
O	082	Managers in agriculture, horticulture and aquaculture	22	20	-9	2.2

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



Overview by sector

Change in share (or percent) of employment in a skill¹ group, relative to the change for Ontario as a whole (i.e. change in location quotient^{2,3}) for each industry sector for non-metro census divisions, Ontario, 2006 and 2016

	Industry sector	Skill group ¹				
		O	A	B	C	D
		Among non-metro census divisions ⁴ , did the share (or percent) of employment in the occupations in this skill group go up or down, relative to the change in the share at the Ontario level (i.e. change in location quotient ^{2,3})				
11	Agriculture, forestry, fishing and hunting	Up	Down	Down	Up	Down
21	Mining, quarrying and oil and gas extraction	Down	Down	No change	Up	Down
22	Utilities	Up	Down	Down	Up	Up
23	Construction	Up	Down	Up	Up	Down
31-33	Manufacturing	Down	Down	Up	Up	Down
41	Wholesale trade	Down	Up	Up	No change	Up
44-45	Retail trade	Down	Up	Up	Up	Up
48-49	Transportation and warehousing	Down	Up	Down	Up	Down
51	Information and cultural industries	Up	Up	Up	Up	Down
52	Finance and insurance	Down	Down	Up	Up	Up
53	Real estate and rental and leasing	Down	Up	Up	Down	Up
54	Professional, scientific and technical services	Up	Down	Up	Up	Up
56	Administrative and support, waste management and remediation services	Up	Down	Down	Down	Up
61	Educational services	Up	Down	Down	Up	Up
62	Health care and social services	Down	Down	No change	Up	Up
71	Arts, entertainment and recreation	Up	Up	Down	Up	Down
72	Accommodation and food services	Up	Down	Down	Down	No change
81	Other (personal) services	Up	Down	Up	Down	Up
91	Public Administration	No change	Down	No change	Up	No change
Total	All sectors	Down	Down	Up	Up	Down

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



Notes:

- The overall pattern of a decrease in the location quotient in non-metro census divisions for Skill Group “A” occurred in 13 of 19 industry sectors (i.e., there was an increase in 6 of 19 sectors).
- For Skill Groups “B” and “C”, the location quotient increased in 10 of 19 industries for Skill Group “B” and in 14 of 19 industries for Skill Group “C”.

Change in relative skill ¹ structure of employment (i.e. change in location quotient ²) for each skill group within each industry sector for non-metro census divisions, Ontario, 2006 and 2016						
NAICS code	Industry sector	Skill group ¹				
		O	A	B	C	D
Among non-metro census divisions ⁴ , did the share (or percent) of employment in the occupations in this skill group go up or down, relative to the change in the share at the Ontario level (i.e. change in location quotient ^{2,3})						
11	Agriculture, forestry, fishing and hunting	2	-10	-14	3	-1
21	Mining, quarrying and oil and gas extraction	-9	-2	0	6	-6
22	Utilities	8	-11	-6	21	25
23	Construction	2	-16	1	1	-6
31-33	Manufacturing	-10	-7	4	4	-16
41	Wholesale trade	-5	11	3	0	8
44-45	Retail trade	-4	1	1	1	1
48-49	Transportation and warehousing	-1	9	-4	2	-2
51	Information and cultural industries	2	1	2	4	-7
52	Finance and insurance	-6	-4	5	11	43
53	Real estate and rental and leasing	-2	11	3	-8	4
54	Professional, scientific and technical services	10	-4	1	15	36
56	Administrative and support, waste management and remediation services	10	-4	-3	-2	4
61	Educational services	3	-2	-2	13	8
62	Health care and social services	-11	-1	0	1	13
71	Arts, entertainment and recreation	8	2	-2	4	-2
72	Accommodation and food services	13	-35	-2	-4	0
81	Other (personal) services	15	-6	5	-6	3
91	Public Administration	0	-4	0	15	0
Total	All sectors	-2	-3	2	4	-1

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

Source: OMAFRA, EMSI ANALYST database.

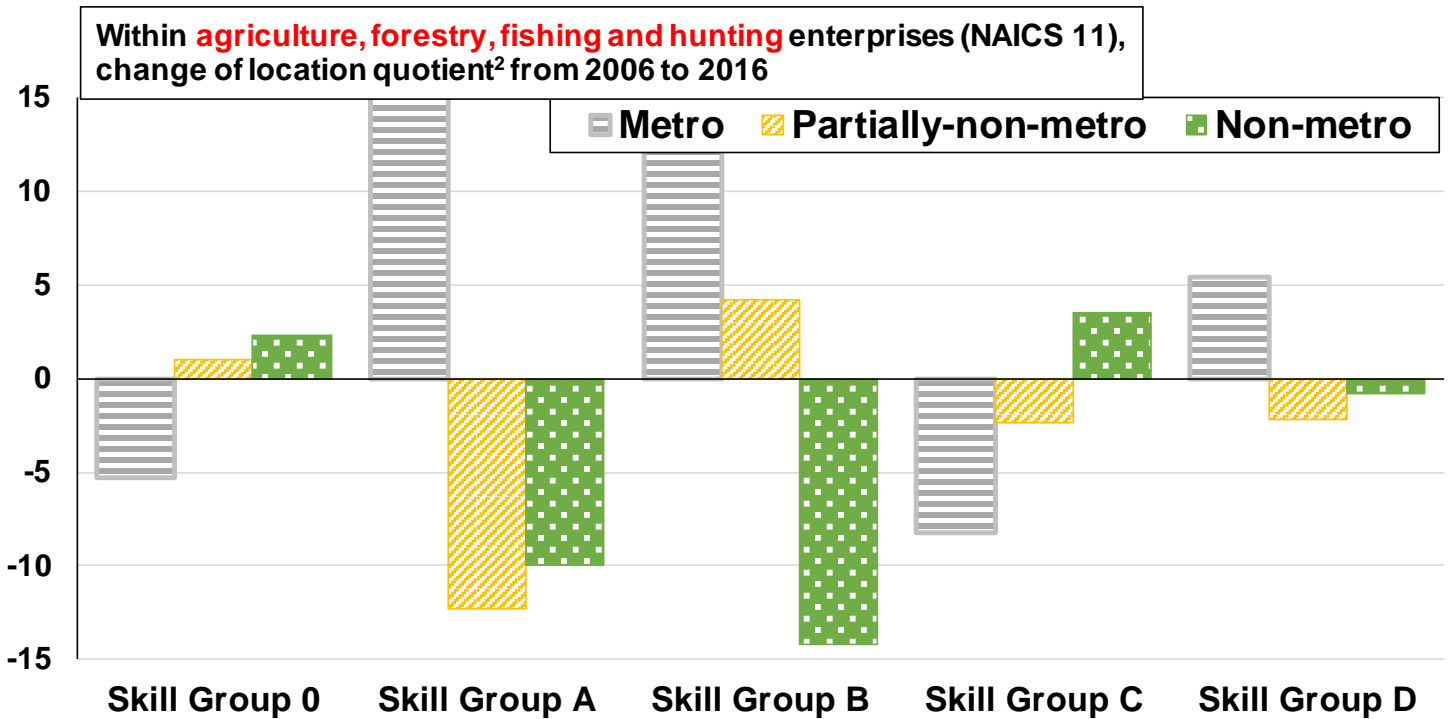


NAICS 11: Agriculture, Forestry, Fishing and Hunting Sector

Notes:

- Employment in agriculture, forestry, fishing and hunting declined in each type of census division from 2006 to 2016. The decline was greatest (21%) in non-metro census divisions.
- Within non-metro census divisions in 2016, 42% of employment was in Skill Group “O”, which includes managers and self-employed farm operators.
- The next largest group was Skill Group “C” (37%).
- Within non-metro census divisions, the number employed declined in each of the top 10 occupational groups.

Among **agriculture, forestry, fishing & hunting** enterprises, the share of non-metro employment in Skill¹ Groups “O” & “C” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in agriculture, forestry, fishing and hunting enterprises (NAICS 11) in Ontario, 2016

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Agriculture, forestry, fishing and hunting sector (NAICS 11)						
O	082	Managers in agriculture, horticulture and aquaculture	43	38	-12	40.6
C	843	Agriculture and horticulture workers	25	24	-4	25.9
D	861	Harvesting, landscaping and natural resources labourers	5	4	-28	3.8
B	825	Contractors and supervisors, agriculture, horticulture and related operations and services	3	2	-14	2.7
C	751	Motor vehicle and transit drivers	4	2	-34	2.6
B	222	Technical occupations in life sciences	1	1	11	1.4
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	2	1	-24	1.3
B	131	Finance, insurance and related business administrative occupations	3	1	-57	1.3
C	842	Logging and forestry workers	2	1	-41	1.1
D	673	Cleaners	1	1	-34	1.0
Top 10 occupations: Non-metro² census divisions – Agriculture, forestry, fishing and hunting sector (NAICS 11)						
O	082	Managers in agriculture, horticulture and aquaculture	22	18	-16	46.0
C	843	Agriculture and horticulture workers	10	9	-3	23.7
D	861	Harvesting, landscaping and natural resources labourers	2	2	-27	3.9
C	751	Motor vehicle and transit drivers	2	1	-36	2.6
B	825	Contractors and supervisors, agriculture, horticulture and related operations and services	1	1	-4	2.3
C	842	Logging and forestry workers	1	1	-36	1.6
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	1	1	-23	1.4
B	222	Technical occupations in life sciences	1	0	-9	1.2
B	131	Finance, insurance and related business administrative occupations	2	0	-74	1.0
B	824	Logging machinery operators	1	0	-52	1.0

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 21: Mining, quarrying and oil and gas extraction sector

Level and change in skill ¹ structure of employment in mining, quarrying and oil and gas extraction enterprises (NAICS 21), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	0	0	2	4	4	126	119	-7
A	1	1	23	8	10	133	136	3
B	6	6	9	60	63	97	100	3
C	2	2	-15	23	19	101	90	-10
D	0	0	3	4	4	80	77	-3
Total	10	10	4	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	0	0	173	2	4	55	123	68
A	0	0	96	4	7	66	95	29
B	2	2	4	60	53	96	84	-12
C	1	1	21	26	26	112	126	14
D	0	0	34	8	10	155	173	18
Total	3	4	18	100	100	100	100	0
Non-metro census divisions⁴								
O	0	0	38	3	3	86	77	-9
A	0	1	68	4	5	73	71	-2
B	5	8	50	66	66	105	105	0
C	2	2	44	21	21	94	100	6
D	0	1	44	6	5	102	96	-6
Total	8	12	49	100	100	100	100	0
All census divisions								
O	1	1	29	3	3	100	100	0
A	1	2	43	6	7	100	100	0
B	13	16	25	62	63	100	100	0
C	5	5	13	23	21	100	100	0
D	1	1	26	5	6	100	100	0
Total	21	26	23	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

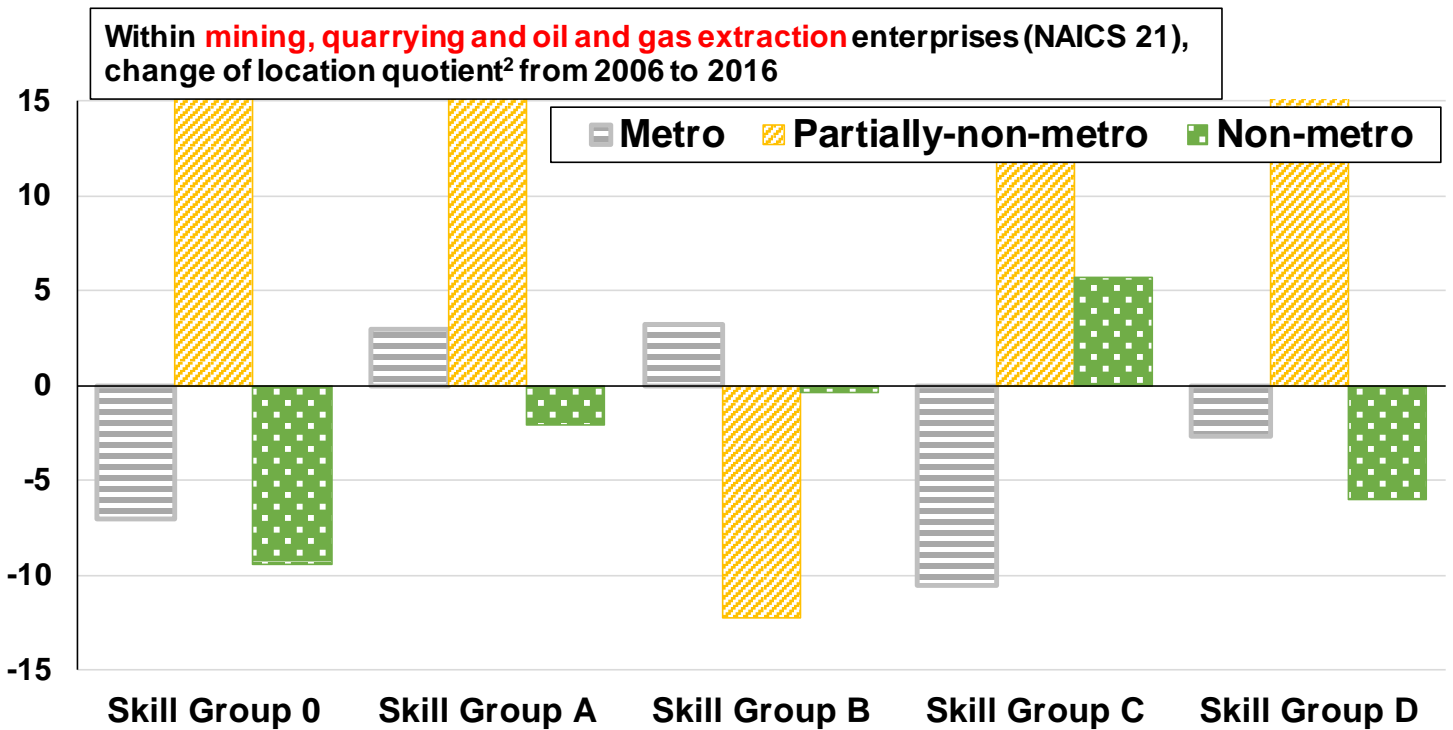
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Within mining, quarrying and oil and gas extraction enterprises, employment increased from 2006 to 2016 for each skill group in each type of census division (except Skill Group “C” in metro census divisions). However, the absolute number employed is small in many of these categories.
- One-half to two-thirds of employment in this sector is in Skill Group “B”.
- Among the top 10 occupations, there was an increase in the number employed from 2006 to 2016 in each of the occupations but none of the top 10 occupations were delineated as a Skill Group “A” occupation.

