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Occupational patterns within industry groups: A rural – urban comparison

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Highlights

- Predominantly rural regions have a higher concentration of unskilled occupations, within most industries, compared to predominantly urban regions.
- During the 1990s, predominantly rural regions tended to become more intensive in unskilled occupations, within most industries.

Introduction

Some analysts suggest that recent employment growth has been characterized by low skill tasks concentrating in rural areas and high skill tasks concentrating in urban areas (Wojan, 2000). Alasia and Magnusson (forthcoming A, forthcoming B) show that this hypothesis is, in fact, true when examining the employment data aggregated across industries. In this bulletin, we examine *each* industry to assess the differences in occupational skill intensity between rural and urban Canada.

This bulletin addresses two primary questions:

1. Does a divide exist between rural and urban regions in the intensity of high skilled versus low skilled occupations? And
2. Have there been any shifts in occupational skill intensity within each industry over the 1991 to 2001 period?

Many studies have compared the patterns of industry concentration between rural and urban areas – see Polèse and Shearmur (2002) and Beshiri (2001a, 2001b, 2001c, 2001d), among others. However, few studies have compared the rural and urban occupational skill intensity within each industry. This is important because two regions may have the same pattern of employment by industry, but, within the same industry, the skill intensity may differ between the two regions. Skills, arguably, are an important local asset in the 'new economy'. Policy analysts should note that even within an industry group, the skills mix of the rural workforce may differ from the skills of the urban workforce.

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Our analysis also has implications for our understanding of productivity differences across regions. In describing their methodology for estimating sub-provincial GDP, McCracken and May (2001) have assumed a constant productivity (i.e., a constant amount of output for each unit of labour input) within each industry across geographical locations. This is based on the reasonable assumption that firms in a given industry would be expected to be using the same technology in both rural and urban locations. However, as McCracken and May indicate, it would be worthwhile to investigate differences in productivity levels or variation over time by sub-provincial areas.

Our analysis looks at the mix of skills, within each industry group, to determine if there is a difference across the urban-to-rural spectrum. If the mix of skills is different across regions, within an industry group, then productivity within that industry may vary across geographic locations.

Our classification of geographic locations is based on the OECD classification of regions in Canada (Box 1).

The analysis is conducted for each of 11 industry groups, which cover the entire economy from the primary sector to manufacturing to the service sectors (Box 2).

Occupations within each industry are assigned to one of five occupational skills groups – these are managerial, professional, intermediate, technical and unskilled (Box 2).

An index measuring the intensity of a given skill level within each industry group is calculated and we examine how this index varies across the regional types. This measure is called a Location Quotient (LQ). A LQ with a value of 1 indicates that a region has the same occupational skill intensity in that industry group as the national average for that industry group. A value above 1 indicates that the region has a higher intensity on the specific skill level relative to the nation (for the given industry group). Conversely, an LQ below 1 means the region has a lower intensity relative to the nation (for the given industry group). For more details about the LQ, refer to Box 3.

Box 1: Definitions of regional types

Region type is defined using an OECD classification, as follows:

Predominantly rural regions – more than 50 percent of the population lives in a ‘rural community’;

Intermediate regions – 15 to 50 percent of the population lives in a ‘rural community’; and

Predominantly urban regions – less than 15 percent of the population lives in a ‘rural community’.

Predominantly rural regions are further broken down to recognize diversity among rural regions. There are 3 types of predominantly rural regions; rural metro-adjacent regions, rural non-metro-adjacent regions and rural northern regions.

A **rural community** is one in which there is less than 150 inhabitants per square kilometre.

Box 2: Data

This analysis is based on data from the Census of Population for 1991, 1996 and 2001.

Occupation skills groups

All occupations recorded on the Census of Population for 1991, 1996 and 2001 are classified according to the Standard Occupational Classification 1991 (SOC91). We follow HRDC (2001) to group these occupations into five skill level categories. These occupational skill levels are: professional workers (skill level A); technical skilled workers (skill level B); intermediate workers (skill level C); and unskilled workers (skill level D). An additional category, managerial occupations, encompasses all types of managerial jobs. Occupations in the SOC are assigned to one of these skill levels based upon the type of education and training required to enter and to perform the duties of the occupation, except for managerial occupations. For managerial occupations, factors other than education are considered a significant determinant for employment. In this study, we will use the term "high skill" to refer to professional and managerial occupations. For details on which occupation is classified to each occupation skill level, see Alasia and Magnusson (forthcoming B).