Among mining, quarrying and oil & gas extraction enterprises, the share of non-metro employment in Skill¹ Group “C” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database. Chart by RayD.Bollman@sasktel.net



NAICS 22: Utilities

Level and change in skill ¹ structure of employment in utility enterprises (NAICS 22), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	2	1	-20	10	7	118	113	-5
A	3	4	24	20	24	114	120	6
B	7	8	9	46	48	87	91	4
C	3	3	-9	20	18	114	102	-12
D	1	1	-14	4	3	110	92	-18
Total	16	17	5	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	1	1	-21	8	6	99	98	-1
A	3	3	15	18	21	103	105	2
B	9	9	1	53	53	100	101	1
C	3	3	-7	18	17	100	95	-4
D	1	1	-3	3	3	94	93	-1
Total	17	17	0	100	100	100	100	0
Non-metro census divisions⁴								
O	1	1	-10	7	6	78	86	8
A	2	2	-1	13	13	78	66	-11
B	8	7	-2	62	59	117	112	-6
C	2	2	26	15	18	82	103	21
D	0	1	28	4	4	95	120	25
Total	12	13	3	100	100	100	100	0
All census divisions								
O	4	3	-18	8	7	100	100	0
A	8	9	16	17	20	100	100	0
B	24	24	3	53	53	100	100	0
C	8	8	0	18	17	100	100	0
D	2	2	1	4	4	100	100	0
Total	45	46	3	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

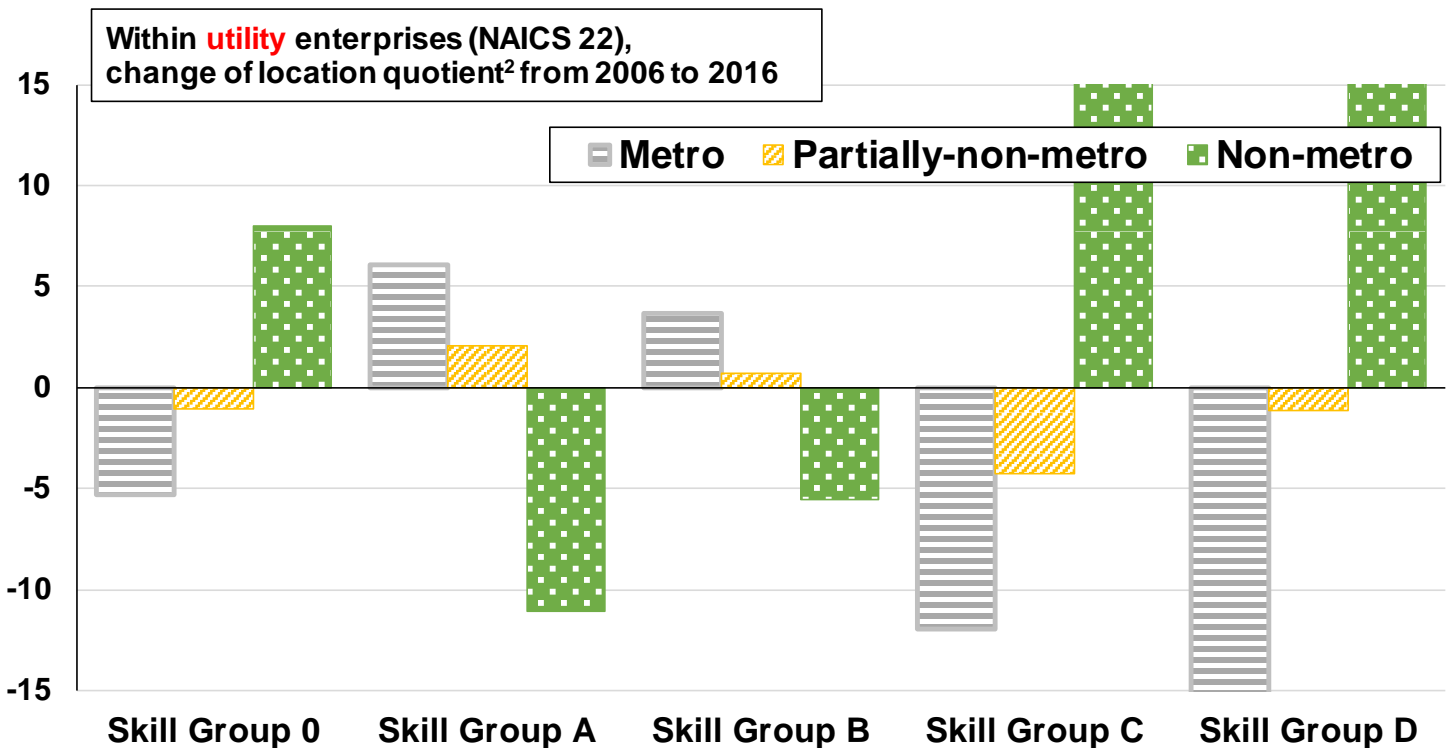
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, there was a small increase in employment in the utilities sector (but no increase in partially-non-metro census divisions).
- For the most part, the measured change in the skill structure in the utility sector in non-metro census divisions was based on a change of fewer than 200 employees (except a change of 470 employees in Skill Group "C") and thus the size of the measured location quotient (i.e. the change in the relative share of employment in a given skill group, relative to the Ontario-level change) is sensitive to the small(er) 25% sample of households that were enumerated for the long-form census in 2016.

Among utility enterprises, the share of non-metro employment in Skill¹ Groups "O", "C" & "D" increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the utilities sector (NAICS 22) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Utilities sector (NAICS 22)						
B	724	Electrical trades and electrical power line and telecommunications workers	4	5	21	10.4
B	924	Utilities equipment operators and controllers	5	4	-15	9.6
A	213	Civil, mechanical, electrical and chemical engineers	4	3	-10	6.8
B	921	Supervisors, processing and manufacturing occupations	2	2	8	4.6
B	224	Technical occupations in electronics and electrical engineering	2	2	1	3.5
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	2	2	-7	3.5
A	217	Computer and information systems professionals	1	1	21	3.1
C	141	General office workers	2	1	-8	3.0
C	655	Customer and information services representatives	1	1	34	2.9
A	111	Auditors, accountants and investment professionals	1	1	20	2.8
Top 10 occupations: Non-metro² census divisions -- Utilities sector (NAICS 22)						
B	924	Utilities equipment operators and controllers	2	2	-27	12.4
B	724	Electrical trades and electrical power line and telecommunications workers	1	1	10	11.2
B	921	Supervisors, processing and manufacturing occupations	1	1	0	5.1
A	213	Civil, mechanical, electrical and chemical engineers	1	1	-31	4.7
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	1	1	13	4.6
B	224	Technical occupations in electronics and electrical engineering	0	0	-6	2.9
C	655	Customer and information services representatives	0	0	87	2.8
O	091	Managers in manufacturing and utilities	0	0	-18	2.7
C	141	General office workers	0	0	15	2.7
B	223	Technical occupations in civil, mechanical and industrial engineering	0	0	4	2.3

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).



NAICS 23: Construction Sector

Level and change in skill ¹ structure of employment in construction enterprises (NAICS 23), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	30	46	52	15	17	107	106	0
A	6	10	70	3	4	120	121	1
B	121	161	33	60	58	98	99	0
C	28	36	31	14	13	99	98	-2
D	17	24	39	9	9	97	94	-3
Total	202	277	37	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	15	19	31	13	14	94	92	-2
A	2	3	50	2	2	76	78	1
B	71	82	15	63	60	104	103	-1
C	15	18	21	13	13	96	99	3
D	9	13	41	8	10	96	106	11
Total	112	136	21	100	100	100	100	0
Non-metro census divisions⁴								
O	8	10	36	12	14	88	91	2
A	1	1	15	2	2	77	61	-16
B	37	43	17	60	59	99	100	1
C	9	11	17	15	15	111	112	1
D	6	8	19	10	10	117	111	-6
Total	62	74	19	100	100	100	100	0
All census divisions								
O	53	76	44	14	16	100	100	0
A	9	15	58	2	3	100	100	0
B	229	286	25	61	59	100	100	0
C	52	65	26	14	13	100	100	0
D	33	45	36	9	9	100	100	0
Total	376	486	29	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

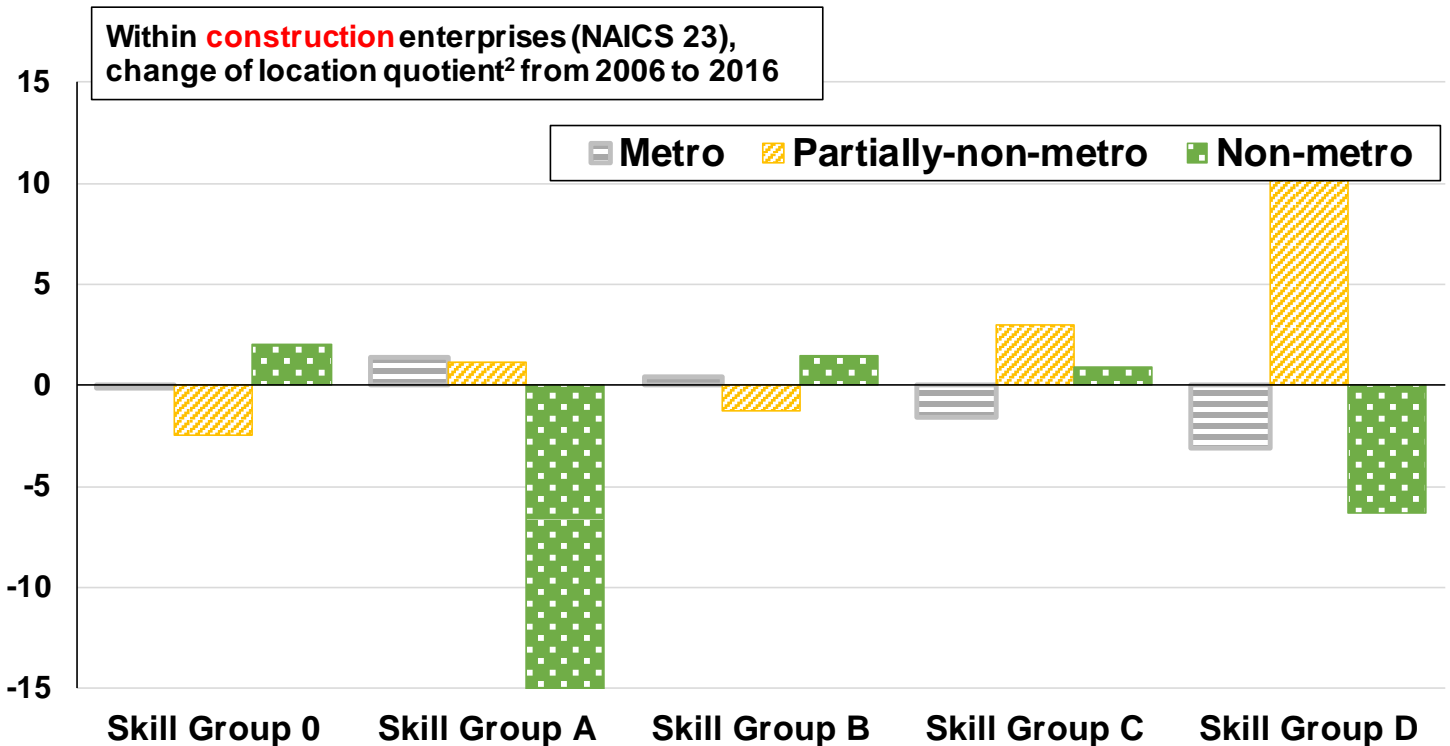
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment in construction increased by 29% at the Ontario level from 2006 to 2016 (and by 19% in non-metro census divisions).
- Employment increased in each skill group.
- Between 58% and 63% of employment in construction is in Skill Group “B” (depending up the year and the type of census division).
- Within non-metro census divisions, the relatively weaker growth in employment in Skill Group “A” (15% compared to 58% at the Ontario level) generated a decline in the non-metro location quotient for Skill Group “A”. Note however that employment in this skill group represents 2% of all construction employment in non-metro census divisions (compared to 3% for Ontario as a whole).

Among **construction** enterprises, the share of non-metro employment in Skill¹ Groups "O" & "B" & "C" increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the construction sector (NAICS 23) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Construction sector (NAICS 23)						
O	071	Managers in construction and facility operation and maintenance	45	66	46	13.6
B	720	Contractors and supervisors, industrial, electrical and construction trades and related workers	34	41	21	8.5
D	761	Trades helpers and labourers	28	39	35	7.9
B	724	Electrical trades and electrical power line and telecommunications workers	27	35	32	7.2
B	727	Carpenters and cabinetmakers	26	31	21	6.4
B	729	Other construction trades	25	30	21	6.1
B	728	Masonry and plastering trades	25	28	10	5.7
B	725	Plumbers, pipefitters and gas fitters	16	20	25	4.1
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	13	18	44	3.7
B	730	Contractors and supervisors, maintenance trades and heavy equipment and transport operators	12	15	27	3.1
Top 10 occupations: Non-metro² census divisions – Construction sector (NAICS 23)						
O	071	Managers in construction and facility operation and maintenance	7	9	36	12.5
D	761	Trades helpers and labourers	6	7	18	8.9
B	720	Contractors and supervisors, industrial, electrical and construction trades and related workers	5	6	14	8.5
B	727	Carpenters and cabinetmakers	4	6	37	8.0
B	724	Electrical trades and electrical power line and telecommunications workers	4	5	23	7.2
B	729	Other construction trades	3	4	15	5.1
C	752	Heavy equipment operators	3	3	10	4.4
B	728	Masonry and plastering trades	3	3	4	4.3
B	725	Plumbers, pipefitters and gas fitters	3	3	9	4.2
B	730	Contractors and supervisors, maintenance trades and heavy equipment and transport operators	3	3	15	4.0

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 31-33 Manufacturing Sector

Level and change in skill ¹ structure of employment in manufacturing enterprises (NAICS 31-33), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	34	29	-13	7	8	114	113	-1
A	27	33	20	6	9	120	121	2
B	139	119	-14	30	32	96	96	0
C	220	156	-29	47	42	98	96	-2
D	43	37	-14	9	10	103	106	3
Total	464	375	-19	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	15	14	-8	5	6	83	89	6
A	11	12	15	4	6	79	78	-1
B	91	75	-17	33	34	105	103	-1
C	139	100	-28	50	45	104	105	1
D	22	19	-16	8	9	88	91	3
Total	277	219	-21	100	100	100	100	0
Non-metro census divisions⁴								
O	7	5	-27	6	5	87	77	-10
A	5	5	0	4	5	74	67	-7
B	43	35	-17	33	36	105	109	4
C	62	44	-29	48	45	99	103	4
D	13	9	-33	10	9	113	98	-16
Total	130	98	-24	100	100	100	100	0
All census divisions								
O	56	48	-14	6	7	100	100	0
A	43	50	16	5	7	100	100	0
B	273	230	-16	31	33	100	100	0
C	421	300	-29	48	43	100	100	0
D	79	65	-18	9	9	100	100	0
Total	872	693	-21	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

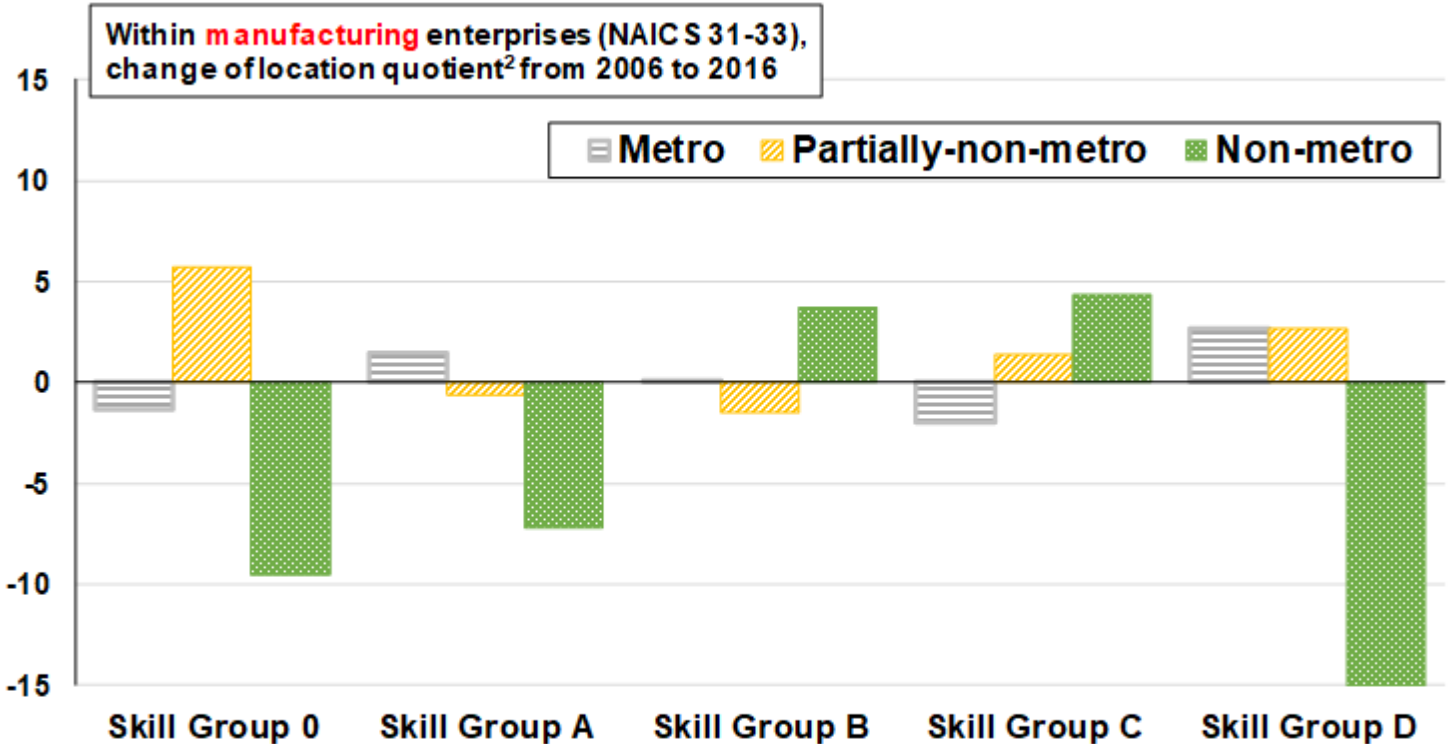
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Manufacturing employment declined by 21% from 2006 to 2016.
- The change was somewhat similar in each type of census division: -19% in metro census divisions, -21% in partially-non-metro census divisions and -24% in non-metro census divisions.
- Interestingly, Skill Group “A” did report an increase over this period. However, no change was reported in non-metro census divisions and thus the change in the location quotient (as a measure of the change in the share of employment in a given skill group) was negative for Skill Group “A” in non-metro census divisions.
- Among the occupational groups in manufacturing, there were no occupations delineated in the Skill Group “A” that ranked as one of the top 10 occupations in manufacturing.

Among manufacturing enterprises, the share of non-metro employment in Skill¹ Groups “B” & “C” increased relative to the Ontario average, 2006 to 2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada, National Occupational Classification Matrix 2011 (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training. Group O includes management occupations.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST databases. Chart by Ray D. Bollman@sasktel.net



Top 10 occupations ¹ in the manufacturing sector (NAICS 31-33) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Manufacturing sector (NAICS 31-33)						
C	941	Machine operators and related workers in mineral and metal products processing and manufacturing	93	56	-40	8.0
D	961	Labourers in processing, manufacturing and utilities	65	51	-23	7.3
C	952	Mechanical, electrical and electronics assemblers	67	48	-29	6.9
B	723	Machining, metal forming, shaping and erecting trades	60	42	-30	6.1
C	953	Other assembly and related occupations	50	36	-28	5.2
O	091	Managers in manufacturing and utilities	34	28	-19	4.0
C	946	Machine operators and related workers in food, beverage and associated products processing	28	25	-9	3.7
B	922	Supervisors, assembly and fabrication	30	25	-16	3.6
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	29	23	-22	3.3
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	25	20	-20	2.9
Top 10 occupations: Non-metro² census divisions -- Manufacturing sector (NAICS 31-33)						
C	941	Machine operators and related workers in mineral and metal products processing and manufacturing	14	9	-36	9.1
D	961	Labourers in processing, manufacturing and utilities	11	7	-39	7.1
B	723	Machining, metal forming, shaping and erecting trades	8	7	-20	6.8
C	952	Mechanical, electrical and electronics assemblers	8	6	-26	6.2
C	953	Other assembly and related occupations	6	5	-24	4.6
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	7	5	-32	4.6
B	921	Supervisors, processing and manufacturing occupations	4	4	-19	3.7
C	946	Machine operators and related workers in food, beverage and associated products processing	5	4	-22	3.6
C	942	Machine operators and related workers in chemical, plastic and rubber processing	5	3	-32	3.3
B	922	Supervisors, assembly and fabrication	4	3	-11	3.3

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 41: Wholesale Trade Sector

Table 1. Level and change in skill¹ structure of employment in **wholesale trade** enterprises (NAICS 41), by type of census division in Ontario, 2006 and 2016

Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	32	34	6	13	13	101	102	1
A	19	27	42	8	10	121	118	-3
B	63	69	10	26	26	99	98	-1
C	117	118	1	48	45	97	97	0
D	12	13	10	5	5	101	99	-2
Total	243	262	8	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	9	10	3	13	12	97	94	-2
A	3	4	62	4	5	55	61	6
B	19	22	15	26	28	101	104	3
C	39	40	2	53	49	107	107	0
D	4	4	16	5	5	99	102	3
Total	74	80	8	100	100	100	100	0
Non-metro census divisions⁴								
O	4	4	-2	13	13	102	97	-5
A	1	1	84	2	4	38	49	11
B	8	9	12	27	29	104	107	3
C	16	16	-1	52	49	106	106	0
D	1	2	19	5	5	96	104	8
Total	30	32	5	100	100	100	100	0
All census divisions								
O	46	48	5	13	13	100	100	0
A	22	33	46	6	9	100	100	0
B	90	101	11	26	27	100	100	0
C	171	173	1	49	46	100	100	0
D	17	19	12	5	5	100	100	0
Total	347	374	8	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

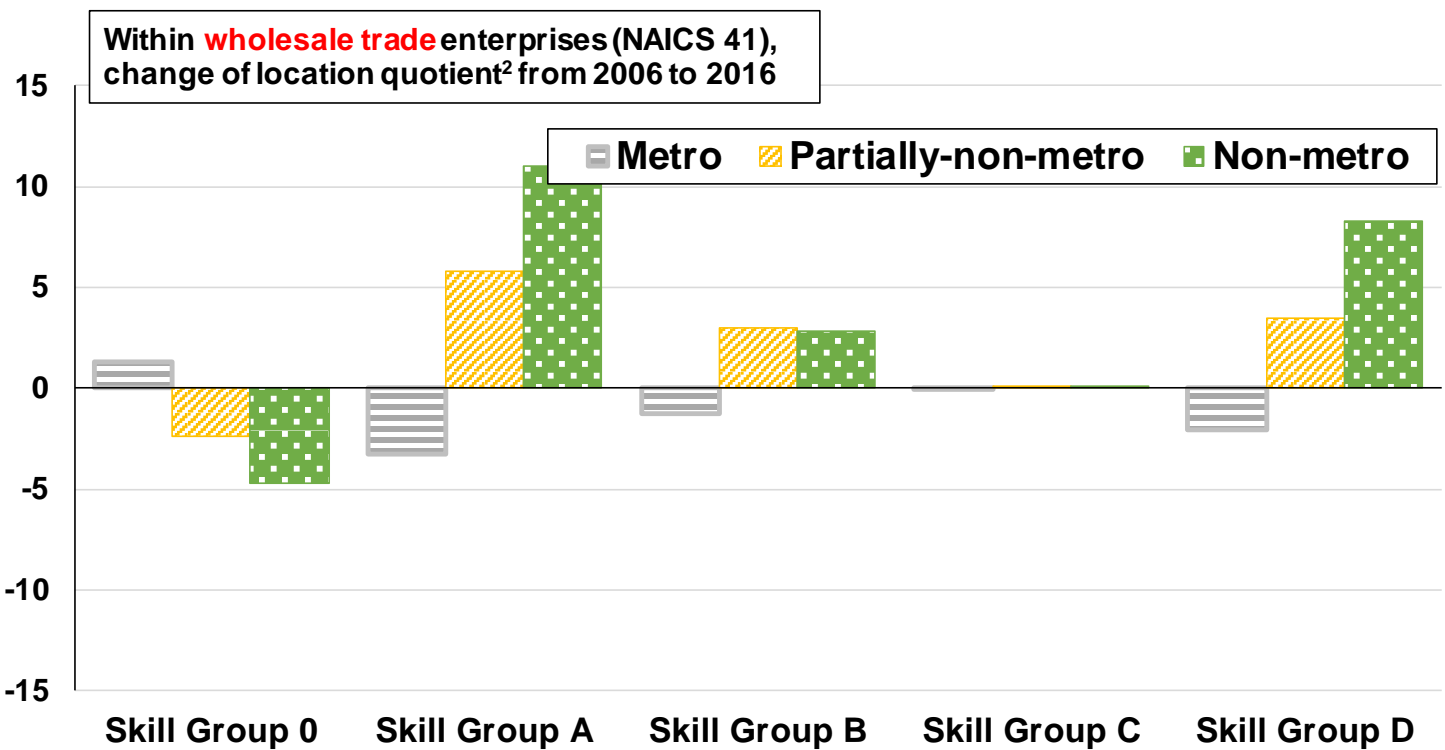
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment in the wholesale trade sector grew by 8% from 2006 to 2016 (up 5% in non-metro census divisions).
- About one-half of total employment (45% to 53%, depending up the year and the type of census division) in wholesale trade is in Skill Group “C”. There was virtually no change in the level of employment in this skill group from 2006 to 2016.
- Another 12%-13% of employment was in Skill Group “O”
- The strongest growth was in Skill Group “A”. Although the numbers were small in absolute terms, the change in the location quotient for Skill Groups “A” and “B” were positive in non-metro census divisions (i.e. the share of non-metro employment in these two skill groups increased more than the Ontario average).

Among wholesale trade enterprises, the share of non-metro employment in Skill¹ Groups "A", "B" & "D" increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the wholesale trade sector (NAICS 41) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Wholesale trade sector (NAICS 41)						
C	641	Sales and account representatives - wholesale trade (non-technical)	54	64	17	17.0
B	622	Technical sales specialists in wholesale trade and retail and wholesale buyers	29	29	2	7.9
O	062	Retail and wholesale trade managers	25	26	3	6.9
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	27	24	-14	6.3
C	745	Longshore workers and material handlers	17	17	0	4.5
C	751	Motor vehicle and transit drivers	14	13	-10	3.4
A	217	Computer and information systems professionals	9	11	24	3.0
C	655	Customer and information services	7	9	39	2.5
B	121	Administrative services supervisors	6	9	56	2.4
B	122	Administrative and regulatory occupations	7	9	37	2.4
Top 10 occupations: Non-metro² census divisions – Wholesale trade sector (NAICS 41)						
C	641	Sales and account representatives - wholesale trade (non-technical)	5	5	-4	15.5
O	062	Retail and wholesale trade managers	3	2	-18	7.2
B	622	Technical sales specialists in wholesale trade and retail and wholesale buyers	3	2	-17	6.7
C	751	Motor vehicle and transit drivers	2	2	-8	6.3
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	2	2	-8	6.1
C	745	Longshore workers and material handlers	2	2	1	4.8
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	1	1	18	4.1
C	655	Customer and information services representatives	0	1	57	2.4
C	642	Retail salespersons	1	1	-8	2.2
D	961	Labourers in processing, manufacturing and utilities	1	1	1	2.2

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 44-45: Retail Trade Sector

Level and change in skill ¹ structure of employment retail trade enterprises (NAICS 44-45), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (.000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	75	68	-10	19	15	100	103	2
A	10	20	94	3	4	118	119	1
B	66	90	36	17	20	98	97	-1
C	149	171	14	38	38	103	101	-1
D	91	106	17	23	23	96	96	1
Total	392	455	16	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	40	31	-22	19	14	98	96	-2
A	4	7	59	2	3	87	79	-8
B	37	47	27	18	21	102	105	2
C	78	83	6	37	37	100	101	1
D	52	54	5	24	24	101	101	-1
Total	211	222	6	100	100	100	100	0
Non-metro census divisions⁴								
O	23	16	-31	20	14	103	98	-4
A	2	3	60	1	2	64	66	1
B	21	24	13	18	21	103	105	1
C	40	39	-4	34	35	92	93	1
D	32	31	-4	27	27	111	113	1
Total	118	112	-5	100	100	100	100	0
All census divisions								
O	138	115	-17	19	15	100	100	0
A	16	30	81	2	4	100	100	0
B	125	161	29	17	20	100	100	0
C	268	293	9	37	37	100	100	0
D	174	191	10	24	24	100	100	0
Total	721	790	10	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

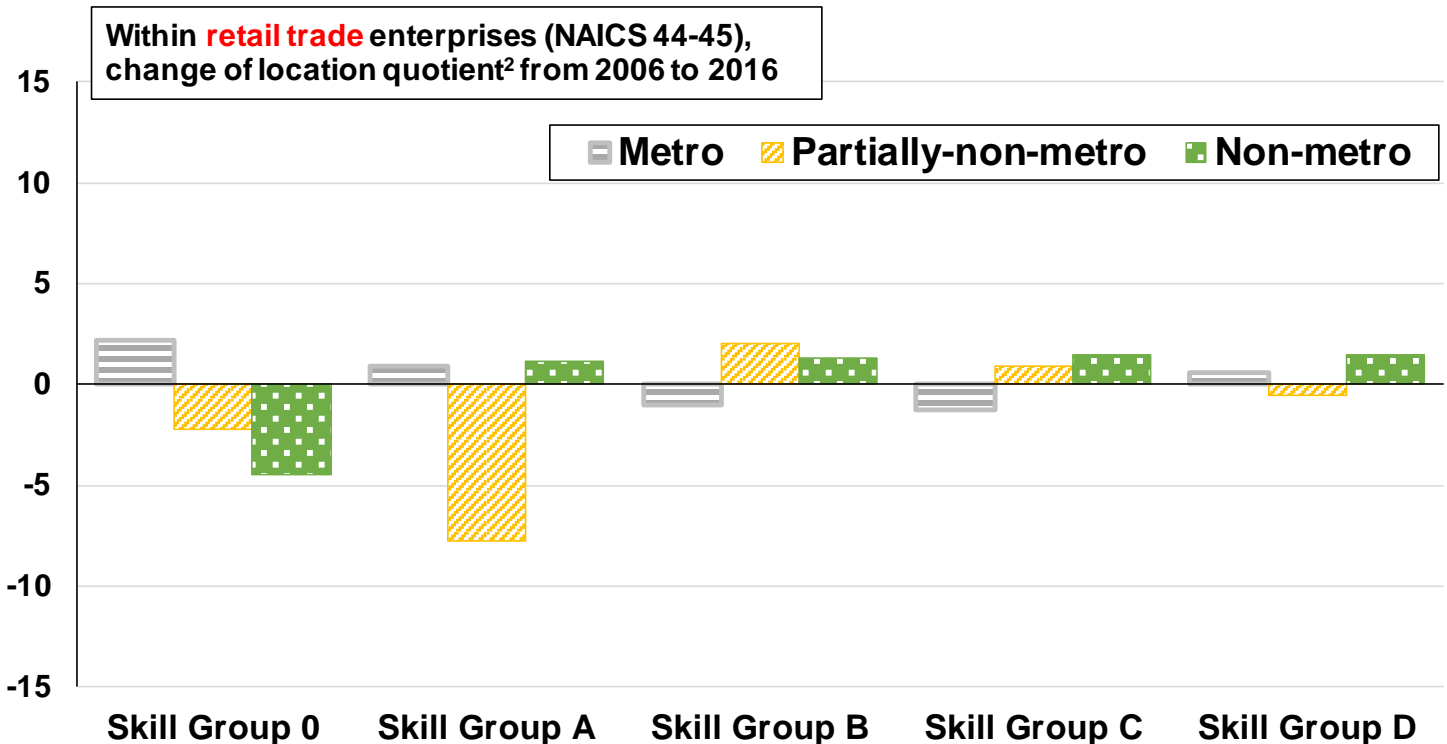
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment in the retail trade sector increased by 10% from 2006 to 2016 at the Ontario level, but there was a 5% decrease in non-metro census divisions.
- In each type of census division, there was a decline in employment in Skill Group "O". The largest decline (31%) was in non-metro census divisions. Skill Group "O" includes self-employed shop owners.
- About one-third of employment is in Skill Group "C" and another (nearly) one-quarter of employment is in Skill Group "D".
- Relative to the Ontario average, the share of employment in non-metro census divisions in Skill Groups "A", "B", "C" and "D" increased (slightly), relative to the Ontario average change over the 2006 to 2016 period.