Industry groups

The census also classifies employment data by the industrial sector in which the individual is employed. For this study, individuals are classified into eleven industry groups, which reflect to a large extent, a standard industry typology. For the 2001 Census of Population data, we use the data that has been re-coded to the 1980 Standard Industrial Classification (SIC80). This re-coding ensures complete consistency and comparability across the 1991, 1996 and 2001 census years.

The 11 industry groups used in this analysis are as follows: agriculture and related services; other primary (fishing, hunting, forestry, mining, gas and oil); manufacturing - natural resources related; manufacturing - labour intensive; manufacturing - scale-based; manufacturing - product-differentiated plus science-based; construction; distributive services; business services; consumer services; and public services.

The disaggregation of the manufacturing sector into four groups is based in the classification developed by Baldwin and Rafiquzzaman (1994). As explained by the authors, these groups are defined on the basis of the primary factors affecting the competitive process in each activity. For the resource-based sector, this factor is access to abundant natural resources. For the labour-intensive sector, this factor is labour costs. The scale-based industries are differentiated on the basis of the length and scale of their production runs. Product differentiated manufacturing relies on tailoring production to specific demand characteristics. Science-based industries focus on continuous application of new technologies.

The variables used to capture economies of scale include the average size of a plant and of a firm, industry concentration, the capital-labour ratio, the relative productivity of small versus large plants, and a measure of scale economies derived from the estimation of a production function using micro data at the plant level. The scale-based group merge a wide range of industries that share these scale-based characteristics. Some of the major scale-based manufacturing sectors are pulp and paper industries, steel pipe and tube industries, wire and wire products industries, motor vehicle and motor vehicle parts industries, clay products industries, glass and glass products industries, and agricultural chemical industries.

For details on which industry is classified to each industry group, see Alasia and Magnusson (forthcoming B).

The data is tabulated at the census division (CD) level of geography. The 1996 CD geographic boundaries are imposed for each of the 3 periods to allow comparability across years.

Box 3: Methods

Location quotient (LQ)

The location quotient, as used in this study, is computed as the ratio of the percent of the total regional employment in a given occupational skill level divided by the percent of the total employment in that occupational skill level in the nation as a whole. In this bulletin, an LQ is calculated within each industry group. The location quotient provides a measure of the intensity of employment in a given occupational skill level in a region relative to the level of employment in that occupational skill level across all regions (i.e., at the national level) (for each given industry group). For example, the location quotient for one occupation skill group (e.g., professional) within one specific industry group (e.g., manufacturing) for predominantly rural (PR) regions, would be calculated as

$$LQ = \frac{\left[(\textit{professional employment in manufacturing in PR regions}) / (\textit{total employment in manufacturing in PR regions})\right]}{\left[(\textit{professional employment in manufacturing in all regions}) / (\textit{total employment in manufacturing in all regions})\right]}$$

The critical value for the LQ is 1. A value of 1 indicates that the given industry in the given region has exactly the same relative level of employment in that skill level as the nation (i.e., for all regions). A LQ value above 1 suggests that the region has a higher intensity of the occupation skill group, relative to the nation (for the given industry group). A value below 1 suggests that the region has a lower intensity of the occupation skill group, relative to the nation (for the given industry).

Another way to interpret the LQ is that it represents the ratio of the actual level of employment compared to the expected level (Wojan, 2000). In our example, the actual level is the observed share of professional employment in manufacturing in predominantly rural regions and the expected level is the share of professional employment in manufacturing at the national level (i.e., across all regions).

Occupational skill intensity differs across regions

There is a difference in occupational skills between predominantly urban regions and predominantly rural regions. Importantly, this difference occurs within nearly every industry.

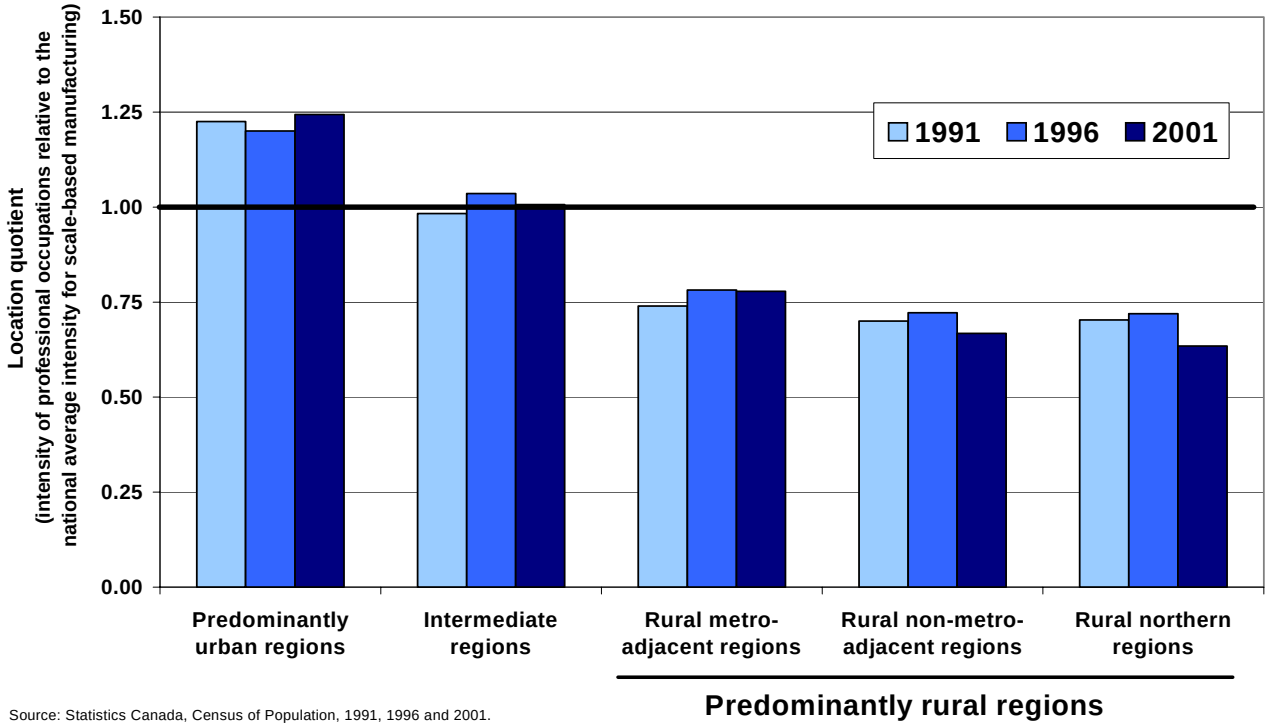
To illustrate this finding, we show below the urban-to-rural gradient for four occupation groups, using the scale-based manufacturing industry group (Box 2) as a representative case. Scale-based manufacturing was selected because it exhibits some of the main patterns evident in the data for each skill level. The skill intensity information for each industry is provided in Appendix Table A1.

Predominantly rural regions have a lower intensity of high skill occupations

Predominantly rural regions have a lower intensity in high skill occupations (i.e., managerial and professional occupations). Using our example of scale-based manufacturing, we see a clear pattern where the intensity of professional skills is lower in each type of predominantly rural region (Figure 1). Predominantly urban regions have a LQ (location quotient) well above 1 (1.24 in 2001) while the intensity in rural regions is very low (0.63 in 2001 for rural northern regions). The same pattern exists for managerial occupations (Appendix Table A1).

Figure 1

Rural regions have a lower intensity of professional occupations
(within scale-based manufacturing)



Source: Statistics Canada, Census of Population, 1991, 1996 and 2001.

There are some ***exceptions*** to the pattern for high skilled occupations shown in Figure 1:

- The ***consumer services*** industry has the reversed pattern for managerial occupations (Appendix Table A1). Predominantly rural regions have a higher intensity of managerial occupations and the intensity is marginally higher for more remote regions. However, professional occupations in consumer services exhibit the commonly observed pattern of lower skill intensity in predominantly rural regions.
- Rural northern regions have a higher intensity of managerial occupations in the ***public services*** sector. However, rural regions have a low intensity of professional occupations in the public services sector.
- In the ***natural resource manufacturing*** industry and the ***construction*** industry, predominantly rural regions have a lower intensity of professional occupations; however, rural northern regions have a higher intensity of professional occupations then rural metro-adjacent and rural non-metro-adjacent regions.