Among retail trade enterprises, the share of non-metro employment in Skill¹ Groups "A", "B", "C" & "D" increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by Ray D. Bollman@sasktel.net



Top 10 occupations ¹ in the retail trade sector (NAICS 44-45) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Retail trade sector (NAICS 44-45)						
C	642	Retail salespersons	170	185	9	23.4
O	062	Retail and wholesale trade managers	126	101	-20	12.8
D	661	Cashiers	90	93	3	11.8
D	662	Other sales support and related occupations	67	80	19	10.2
B	621	Retail sales supervisors	31	54	72	6.8
B	633	Butchers and bakers	16	20	28	2.6
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	22	20	-7	2.6
B	732	Automotive service technicians	16	14	-7	1.8
B	321	Medical technologists and technicians (except dental health)	10	13	30	1.6
C	745	Longshore workers and material handlers	12	13	9	1.6
Top 10 occupations: Non-metro² census divisions -- Retail trade sector (NAICS 44-45)						
C	642	Retail salespersons	25	24	-5	21.0
D	661	Cashiers	16	15	-5	13.2
O	062	Retail and wholesale trade managers	22	15	-33	13.0
D	662	Other sales support and related occupations	13	13	-2	11.5
B	621	Retail sales supervisors	6	8	48	7.4
B	633	Butchers and bakers	3	3	11	3.0
B	732	Automotive service technicians	3	3	-21	2.4
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	3	3	-19	2.3
C	751	Motor vehicle and transit drivers	2	2	-7	1.8
B	321	Medical technologists and technicians (except dental health)	2	2	29	1.7

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 48-49: Transportation and Warehousing Sector

Level and change in skill ¹ structure of employment in transportation and warehousing enterprises (NAICS 48-49), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	9	11	20	5	5	107	105	-2
A	6	10	75	3	5	136	127	-9
B	34	46	34	20	21	99	102	3
C	121	145	20	69	66	98	97	-1
D	4	6	47	2	3	110	108	-3
Total	174	218	25	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	3	3	13	4	4	85	88	3
A	1	1	93	1	2	41	47	6
B	13	14	12	19	19	98	93	-5
C	48	53	11	74	73	104	106	2
D	1	2	43	2	2	79	84	5
Total	66	74	12	100	100	100	100	0
Non-metro census divisions⁴								
O	2	2	-3	5	4	94	94	-1
A	0	1	88	1	2	37	46	9
B	8	8	1	21	21	105	102	-4
C	27	27	-1	72	71	101	103	2
D	1	1	17	2	2	88	85	-2
Total	38	38	0	100	100	100	100	0
All census divisions								
O	13	15	16	5	5	100	100	0
A	7	12	77	2	4	100	100	0
B	55	68	24	20	21	100	100	0
C	196	225	15	71	68	100	100	0
D	6	9	43	2	3	100	100	0
Total	278	330	19	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

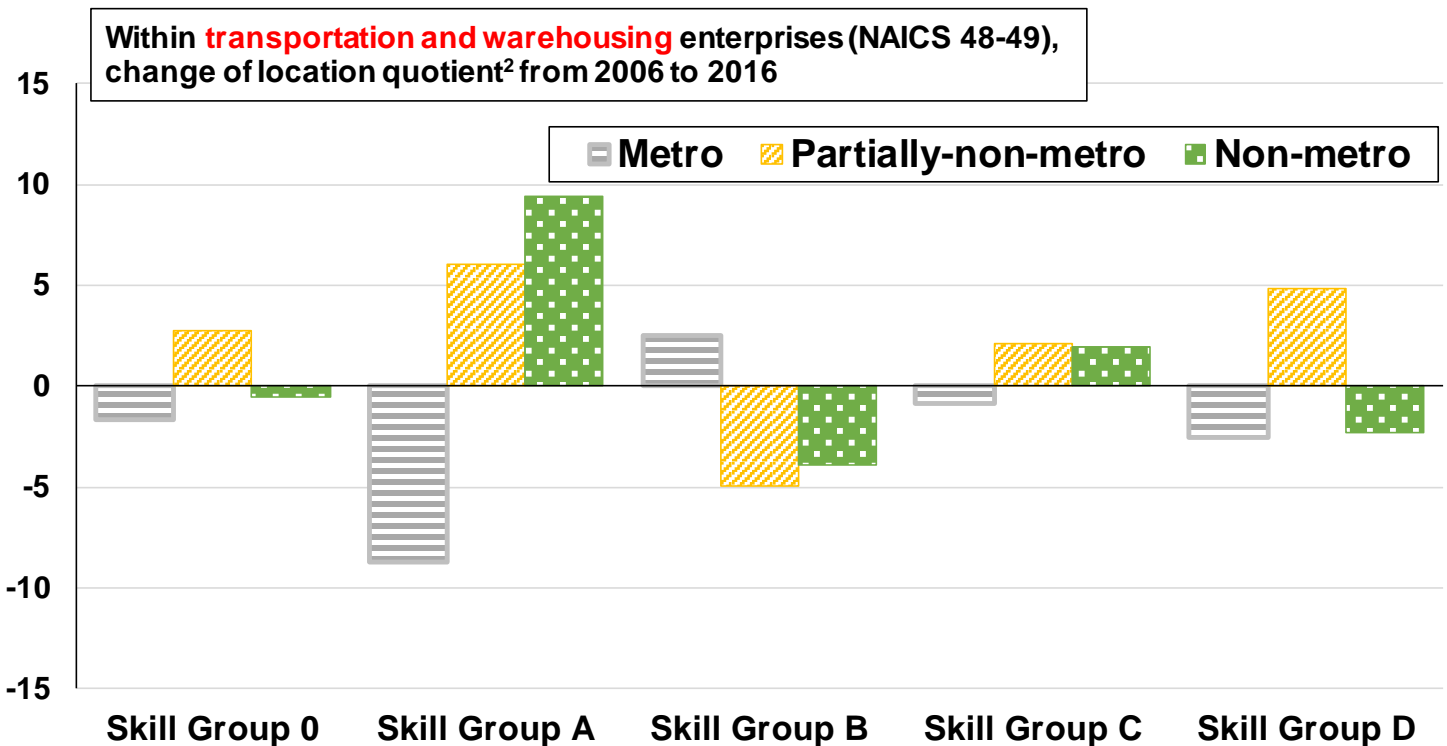
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment increased by 10% at the Ontario level in the transportation and warehousing sector but there was no change in employment in this sector in non-metro census divisions from 2006 to 2016.
- Over two-thirds of employment is in Skill Group “C”. Over one-third of employment is in the “motor vehicle and transit driver” occupation (NOC 751).

Among transportation and warehousing enterprises, the share of non-metro employment in Skill Groups “A” & “C” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database. Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in the transportation and warehousing trade sector (NAICS 48-49) in Ontario, 2016

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Transportation and warehousing trade sector (NAICS 48-49)						
C	751	Motor vehicle and transit drivers	105	123	17	37.4
C	151	Mail and message distribution occupations	29	30	3	9.1
C	745	Longshore workers and material handlers	13	16	20	4.8
B	730	Contractors and supervisors, maintenance trades and heavy equipment and transport operators	10	15	43	4.5
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	13	14	9	4.3
B	121	Administrative services supervisors	8	12	44	3.6
C	652	Occupations in travel and accommodation	8	9	10	2.7
O	073	Managers in transportation	5	7	23	2.0
C	141	General office workers	5	6	13	1.8
B	732	Automotive service technicians	7	5	-18	1.7
Top 10 occupations: Non-metro² census divisions -- Transportation and warehousing sector (NAICS 48-49)						
C	751	Motor vehicle and transit drivers	17	17	-2	44.5
C	151	Mail and message distribution occupations	4	3	-11	8.8
B	730	Contractors and supervisors, maintenance trades and heavy equipment and transport operators	2	2	0	5.1
C	745	Longshore workers and material handlers	1	2	15	4.1
C	152	Supply chain logistics, tracking and scheduling co-ordination occupations	1	1	5	3.8
B	121	Administrative services supervisors	1	1	-3	2.7
O	073	Managers in transportation	1	1	-9	2.4
B	731	Machinery and transportation equipment mechanics (except motor vehicles)	1	1	13	2.0
B	736	Train crew operating occupations	1	1	-6	1.9
C	753	Other transport equipment operators and related maintenance workers	1	1	-17	1.8

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 51: Information and Cultural Industries Sector

Level and change in skill ¹ structure of employment in information and cultural enterprises (NAICS 51), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	14	13	-4	12	10	106	104	-2
A	35	46	29	32	36	105	103	-2
B	33	38	16	29	30	98	99	1
C	27	27	-2	24	21	93	94	1
D	3	5	47	3	4	104	105	1
Total	112	129	14	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	2	3	16	9	9	81	89	8
A	6	9	57	25	32	83	92	8
B	7	9	22	31	31	106	103	-3
C	7	7	-1	32	25	122	116	-6
D	1	1	56	2	3	87	86	-1
Total	23	28	24	100	100	100	100	0
Non-metro census divisions⁴								
O	1	1	-20	9	8	78	80	2
A	2	2	6	24	28	78	80	1
B	3	3	-8	32	33	108	110	2
C	3	2	-22	33	29	127	132	4
D	0	0	6	2	3	84	77	-7
Total	9	8	-10	100	100	100	100	0
All census divisions								
O	17	16	-2	12	10	100	100	0
A	43	57	32	30	35	100	100	0
B	43	50	15	30	30	100	100	0
C	38	36	-4	26	22	100	100	0
D	4	6	46	3	4	100	100	0
Total	145	165	14	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

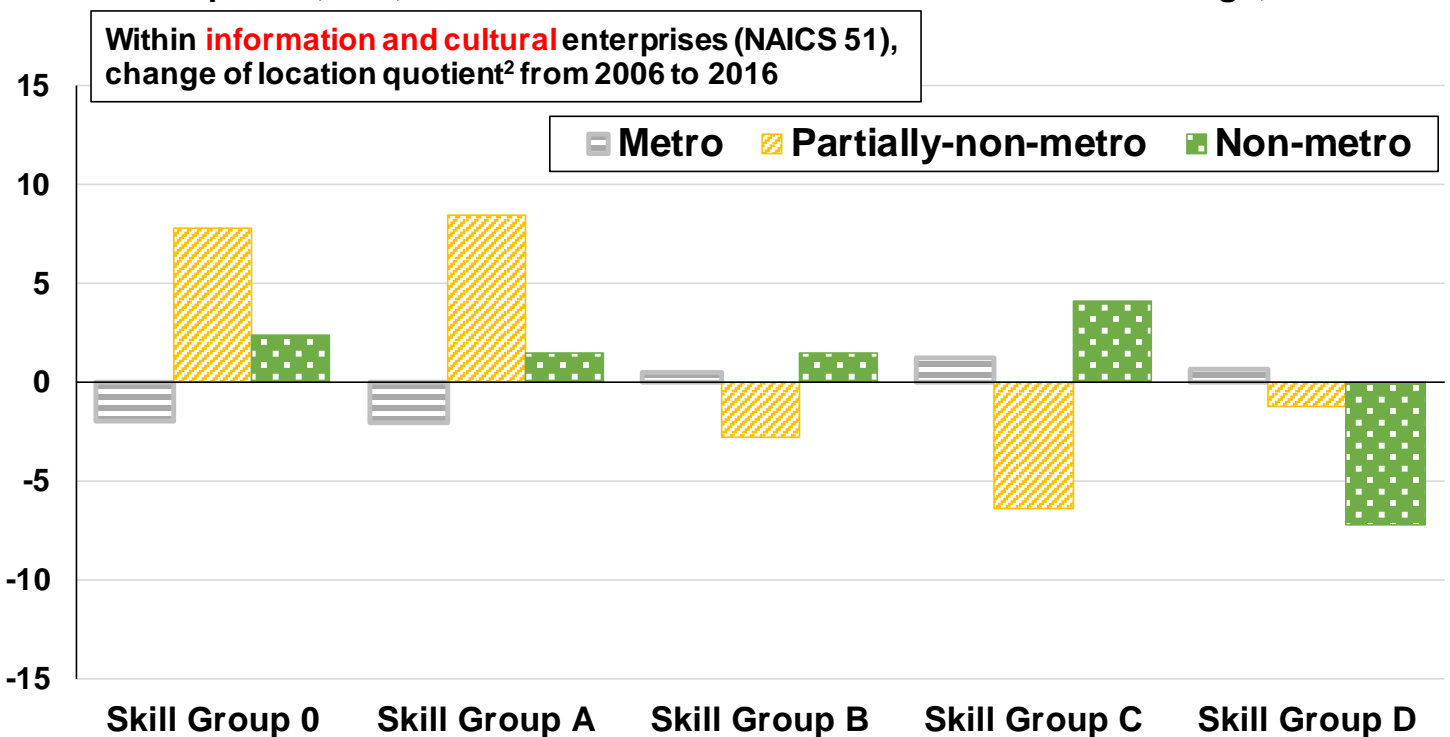
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment grew by 14% at the Ontario level from 2006 to 2016, but declined by 10% in non-metro census divisions.
- Employment is “somewhat” evenly distributed across Skill Groups “A”, “B” and “C” (about one-third in Skill Group “A”, almost one-third in Skill Group “B” and a bit above one-fifth in Skill Group “C”).
- Although employment declined in non-metro census divisions, the re-alignment of skill groups generated the result that the share of employment in non-metro census divisions increased in Skill Groups “O”, “A”, “B” and “C”, relative the change at the Ontario level (i.e., there was an increase in the location quotients in non-metro census divisions for each of these skill groups).
- In 2016, the top occupation within information and cultural enterprises was “computer and information systems professionals” (NOC 217). This occupation constituted 12% of employment in this sector, but only 6% of the employment in this sector within non-metro census divisions.

Among information and cultural enterprises, the share of non-metro employment in Skill¹ Groups "O", "A", "B" & "C" increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the information and cultural industries sector (NAICS 51) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Information and cultural industries sector (NAICS 51)						
A	217	Computer and information systems professionals	13	20	55	12.2
A	513	Creative and performing artists	9	10	12	6.0
B	228	Technical occupations in computer and information systems	5	10	86	5.8
A	512	Writing, translating and related	9	9	6	5.5
B	522	Photographers, graphic arts technicians and technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts	7	9	15	5.1
C	145	Library, correspondence and other clerks	8	8	4	4.8
B	724	Electrical trades and electrical power line and telecommunications workers	8	7	-8	4.5
C	655	Customer and information services representatives	6	7	28	4.4
A	112	Human resources and business service professionals	4	5	40	3.1
A	511	Librarians, archivists, conservators and curators	4	4	12	2.7
Top 10 occupations: Non-metro² census divisions -- Information and cultural industries sector (NAICS 51)						
C	145	Library, correspondence and other clerks	1	1	-9	9.2
B	724	Electrical trades and electrical power line and telecommunications workers	1	1	-10	8.0
A	512	Writing, translating and related communications professionals	1	1	-12	6.5
A	217	Computer and information systems professionals	0	1	15	6.4
A	511	Librarians, archivists, conservators and curators	0	1	5	6.0
B	228	Technical occupations in computer and information systems	0	0	66	5.0
B	522	Photographers, graphic arts technicians and technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts	0	0	-22	4.2
C	655	Customer and information services representatives	0	0	41	4.2
A	513	Creative and performing artists	0	0	-5	3.7
C	641	Sales and account representatives - wholesale trade (non-technical)	0	0	-23	3.6

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 52: Finance and Insurance Sector

Level and change in skill ¹ structure of employment in finance and insurance enterprises (NAICS 31-33), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	35	41	17	16	15	106	107	1
A	70	106	51	32	38	107	107	0
B	57	74	30	26	26	93	92	-1
C	57	60	6	26	21	96	95	-1
D	1	1	13	1	0	114	104	-10
Total	220	283	28	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	8	7	-8	13	11	86	79	-8
A	14	18	26	25	28	83	80	-3
B	19	23	20	33	35	118	124	6
C	17	17	-2	29	26	109	115	6
D	0	0	35	0	0	72	91	19
Total	58	65	12	100	100	100	100	0
Non-metro census divisions⁴								
O	2	2	-19	11	9	74	67	-6
A	4	5	9	22	24	73	69	-4
B	7	7	5	35	37	126	131	5
C	6	5	-10	32	29	120	131	11
D	0	0	174	0	0	23	66	43
Total	19	19	-1	100	100	100	100	0
All census divisions								
O	45	50	11	15	14	100	100	0
A	89	129	45	30	35	100	100	0
B	82	103	26	28	28	100	100	0
C	80	82	3	27	23	100	100	0
D	1	2	18	0	0	100	100	0
Total	297	366	23	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

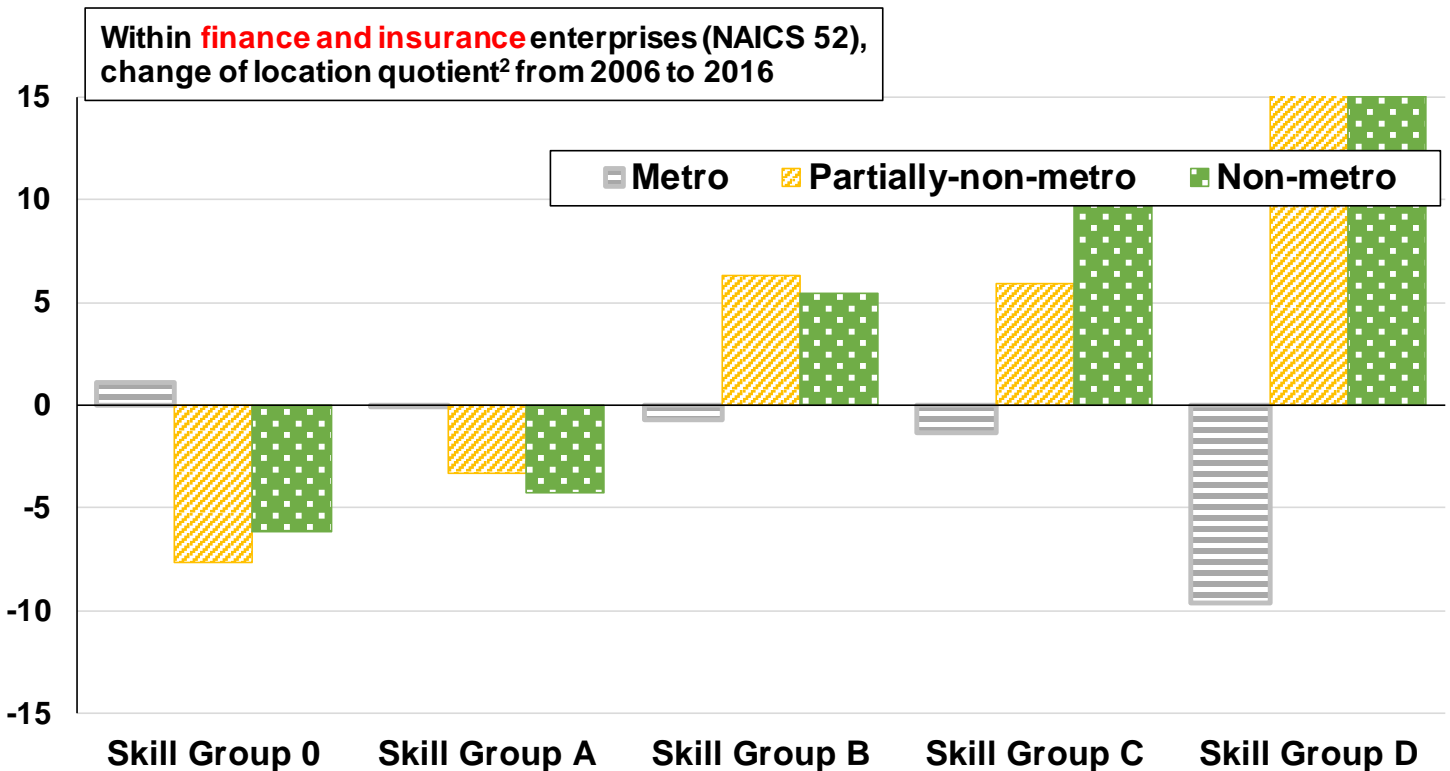
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment in finance and insurance enterprises increased 23% from 2006 to 2016 at the Ontario level, but declined by 1% in non-metro census divisions.
- Part of the decline within non-metro census divisions was in the Skill Group “O” which would include self-employed insurance brokers and self-employed financial advisors.
- Specifically, in Ontario as a whole, there was a 10% increase in the occupation “managers in financial and business services” (NOC 01) but a 18% decline in this occupation in non-metro census divisions.
- Within non-metro census divisions, there was also a decline in employment in Skill Group “C”.
- Relative to Ontario as a whole, the share of employment in Skill Groups “O” and “A” declined (i.e. the change in the location quotient was negative).

Among **finance and insurance** enterprises, the share of non-metro employment in Skill¹ Groups “B”, “C” and “D” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the finance and insurance sector (NAICS 52) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Finance and insurance sector (NAICS 52)						
A	111	Auditors, accountants and investment professionals	63	88	39	24.1
B	623	Insurance, real estate and financial sales occupations	41	45	12	12.4
C	655	Customer and information services representatives	38	43	14	11.8
O	012	Managers in financial and business services	30	33	10	8.9
B	131	Finance, insurance and related business administrative occupations	19	24	23	6.5
C	143	Financial, insurance and related administrative support workers	26	23	-13	6.2
A	217	Computer and information systems professionals	13	19	46	5.2
A	112	Human resources and business service professionals	6	10	66	2.7
C	141	General office workers	9	9	4	2.5
B	121	Administrative services supervisors	4	9	98	2.4
Top 10 occupations: Non-metro² census divisions -- Finance and insurance sector (NAICS 52)						
B	623	Insurance, real estate and financial sales occupations	4	4	4	23.2
C	655	Customer and information services representatives	4	4	-8	20.0
A	111	Auditors, accountants and investment professionals	3	3	10	18.6
B	131	Finance, insurance and related business administrative occupations	1	1	12	6.8
O	012	Managers in financial and business services	1	1	-18	6.2
C	143	Financial, insurance and related administrative support workers	1	1	-13	5.9
A	217	Computer and information systems professionals	0	0	-7	2.4
C	141	General office workers	0	0	-23	1.9
B	122	Administrative and regulatory occupations	0	0	-17	1.7
A	112	Human resources and business service professionals	0	0	-4	1.7

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 53: Real Estate and Rental and Leasing Sector

Level and change in skill ¹ structure of employment in real estate and rental and leasing enterprises (NAICS 53), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	15	18	24	15	14	100	98	-2
A	8	12	53	8	9	116	112	-4
B	44	66	51	44	50	99	100	0
C	19	19	0	19	15	97	98	1
D	13	17	27	13	13	97	97	0
Total	99	133	34	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	5	6	17	15	15	99	108	8
A	2	2	35	5	6	70	70	0
B	14	18	26	46	50	102	100	-2
C	7	6	-14	21	15	103	104	1
D	5	5	9	14	14	105	105	0
Total	32	36	14	100	100	100	100	0
Non-metro census divisions⁴								
O	2	2	1	15	14	99	98	-2
A	0	1	55	3	5	50	61	11
B	6	7	25	45	52	100	103	3
C	3	2	-26	22	15	113	104	-8
D	2	2	7	15	14	107	111	4
Total	13	14	9	100	100	100	100	0
All census divisions								
O	22	26	20	15	14	100	100	0
A	10	15	50	7	8	100	100	0
B	64	92	43	45	50	100	100	0
C	29	27	-6	20	15	100	100	0
D	20	24	21	14	13	100	100	0
Total	144	184	27	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

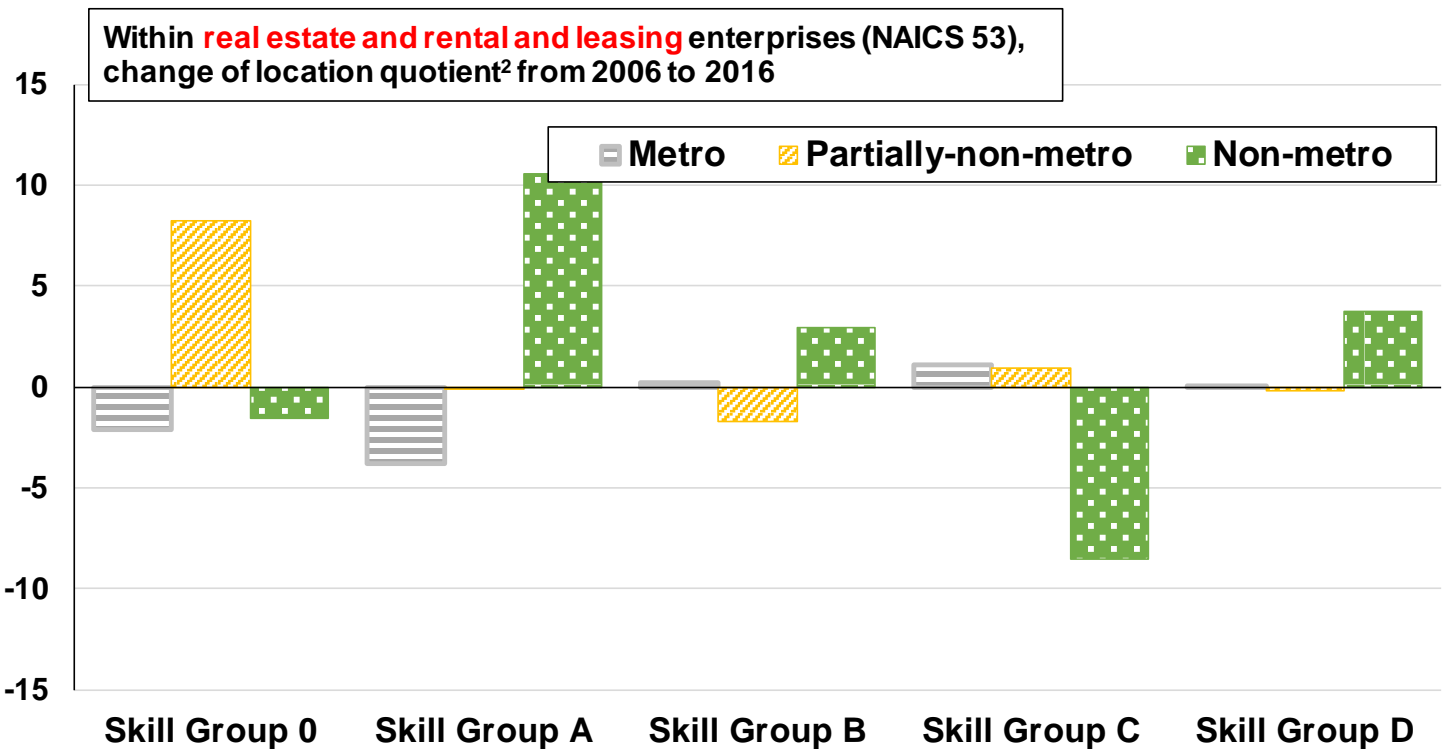
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, employment in real estate and rental and leasing enterprises increased 27% at the Ontario level but only 9% in non-metro census divisions.
- About one-half of employment in this sector is in Skill Group “B”.
- Employment in Skill Group “C” declined over this period (with no change in metro census divisions).
- Relative to the change in the share of employment by Skill Group at the Ontario level, the relative share of employment within non-metro census divisions increase in Skill Groups “A” and “B” (i.e. the location quotient was positive).
- The top occupation within the real estate and rental and leasing enterprises was “insurance, real estate and financial sales occupations” (NOC 623). This occupation is delineated as a Skill Group “B” occupation and represented 26% of total employment in the real estate and rental and leasing sector at the Ontario level and within non-metro census divisions in 2016.

Among real estate and rental and leasing enterprises, the share of non-metro employment in Skill¹ Groups “A”, “B” & “D” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database. Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in the real estate and rental and leasing sector (NAICS 53) in Ontario, 2016

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Real estate and rental and leasing sector (NAICS 53)						
B	623	Insurance, real estate and financial sales occupations	29	48	69	26.2
D	673	Cleaners	15	19	28	10.2
B	122	Administrative and regulatory occupations	13	18	36	9.8
O	012	Managers in financial and business services	5	7	53	3.9
A	111	Auditors, accountants and investment professionals	6	7	22	3.8
C	141	General office workers	5	6	9	3.2
O	063	Managers in food service and accommodation	3	5	98	2.9
C	642	Retail salespersons	8	5	-34	2.8
B	131	Finance, insurance and related business administrative occupations	5	5	7	2.7
C	143	Financial, insurance and related administrative support workers	4	5	3	2.5
Top 10 occupations: Non-metro² census divisions -- Real estate and rental and leasing sector (NAICS 53)						
B	623	Insurance, real estate and financial sales occupations	3	4	52	26.6
D	673	Cleaners	1	2	13	11.5
B	122	Administrative and regulatory occupations	1	1	25	8.8
O	063	Managers in food service and accommodation	0	1	63	3.6
C	642	Retail salespersons	1	0	-54	3.3
O	012	Managers in financial and business services	0	0	22	3.1
O	071	Managers in construction and facility operation and maintenance	0	0	-9	3.1
B	131	Finance, insurance and related business administrative occupations	0	0	2	3.0
C	141	General office workers	1	0	-20	2.8
A	111	Auditors, accountants and investment professionals	0	0	2	2.5

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 54 Professional, Scientific and Technical Services Sector

Level and change in skill ¹ structure of employment in professional, scientific and technical services (NAICS 54), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	26	30	15	8	7	105	103	-2
A	175	238	36	52	56	103	104	1
B	92	114	24	27	27	93	94	0
C	38	38	-1	11	9	99	95	-4
D	4	3	-6	1	1	106	97	-8
Total	334	423	26	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	5	6	23	7	6	90	93	3
A	37	51	35	46	49	91	90	-1
B	28	35	25	34	33	117	116	-1
C	10	11	13	12	11	103	113	10
D	1	1	28	1	1	87	108	21
Total	81	104	28	100	100	100	100	0
Non-metro census divisions⁴								
O	2	2	18	5	5	70	79	10
A	14	16	14	44	45	87	83	-4
B	12	13	10	38	37	129	130	1
C	4	4	4	12	11	103	118	15
D	0	0	36	1	1	71	107	36
Total	31	35	11	100	100	100	100	0
All census divisions								
O	33	38	17	7	7	100	100	0
A	226	304	34	51	54	100	100	0
B	132	162	23	29	29	100	100	0
C	52	53	2	12	9	100	100	0
D	5	5	2	1	1	100	100	0
Total	447	562	26	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016"

Focus on Rural Ontario (March, 2017).

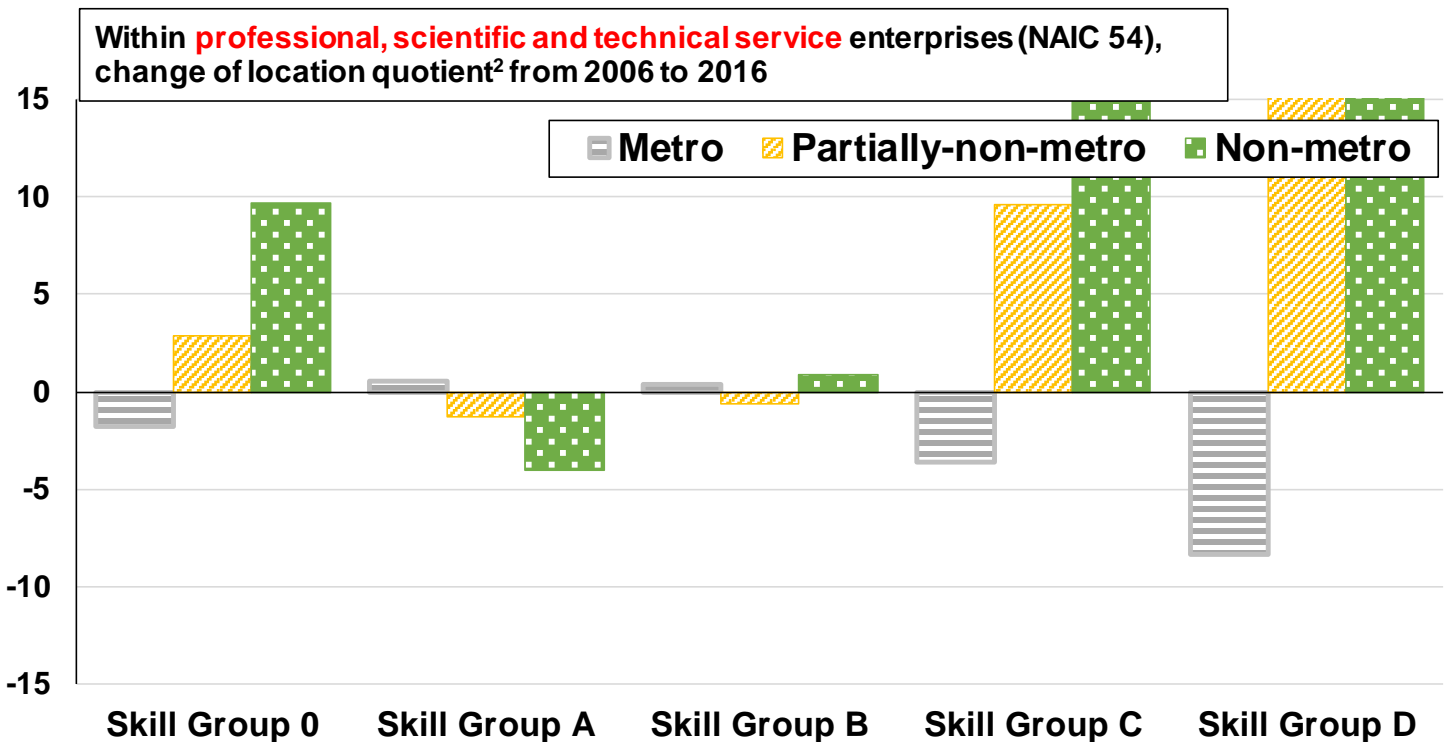
Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment in professional, scientific and technical services increased by 26% at the Ontario level from 2006 to 2006, but only by 11% within non-metro census divisions.
- About one-half of total employment is in Skill Group “A”. This skill group showed strong growth (34% to 36%) at the Ontario level and in both metro and partially-non-metro census divisions. The growth in non-metro census divisions was lower (14%).
- Consequently, the change in the relative share of employment in non-metro census divisions in Skill Group “A” declined from 2006 to 2016 (i.e. the change in the location quotient was negative).
- At the Ontario level, 6 of the top 10 occupations were classified as Skill Group “A” occupations. Within non-metro census divisions, 5 of the top 10 occupations were Skill Group “A” occupations.