In terms of change in the 1990s for the professional and managerial occupational groups, predominantly rural regions reported a small increase (from a low base) in intensity in a number of industry groups – see the blue-shaded cells in Appendix Table A1 which uses the colour-shading scheme denoted in Box 4. However, distributive services firms reduced the intensity of their managerial employees in predominantly rural regions in the 1990s (see the pink-shaded cells in Appendix Table A1). Also, governments (the public service industries group) reduced the intensity of their professional staff in rural metro-adjacent and rural non-metro-adjacent regions in the 1990s.

Box 4: Level and change of LQ (intensity of occupational skills employment) from 1991 to 2001

To show trends over time in the LQ, we have shaded the cells in Appendix Table A1 according to the following scheme. Pink and yellow indicate a declining LQ and blue and green indicate an increasing LQ. Pink and blue indicate an LQ less than 1 (i.e., below the national average for the given industry) and yellow and green indicate an LQ greater than 1.

		Change in intensity of occupational skills group	
		Decrease of LQ from 1991 to 2001	**Increase of LQ from 1991 to 2001**
Intensity of occupational skills group	**Below national average for this industry group (i.e. LQ < 1)**	**Diverging** (down) away from the national average for this industry	**Converging** (up) toward the national average for this industry
	Above national average for this industry group (i.e. LQ > 1)	**Converging** (down) toward the national average for this industry	**Diverging** (up) away from the national average for this industry

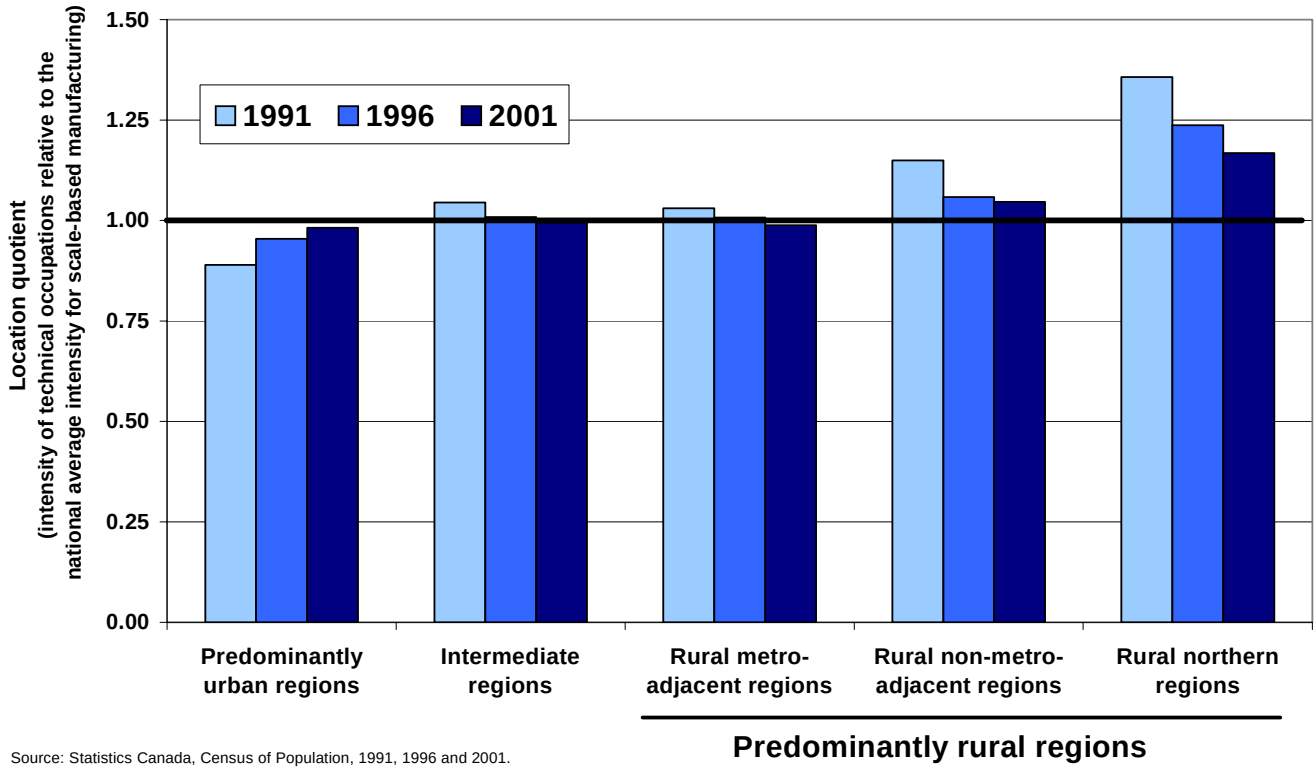
Predominantly rural regions have a higher intensity of technical occupations