Among professional, scientific & technical service enterprises, the share of non-metro employment in Skill¹ Group “A” declined, relative to the Ontario average



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in the professional, scientific and technical services (NAICS 54) sector in Ontario, 2016

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Professional, scientific and technical services sector (NAICS 54)						
A	217	Computer and information systems professionals	77	99	29	17.7
A	112	Human resources and business service professionals	31	46	48	8.2
A	111	Auditors, accountants and investment professionals	31	40	27	7.0
A	411	Judges, lawyers and Quebec notaries	21	28	30	4.9
A	213	Civil, mechanical, electrical and chemical engineers	21	22	7	4.0
B	524	Creative designers and craftspersons	18	22	24	4.0
B	131	Finance, insurance and related business administrative occupations	14	19	35	3.3
A	416	Policy and program researchers, consultants and officers	9	17	89	3.1
B	124	Office administrative assistants - general, legal and medical	16	16	0	2.9
B	228	Technical occupations in computer and information systems	10	15	59	2.7
Top 10 occupations: Non-metro² census divisions – Professional, scientific and technical services sector (NAICS 54)						
A	217	Computer and information systems professionals	3	3	19	9.3
A	111	Auditors, accountants and investment professionals	2	3	8	7.1
A	112	Human resources and business service professionals	2	2	28	6.6
B	131	Finance, insurance and related business administrative occupations	2	2	34	6.5
A	213	Civil, mechanical, electrical and chemical engineers	2	2	-11	4.5
B	124	Office administrative assistants - general, legal and medical	2	1	-2	4.2
A	411	Judges, lawyers and Quebec notaries	1	1	26	4.2
B	524	Creative designers and craftspersons	1	1	10	3.7
B	225	Technical occupations in architecture, drafting, surveying, geomatics and meteorology	1	1	-3	2.5
A	416	Policy and program researchers, consultants and officers	1	1	53	2.4

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 56: Administrative and Support, Waste Management and Remediation Sector

Level and change in skill¹ structure of employment in **administrative and support, waste management and remediation service** enterprises (NAICS 56), by type of census division in Ontario, 2006 and 2016

Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	18	18	-2	7	6	109	106	-3
A	23	28	23	9	10	116	114	-2
B	62	68	10	23	24	97	97	0
C	110	103	-7	41	37	102	102	0
D	54	63	17	20	23	92	93	1
Total	267	279	5	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	5	5	0	5	5	84	86	2
A	5	7	26	5	7	74	77	4
B	25	26	7	25	26	104	106	1
C	39	35	-10	39	35	97	97	0
D	25	27	8	25	27	114	110	-3
Total	98	99	1	100	100	100	100	0
Non-metro census divisions⁴								
O	3	3	-2	5	6	82	93	10
A	3	3	1	5	6	68	64	-4
B	13	12	-9	26	27	110	106	-3
C	19	15	-22	38	33	94	92	-2
D	13	13	2	26	29	117	120	4
Total	51	46	-10	100	100	100	100	0
All census divisions								
O	26	26	-1	6	6	100	100	0
A	31	38	22	7	9	100	100	0
B	100	106	6	24	25	100	100	0
C	168	152	-9	40	36	100	100	0
D	92	103	13	22	24	100	100	0
Total	416	425	2	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

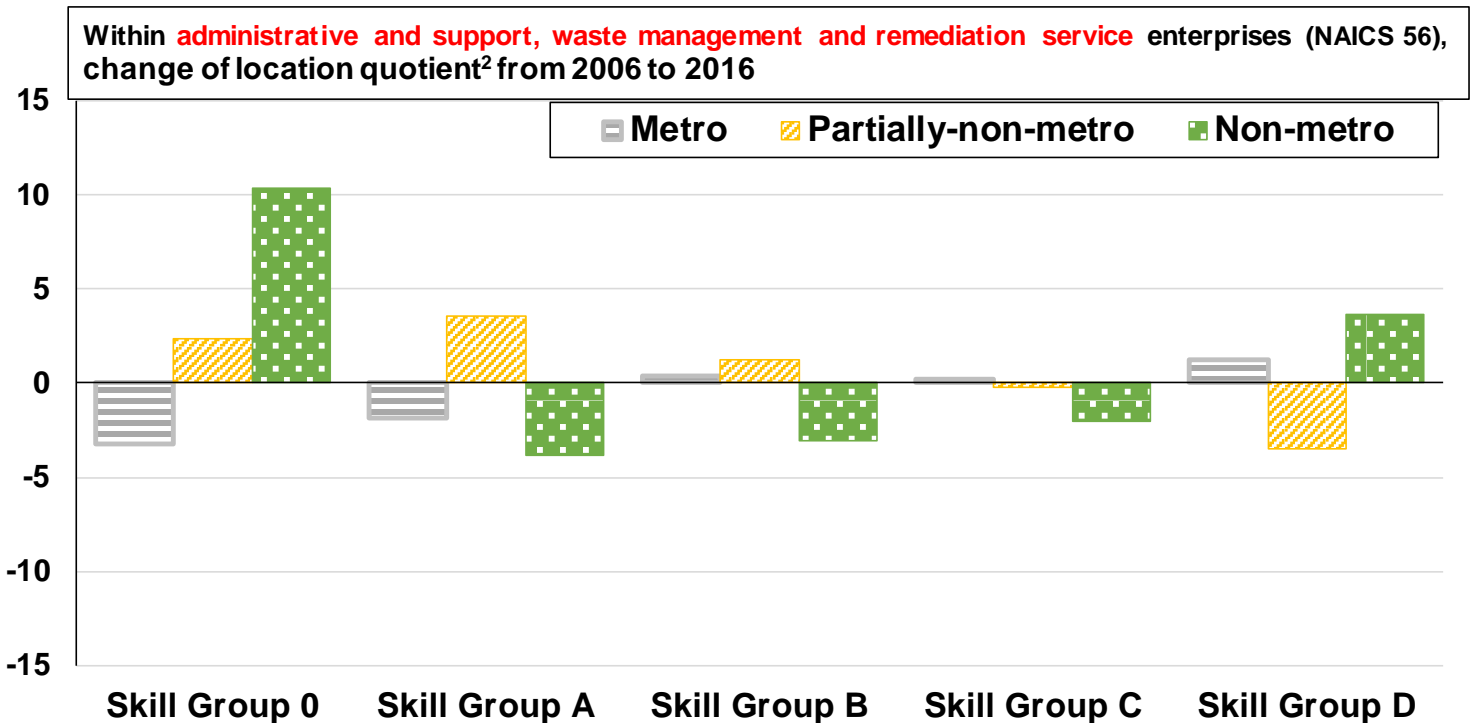
Source: OMAFRA, EMSI ANALYST database.



Notes:

- In the administrative and support, waste management and remediation sector, employment increase at the Ontario level by 2% from 2006 to 2016 but declined by 10% within non-metro census divisions.
- About one-third of employment in this sector is in Skill Group “C” and about one-quarter of employment is in each of Skill Groups “B” and “D”.
- Relative to the change in the share of each skill group at the Ontario level, the share of employment in non-metro census divisions declined in Skill Groups “A”, “B” and “C” (i.e. the location quotient declined for these skill groups).

Among administrative and support, waste management and remediation service enterprises, the share of non-metro employment in Skill¹ Groups “O” & “D” increased relative to the Ontario average, 2006 to 2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the administrative and support, waste management and remediation services sector (NAICS 56) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Administrative and support, waste management and remediation services sector (NAICS 56)						
D	673	Cleaners	48	65	35	15.3
C	654	Security guards and related security service occupations	26	34	29	8.0
B	122	Administrative and regulatory occupations	17	21	22	4.9
C	655	Customer and information services representatives	25	20	-22	4.6
C	141	General office workers	23	17	-26	3.9
B	631	Service supervisors	12	15	24	3.6
B	825	Contractors and supervisors, agriculture, horticulture and related operations and services	12	13	11	3.1
D	861	Harvesting, landscaping and natural resources labourers	9	13	51	3.1
D	961	Labourers in processing, manufacturing and utilities	16	12	-24	2.9
C	143	Financial, insurance and related administrative support workers	15	11	-28	2.6
Top 10 occupations: Non-metro² census divisions – Administrative and support, waste management and remediation services sector (NAICS 56)						
D	673	Cleaners	7	9	26	19.9
C	655	Customer and information services representatives	5	3	-47	5.8
C	654	Security guards and related security service occupations	2	2	17	4.7
B	825	Contractors and supervisors, agriculture, horticulture and related operations and services	2	2	0	4.7
B	631	Service supervisors	2	2	3	4.2
D	861	Harvesting, landscaping and natural resources labourers	1	2	25	3.7
B	122	Administrative and regulatory occupations	2	1	-4	3.2
C	141	General office workers	2	1	-45	3.0
C	751	Motor vehicle and transit drivers	2	1	-23	2.6
C	752	Heavy equipment operators	1	1	63	2.5

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 61 Educational Services Sector

Level and change in skill ¹ structure of employment in educational services organizations (NAICS 61), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	13	14	13	5	5	100	101	1
A	153	203	33	64	67	102	101	-1
B	38	46	21	16	15	101	103	3
C	27	32	16	11	10	94	93	-1
D	8	8	-3	3	3	86	90	3
Total	239	303	27	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	7	7	-5	5	5	100	97	-3
A	82	98	20	61	66	97	100	2
B	22	21	-3	16	14	104	98	-6
C	17	17	3	12	12	103	103	0
D	6	5	-21	5	3	115	111	-5
Total	134	148	11	100	100	100	100	0
Non-metro census divisions⁴								
O	3	2	-8	5	5	97	100	3
A	32	34	4	62	64	99	97	-2
B	7	7	-8	14	12	87	85	-2
C	7	8	4	14	15	118	131	13
D	3	2	-21	5	4	123	131	8
Total	52	52	0	100	100	100	100	0
All census divisions								
O	22	23	5	5	5	100	100	0
A	267	334	25	63	66	100	100	0
B	67	74	10	16	15	100	100	0
C	51	57	10	12	11	100	100	0
D	17	15	-12	4	3	100	100	0
Total	425	504	18	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



Notes:

- Employment in educational services increased by 18% at the Ontario level from 2006 to 2016 but there was no change within non-metro census divisions.
- Two-thirds of employment in this sector is in Skill Group “A”.
- The employment change in each skill group in non-metro census divisions was small in absolute terms. The calculated change in skill structure showed a decline in the relative share of employment in Skill Groups “A” and “B” in non-metro census divisions.
- Among the top 10 occupations in educational services organizations, 4 of 10 occupations were classified in Skill Group “A” – both at the Ontario level and within non-metro census divisions. The largest sector that was not a Skill Group “A” occupation was “home care providers and educational support occupations” (NOC 441).

Among educational services organizations, the share of non-metro employment in Skill¹ Groups “O”, “C” & “D” increased relative to the Ontario average, 2006-2016

Within educational services organizations (NAICS 61), change of location quotient² from 2006 to 2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. National Occupational Classification Matrix 2011 (http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the educational services sector (NAICS 61) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Educational services sector (NAICS 61)						
A	403	Secondary and elementary school teachers and educational counsellors	167	203	22	40.3
A	401	University professors and post-secondary assistants	44	55	26	10.9
C	441	Home care providers and educational support occupations	29	36	23	7.1
A	402	College and other vocational instructors	22	31	40	6.1
B	421	Paraprofessional occupations in legal, social, community and education services	18	22	20	4.3
O	042	Managers in education and social and community services	16	16	3	3.2
A	513	Creative and performing artists	11	15	29	2.9
B	525	Athletes, coaches, referees and related occupations	9	13	37	2.5
D	673	Cleaners	14	12	-13	2.4
B	122	Administrative and regulatory occupations	9	12	28	2.3
Top 10 occupations: Non-metro² census divisions -- Educational services sector (NAICS 61)						
A	403	Secondary and elementary school teachers and educational counsellors	27	27	-1	50.8
C	441	Home care providers and educational support occupations	5	6	11	11.3
A	402	College and other vocational instructors	2	3	22	5.5
B	421	Paraprofessional occupations in legal, social, community and education services	2	2	-7	3.9
O	042	Managers in education and social and community services	2	2	-13	3.9
D	673	Cleaners	2	2	-22	3.5
A	401	University professors and post-secondary assistants	1	1	62	2.3
A	513	Creative and performing artists	1	1	21	2.2
B	525	Athletes, coaches, referees and related occupations	1	1	49	1.8
B	122	Administrative and regulatory occupations	1	1	6	1.4

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 62: Health Care and Social Assistance Sector

Level and change in skill ¹ structure of employment in health care and social assistance organizations (NAICS 62), by type of census division in Ontario, 2006-2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	11	17	49	4	4	100	105	4
A	110	156	42	35	36	104	105	1
B	102	141	38	32	32	99	99	1
C	79	106	35	25	24	98	96	-2
D	16	18	15	5	4	92	83	-9
Total	317	437	38	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	6	8	33	3	3	99	96	-2
A	57	75	31	32	32	97	95	-2
B	59	76	30	33	33	102	101	-1
C	45	61	35	25	26	100	103	3
D	10	13	33	6	6	105	116	10
Total	177	233	32	100	100	100	100	0
Non-metro census divisions⁴								
O	4	4	16	4	3	102	91	-11
A	31	39	26	31	31	92	91	-1
B	33	41	25	33	33	100	100	0
C	27	34	26	27	27	107	107	1
D	6	8	27	6	6	116	129	13
Total	102	127	25	100	100	100	100	0
All census divisions								
O	21	29	38	4	4	100	100	0
A	198	270	37	33	34	100	100	0
B	194	259	33	33	32	100	100	0
C	151	201	33	25	25	100	100	0
D	32	39	23	5	5	100	100	0
Total	595	798	34	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

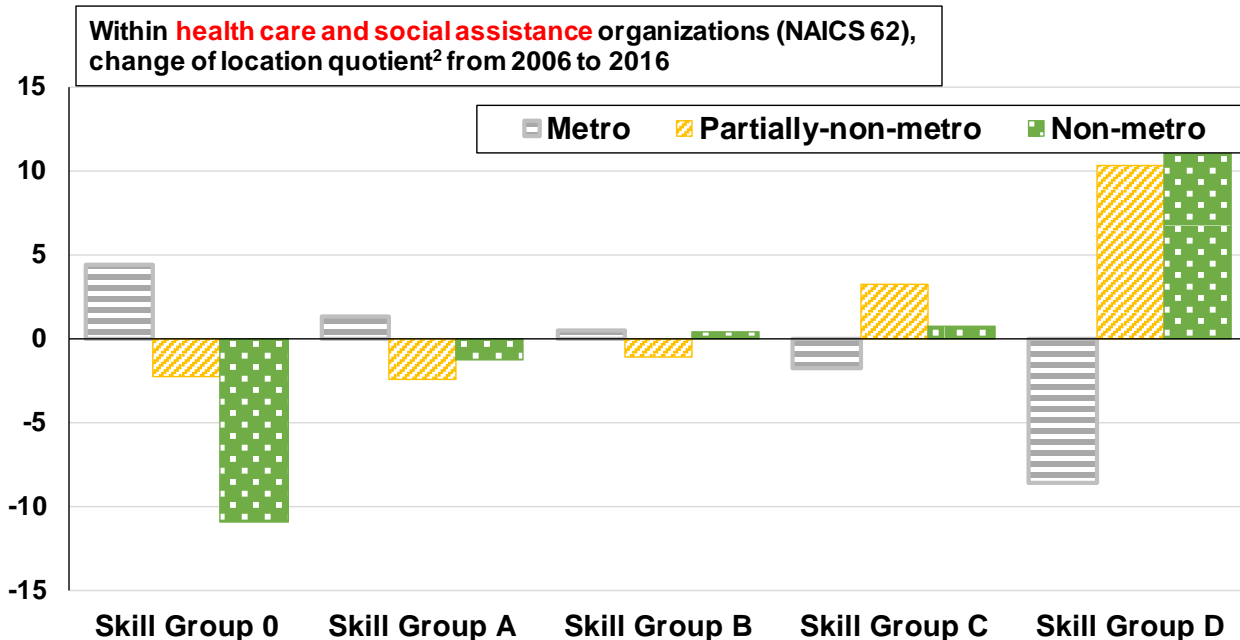
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, employment in the health care and social assistance sector increased 34% at the Ontario level and 25% within non-metro census divisions.
- Employment increased in every skill group in each type of census division.
- Within non-metro census divisions, the 25% increase occurred in each skill group – except for a smaller increase (16%) in Skill Group “O”.
- In 2016, about one-third of employment was in each of Skill Groups “A” and “B” and another one-quarter was in Skill Group “C”. Thus, 4% to 6% were in each of the other two skill groups (Skill Group “O” and “D”).
- The change in the skill structure in non-metro census divisions mirrored the change for Ontario as a whole for the major skill groups (i.e., Skill Groups “A”, “B” and “C”). The change in location quotients was small in each case. Larger changes in location quotients occurred in the relatively smaller skill groups (i.e., Skill Groups “O” and “D”).
- Both at the Ontario level and within non-metro census divisions, about 40% of employment is concentrated in three occupations:
 - Professional occupations in nursing (NOC 301);
 - Assisting occupations in support of health services (NOC 341); and
 - Paraprofessional occupations in legal, social, community and education services (NOC 421).

Among health care and social assistance organizations, the share of non-metro employment in Skill¹ Groups “B” & “C” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by Ray D. Bollman@sasktel.net



Top 10 occupations¹ in the health care and social assistance sector (NAICS 62) in Ontario

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Health care and social assistance sector (NAICS 62)						
A	301	Professional occupations in nursing	86	113	30	14.1
C	341	Assisting occupations in support of health services	80	108	35	13.5
B	421	Paraprofessional occupations in legal, social, community and education services	69	95	37	11.9
A	311	Physicians, dentists and veterinarians	35	48	36	6.0
C	141	General office workers	39	47	18	5.8
B	323	Other technical occupations in health care	24	43	77	5.3
A	415	Social and community service professionals	30	41	37	5.1
B	321	Medical technologists and technicians (except dental health)	28	35	24	4.4
C	441	Home care providers and educational support occupations	14	25	71	3.1
D	673	Cleaners	16	22	36	2.8
Top 10 occupations: Non-metro² census divisions – Health care and social assistance sector (NAICS 62)						
C	341	Assisting occupations in support of health services	16	20	24	15.8
A	301	Professional occupations in nursing	16	19	18	14.9
B	421	Paraprofessional occupations in legal, social, community and education services	12	15	27	11.8
B	323	Other technical occupations in health care	5	8	66	6.2
A	415	Social and community service professionals	5	7	25	5.3
C	141	General office workers	6	7	18	5.1
B	321	Medical technologists and technicians (except dental health)	4	5	23	3.8
D	673	Cleaners	3	4	40	3.5
A	311	Physicians, dentists and veterinarians	3	4	36	3.5
C	441	Home care providers and educational support occupations	3	4	38	3.1

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 71: Arts, Entertainment and Recreation Sector

Level and change in skill ¹ structure of employment in arts, entertainment and recreation enterprises (NAICS 71), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	4	5	23	6	6	102	99	-3
A	20	24	23	28	27	131	120	-11
B	24	35	45	35	38	100	101	0
C	9	12	23	14	13	77	84	7
D	12	15	31	17	17	85	88	3
Total	69	91	32	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	2	2	11	5	5	91	93	2
A	5	7	38	13	16	62	74	13
B	14	17	23	34	37	98	97	0
C	10	9	-10	24	19	134	125	-9
D	9	10	7	24	22	118	117	-1
Total	40	46	13	100	100	100	100	0
Non-metro census divisions⁴								
O	1	1	17	7	7	114	122	8
A	2	3	19	14	14	63	65	2
B	6	7	22	36	39	105	103	-2
C	3	3	0	20	17	111	114	4
D	4	4	8	24	22	118	117	-2
Total	16	19	14	100	100	100	100	0
All census divisions								
O	7	9	18	6	6	100	100	0
A	27	34	26	22	22	100	100	0
B	43	58	35	35	38	100	100	0
C	22	24	5	18	15	100	100	0
D	25	30	18	20	19	100	100	0
Total	125	155	23	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

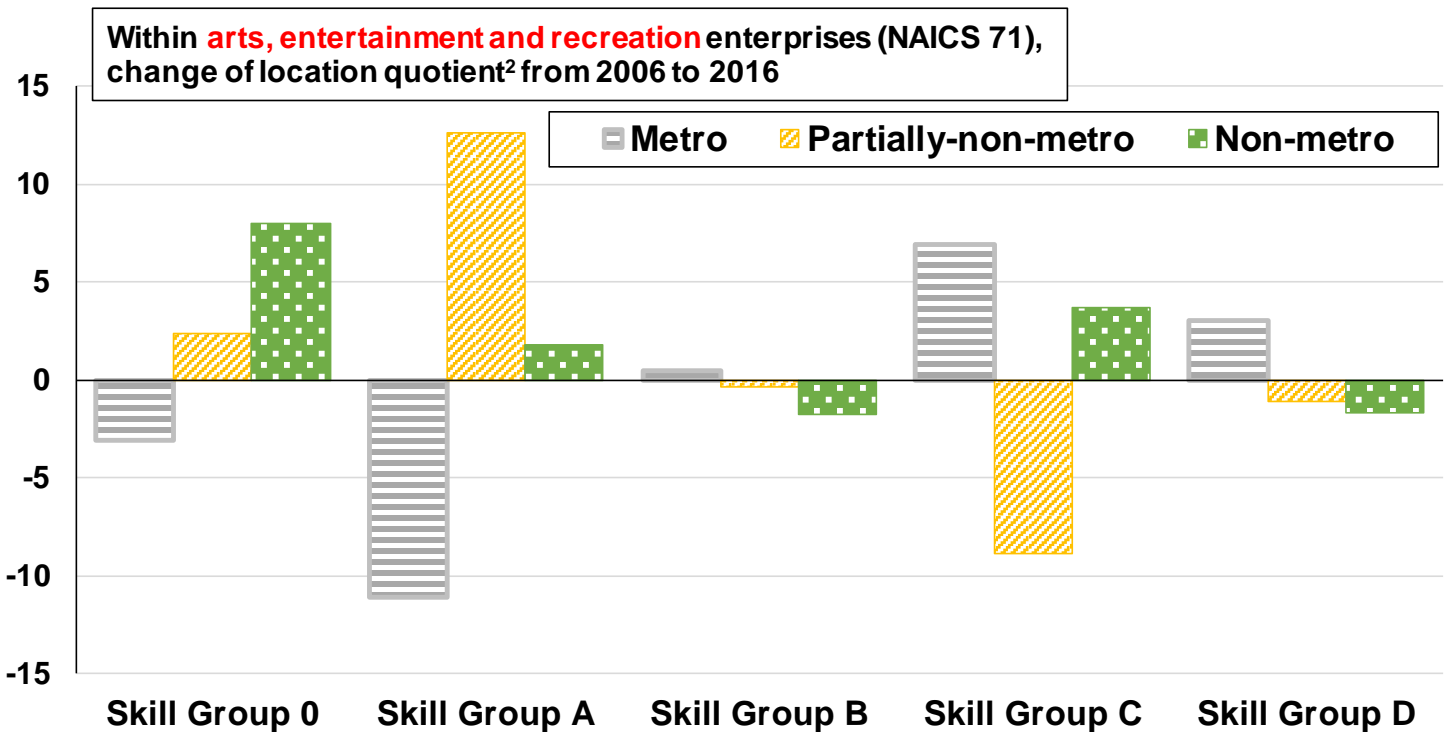
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, employment in arts, recreation and entertainment enterprises increased by 23% at the Ontario level, but only by 14% in non-metro census divisions.
- Employment grew in each skill group in each type of region – except for a decline in Skill Group “C” in partially-non-metro census divisions and no change in this skill group in non-metro census divisions.
- Over one-third of employment is in Skill Group “B”.
- Although the change in numbers employed is small, non-metro census divisions did increase their relative share of employment in Skill Groups “O” and “A” (i.e., the change in the location quotient was positive).
- The top occupation in this sector for Ontario and for non-metro census divisions was the occupation “athletes, coaches, referees and related occupations” (NOC 525) comprising 17.5% of total employment in this sector for Ontario as a whole and 16.5% in this sector in non-metro census divisions.

Among arts, entertainment and recreation enterprises, the share of non-metro employment in Skill¹ Groups “O”, “A” & “C” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database. Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in the arts, entertainment and recreation sector (NAICS 71) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Arts, entertainment and recreation sector (NAICS 71)						
B	525	Athletes, coaches, referees and related occupations	18	27	53	17.5
A	513	Creative and performing artists	15	18	21	11.8
D	672	Support occupations in accommodation, travel and amusement services	8	11	42	7.0
A	512	Writing, translating and related communications professionals	6	7	21	4.8
D	861	Harvesting, landscaping and natural resources labourers	5	7	50	4.6
B	631	Service supervisors	5	6	20	3.8
C	653	Tourism and amusement services occupations	5	5	2	3.3
D	673	Cleaners	4	4	14	2.6
B	122	Administrative and regulatory occupations	2	4	67	2.6
C	141	General office workers	3	4	16	2.3
Top 10 occupations: Non-metro² census divisions – Arts, entertainment and recreation sector (NAICS 71)						
B	525	Athletes, coaches, referees and related occupations	3	3	14	16.5
D	672	Support occupations in accommodation, travel and amusement services	1	1	9	7.6
D	861	Harvesting, landscaping and natural resources labourers	1	1	34	6.5
A	513	Creative and performing artists	1	1	8	6.4
B	631	Service supervisors	1	1	23	4.0
C	653	Tourism and amusement services occupations	1	1	-23	3.9
A	512	Writing, translating and related communications professionals	1	1	15	3.5
D	673	Cleaners	1	1	13	3.3
C	141	General office workers	0	0	7	2.6
B	825	Contractors and supervisors, agriculture, horticulture and related operations and services	0	0	127	2.3

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 72: Accommodation and Food Services Sector

Level and change in skill ¹ structure of employment in accommodation and food service enterprises (NAICS 72), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	33	35	6	17	12	107	102	-5
A	1	3	126	1	1	115	118	3
B	45	67	50	23	24	99	99	0
C	52	77	47	26	27	101	104	4
D	66	100	50	34	35	97	97	0
Total	198	282	43	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	17	17	-2	14	11	90	91	1
A	1	1	106	0	1	75	82	7
B	29	37	31	23	25	100	101	2
C	33	39	15	27	25	102	97	-6
D	45	58	31	36	38	103	105	1
Total	124	152	23	100	100	100	100	0
Non-metro census divisions⁴								
O	10	10	0	15	13	97	111	13
A	0	0	13	1	1	102	67	-35
B	16	18	16	24	25	104	103	-2
C	16	17	7	25	24	94	90	-4
D	23	27	18	36	38	103	103	0
Total	65	73	12	100	100	100	100	0
All census divisions								
O	60	61	3	15	12	100	100	0
A	2	5	102	1	1	100	100	0
B	89	123	38	23	24	100	100	0
C	102	133	30	26	26	100	100	0
D	134	186	38	35	37	100	100	0
Total	387	507	31	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

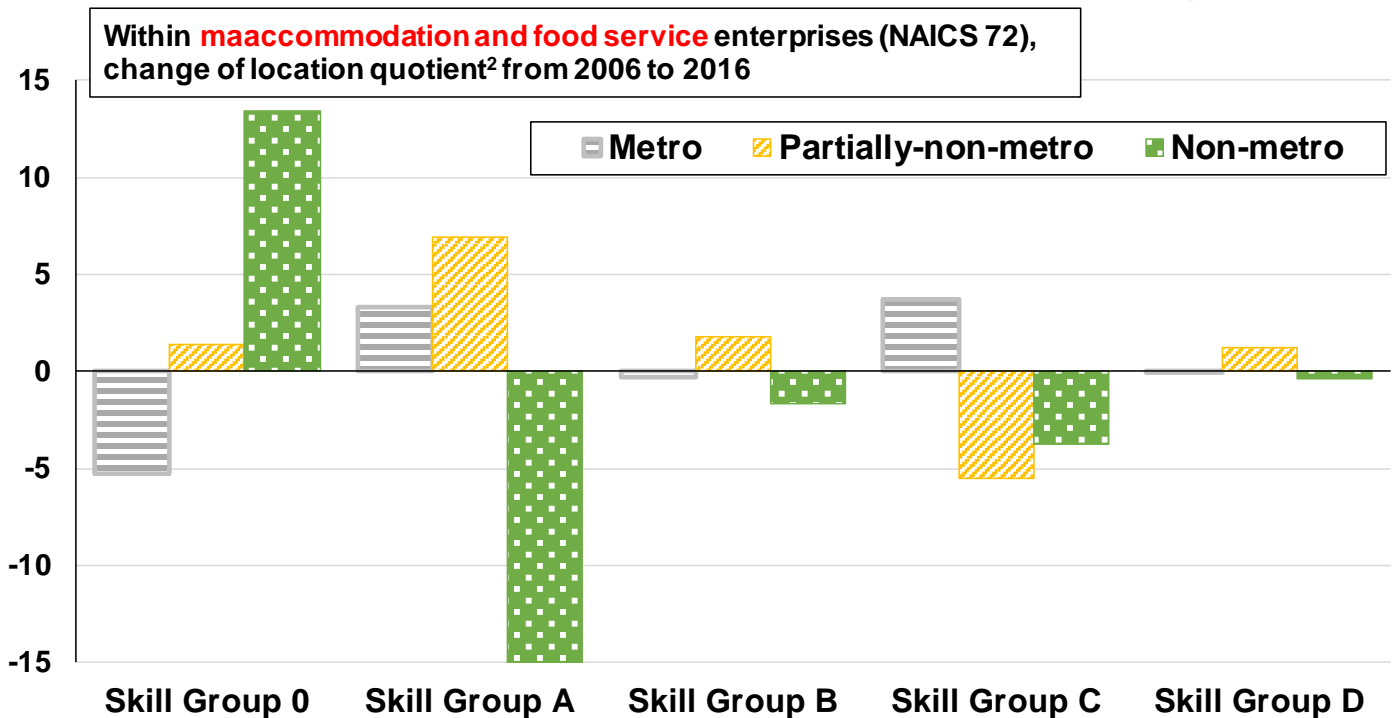
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, employment in accommodation and food services enterprises increased by 31% overall in Ontario, but only 12% in non-metro census divisions.
- Employment increased in all skill groups in all types of regions – except for Skill Group “O” showing a small decline in partially-non-metro census divisions and no change in non-metro census divisions.
- Over one-third of employment is in Skill Group “D” with another one-quarter of employment in each of Skill Groups “B” and “C”.
- Within non-metro census divisions, the change in the number employed in Skill Groups “A” and “B” and “C” were small but the calculated change in the relative share of employment in these skill groups declined, relative to the change in share of employment for Ontario as a whole (i.e. the change in the location quotient was negative).
- Over 50% of employment, both at the Ontario level and within non-metro census divisions, was concentrated in three occupations”
 - Food counter attendants, kitchen helpers and related support occupations (NOC 671);
 - Occupations in food and beverage service (NOC 651); and
 - Chefs and cooks (NOC 632).

Among accommodation and food service enterprises, the share of non-metro employment in Skill¹ Group “O” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the food and accommodation sector (NAICS 72) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions – Food and accommodation sector (NAICS 72)						
D	671	Food counter attendants, kitchen helpers and related support occupations	89	121	35	23.8
C	651	Occupations in food and beverage service	79	103	30	20.2
B	632	Chefs and cooks	56	76	34	14.9
O	063	Managers in food service and accommodation	56	57	0	11.1
D	661	Cashiers	24	38	60	7.4
B	631	Service supervisors	20	25	21	4.9
D	673	Cleaners	16	21	28	4.1
C	652	Occupations in travel and accommodation	8	8	-1	1.5
B	633	Butchers and bakers	4	7	86	1.4
C	751	Motor vehicle and transit drivers	4	5	20	1.0
Top 10 occupations: Non-metro² census divisions – Food and accommodation sector (NAICS 72)						
D	671	Food counter attendants, kitchen helpers and related support occupations	15	17	15	22.9
C	651	Occupations in food and beverage service	12	12	5	16.9
B	632	Chefs and cooks	10	10	8	14.1
O	063	Managers in food service and accommodation	9	9	-2	12.2
D	661	Cashiers	4	5	46	7.2
B	631	Service supervisors	3	4	23	5.3
D	673	Cleaners	4	4	1	5.2
C	652	Occupations in travel and accommodation	1	1	-11	1.6
B	633	Butchers and bakers	1	1	64	1.5
C	751	Motor vehicle and transit drivers	1	1	5	1.2

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 81: Other (Personal) Services Sector

Level and change in skill ¹ structure of employment in other (personal) service enterprises (NAICS 81), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	11	14	19	7	7	110	106	-4
A	24	31	30	14	16	114	116	2
B	76	79	4	44	41	94	90	-3
C	45	52	17	26	27	105	108	3
D	16	15	-2	9	8	95	96	1
Total	172	191	11	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	4	5	13	6	6	91	90	-1
A	8	9	11	10	11	84	79	-5
B	40	42	6	50	51	106	113	6
C	18	19	1	23	23	94	89	-5
D	8	7	-12	11	9	111	108	-3
Total	79	82	4	100	100	100	100	0
Non-metro census divisions⁴								
O	2	3	28	5	6	79	94	15
A	4	4	2	9	10	75	69	-6
B	23	23	-2	54	54	114	118	5
C	10	9	-7	23	22	91	85	-6
D	4	4	-12	9	8	99	102	3
Total	43	42	-2	100	100	100	100	0
All census divisions								
O	18	21	19	6	7	100	100	0
A	37	45	22	12	14	100	100	0
B	139	144	3	47	45	100	100	0
C	73	80	10	25	25	100	100	0
D	28	26	-6	9	8	100	100	0
Total	295	316	7	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

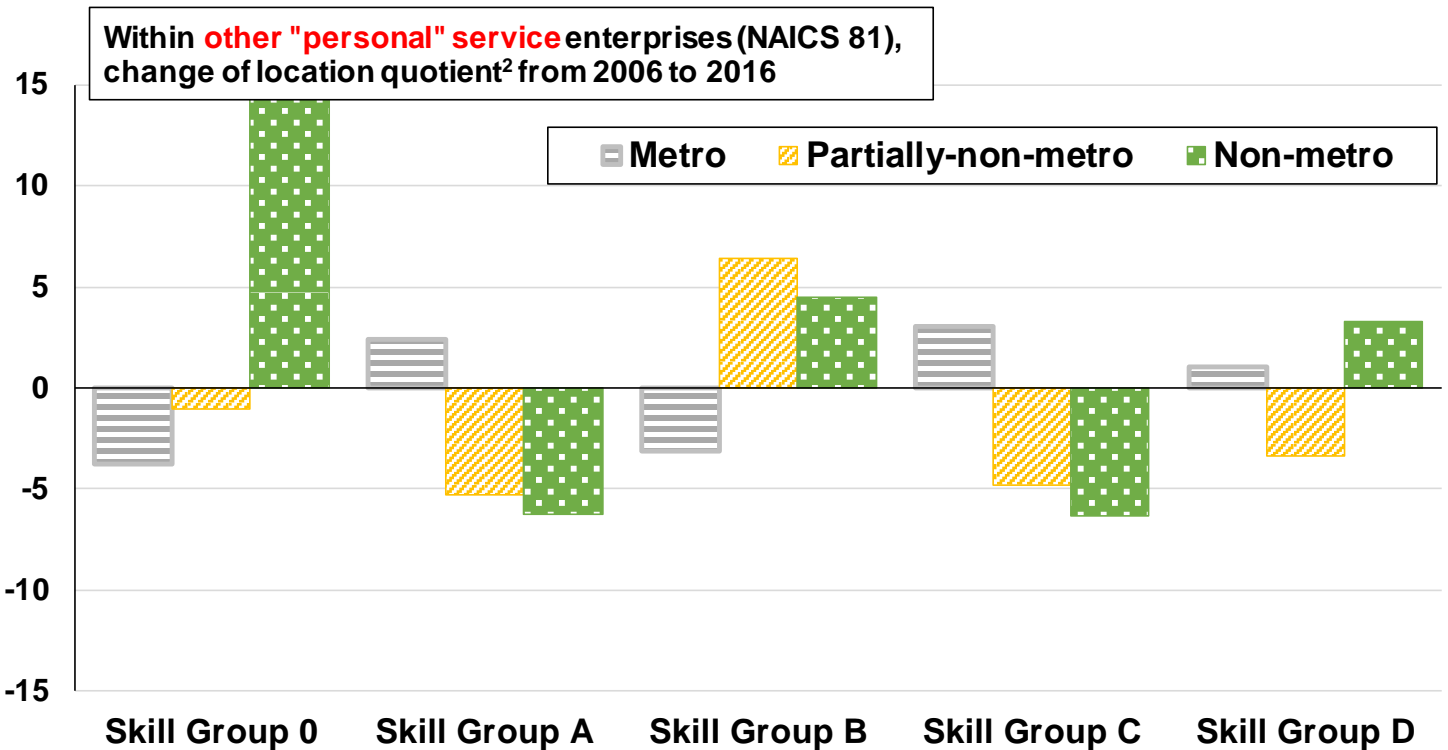
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, employment on other (personal) services increased by 7% at the Ontario level but declined 2% in non-metro census divisions.
- At the Ontario level, 45% of employment is in Skill Group “B” and the share is 54% in non-metro census divisions.
- The change from 2006 to 2016 in the skill groups in non-metro census divisions is small in absolute terms. The calculated change in the relative share of employment in each skill group shows a decline for Skill Group “A” and “C”, relative to the change at the Ontario level.
- Over 20% of employment in other (personal) services is concentrated in two occupations:
 - Specialized occupations in personal and customer services (NOC 634); and
 - Automotive service technicians (NOC 732).

Among other "personal" service enterprises, the share of non-metro employment in Skill¹ Groups "O", "B" & "D" increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database.

Chart by RayD.Bollman@sasktel.net



Top 10 occupations ¹ in the other (personal) services sector (NAICS 81) in Ontario, 2016						
Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Other (personal) services sector (NAICS 81)						
B	634	Specialized occupations in personal and customer services	41	42	2	13.3
B	732	Automotive service technicians	26	27	5	8.6
C	441	Home care providers and educational support occupations	21	23	8	7.2
C	656	Other occupations in personal service	14	21	51	6.7
A	415	Social and community service professionals	15	15	3	4.8
D	673	Cleaners	12	12	-7	3.7
A	112	Human resources and business service professionals	8	11	35	3.5
B	421	Paraprofessional occupations in legal, social, community and education services	11	11	3	3.5
B	122	Administrative and regulatory occupations	9	11	21	3.5
C	141	General office workers	10	10	-5	3.1
Top 10 occupations: Non-metro² census divisions -- Other (personal) services sector (NAICS 81)						
B	634	Specialized occupations in personal and customer services	6	7	15	16.6
B	732	Automotive service technicians	5	5	-1	11.2
C	656	Other occupations in personal service	2	3	63	6.9
A	415	Social and community service professionals	2	2	-7	5.0
D	673	Cleaners	2	2	-7	4.5
B	723	Machining, metal forming, shaping and erecting trades	1	2	47	3.6
C	441	Home care providers and educational support occupations	3	1	-48	3.5
B	421	Paraprofessional occupations in legal, social, community and education services	2	1	-30	3.3
B	730	Contractors and supervisors, maintenance trades and heavy equipment and transport operators	2	1	-36	2.8
B	122	Administrative and regulatory occupations	1	1	12	2.6

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.



NAICS 91: Public Administration Sector

Level and change in skill ¹ structure of employment in public administration organizations (NAICS 91), by type of census division in Ontario, 2006 and 2016								
Skill group ¹	Number employed (,000)		Percent change, 2006 to 2016	Number employed as percent of total		Location quotient ²		
	2006	2016		2006	2016	2006	2016	Change ³
Metro census divisions⁴								
O	28	26	-4	11	9	112	110	-1
A	70	95	35	28	34	118	120	2
B	90	97	8	35	35	91	90	0
C	56	51	-10	22	18	97	90	-6
D	11	11	2	4	4	83	82	-1
Total	255	280	10	100	100	100	100	0
Partially-non-metro census divisions⁴								
O	7	7	1	8	7	79	83	4
A	14	17	22	16	18	68	63	-5
B	40	43	9	46	47	119	121	2
C	20	21	3	24	22	104	112	9
D	5	6	4	6	6	122	125	3
Total	85	93	9	100	100	100	100	0
Non-metro census divisions⁴								
O	4	4	-5	8	7	80	80	0
A	9	11	23	16	18	67	64	-4
B	25	26	6	44	43	113	112	0
C	14	15	7	25	25	110	125	15
D	4	4	1	8	7	144	145	0
Total	56	61	8	100	100	100	100	0
All census divisions								
O	38	37	-4	10	9	100	100	0
A	93	122	32	23	28	100	100	0
B	154	167	8	39	38	100	100	0
C	91	87	-4	23	20	100	100	0
D	21	21	2	5	5	100	100	0
Total	396	434	9	100	100	100	100	0

1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations and self-employed individuals.

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

3. The change in the location quotient indicates whether a given geographic group (e.g., non-metro census divisions) reported an increase or decrease in the percent of their employment in a given skill group, relative to Ontario as a whole.

4. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" **Focus on Rural Ontario** (March, 2017).

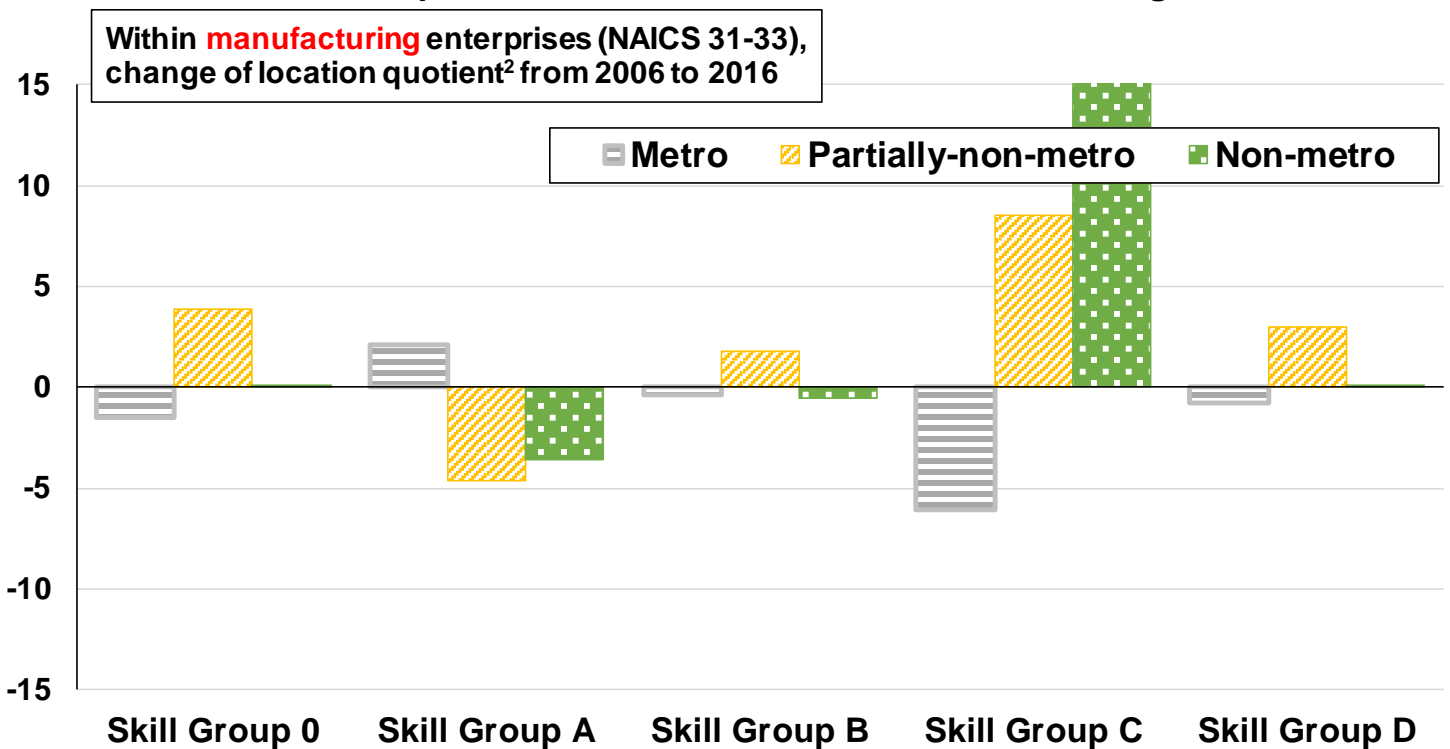
Source: OMAFRA, EMSI ANALYST database.



Notes:

- From 2006 to 2016, employment in public administration organizations (federal, municipal and local) increased by 9% with an 8% increase in non-metro census divisions.
- There was higher growth in each type of census divisions for employment in Skill Group “A” (from 22% to 35%, depending upon the type of census division).
- Employment in Skill Group “B” represents 35% to 47% of all public administration employment, depending upon the type of census division.
- About one-fifth of employment is in Skill Group “C”.
- Employment in Skill Group “A” represents 18% of total employment in partially-non-metro and non-metro census divisions but represents 34% of total employment in metro census divisions.
- For non-metro census divisions, there was no change in the location quotient for three skill groups. There was an increase for Skill Group “C” and a decrease for Skill Group “A”.
- The top occupation, comprising 10% of total employment in public administration is the occupation “occupations in front-line public protection services” (NOC 431).

Among public administration organizations, the share of non-metro employment in Skill¹ Group “C” increased relative to the Ontario average, 2006-2016



1. Occupations are classified to Skill Groups based on: Employment and Skills Development Canada. **National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). Group A usually requires a university education; Group B usually requires a college education or apprenticeship training; Group C usually requires a secondary school or occupation-specific training; Group D usually requires on-the-job training; Group O includes management occupations

2. A location quotient is a measure, for each industry sector, of the relative intensity of employment in a skill group in, say, non-metro census divisions, compared to the employment in the skill group for Ontario as a whole. It is calculated as the percent of employment in a skill group in an industry sector for, say, non-metro census divisions, divided by the percent of employment in the skill group in the industry sector for Ontario as a whole (and then multiplied by 100).

Source: OMAFRA, EMSI ANALYST database. Chart by RayD.Bollman@sasktel.net



Top 10 occupations¹ in the public administration sector (NAICS 91) in Ontario, 2016

Skill Group ¹	NOCS	Occupation description (ranked by number employed in 2016)	Number employed (,000)		Percent change, 2006 to 2016	Number employed in 2016 as a percent of total employment in this type of region
			2006	2016		
Top 10 occupations: All census divisions -- Public administration sector (NAICS 91)						
B	431	Occupations in front-line public protection services	39	44	13	10.1
A	416	Policy and program researchers, consultants and officers	17	33	91	7.6
B	122	Administrative and regulatory occupations	27	32	21	7.4
C	141	General office workers	25	22	-13	5.0
A	217	Computer and information systems professionals	17	21	22	4.8
A	112	Human resources and business service professionals	11	14	24	3.2
O	041	Managers in public administration	13	13	-2	3.0
A	111	Auditors, accountants and investment professionals	12	13	13	3.0
C	442	Legal and public protection support occupations	9	10	12	2.3
C	143	Financial, insurance and related administrative support workers	11	10	-9	2.3
Top 10 occupations: Non-metro² census divisions -- Public administration sector (NAICS 91)						
B	431	Occupations in front-line public protection services	6	6	9	10.4
B	122	Administrative and regulatory occupations	3	4	30	6.6
C	141	General office workers	3	3	-2	5.6
C	442	Legal and public protection support occupations	2	2	16	3.7
A	416	Policy and program researchers, consultants and officers	1	2	83	3.6
C	143	Financial, insurance and related administrative support workers	1	2	9	2.6
D	673	Cleaners	1	1	13	2.3
A	217	Computer and information systems professionals	1	1	26	2.2
C	752	Heavy equipment operators	1	1	10	2.2
B	421	Paraprofessional occupations in legal, social, community and education services	1	1	8	2.2

1. Occupations are classified to Skill Groups based on: **Employment and Skills Development Canada. National Occupational Classification Matrix 2011** (<http://noc.esdc.gc.ca/English/NOC/Matrix2011.aspx?ver=11>). **Group A** usually requires a university education; **Group B** usually requires a college education or apprenticeship training; **Group C** usually requires a secondary school or occupation-specific training; **Group D** usually requires on-the-job training; **Group O** includes management occupations.

2. The classification of census divisions is shown in Table 2 in "Rural Ontario's Demography: Census Update to 2016" Focus on Rural Ontario (March, 2017).

Source: OMAFRA, EMSI ANALYST database.