Technical occupations are more evenly distributed across regional types, compared to the managerial, professional and unskilled occupational groups. This is true for virtually all industries and for all years. Nonetheless, there is an increasing intensity of technical occupations as one moves across the urban-to-rural gradient. Intermediate and predominantly rural regions generally, within each industry, have a greater intensity of technical occupations then predominantly urban regions. Rural northern regions typically have the highest intensity of technical occupations. For most industry groups, the differences across regions are not large (Appendix Table A1). Figure 2 shows the pattern within the scaled-based manufacturing group.

There are a few exceptions to this pattern. For example, the construction industry shows a pattern opposite to the pattern shown in Figure 2, as the intensity of technical occupations is higher in predominantly urban regions and is lower in predominantly rural regions, particularly in rural northern regions (Appendix Table A1).

Figure 2

Rural regions have a higher intensity of technical occupations
(within scale-based manufacturing)



Source: Statistics Canada, Census of Population, 1991, 1996 and 2001.

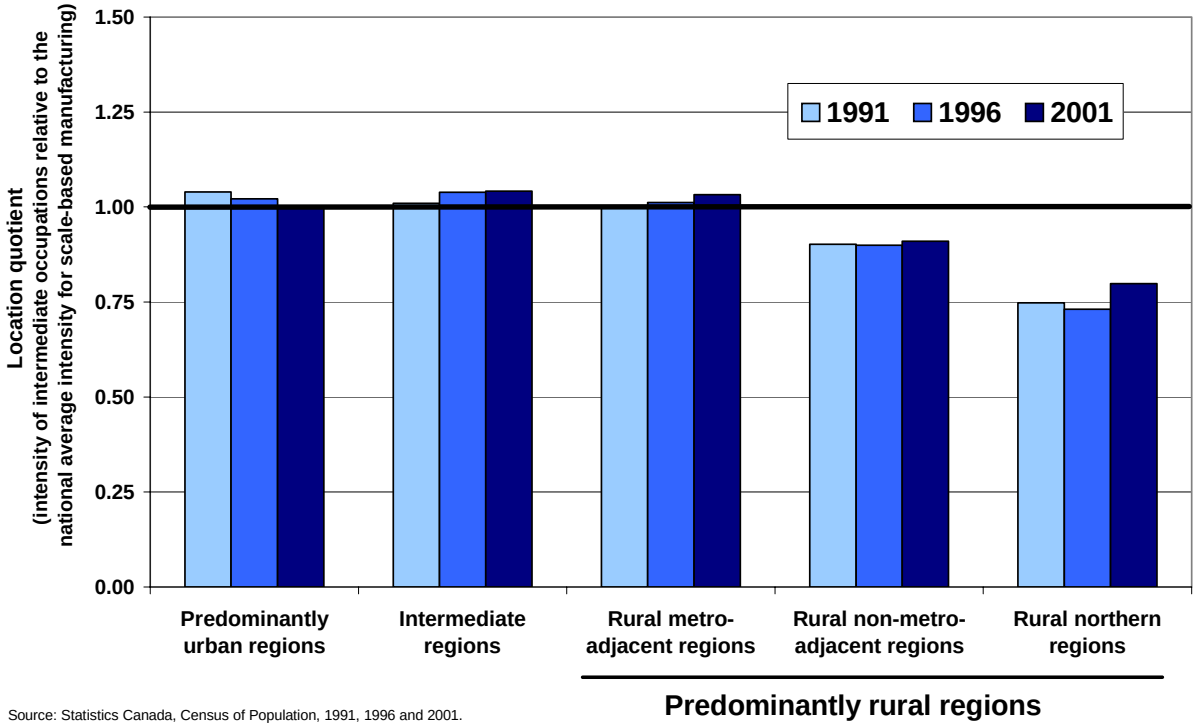
Within the scale-based manufacturing group (Figure 2), the intensity of technical occupations declined in predominantly rural regions from 1991 to 2001 (see also the yellow-shaded cells in Appendix Table A1). The decline was small in rural metro-adjacent regions; however the LQ crossed over from above 1 to below 1. This means that rural metro-adjacent regions now have a lower intensity of technically skilled workers relative to the national average for scale-based manufacturing firms. The decline was much larger in rural non-metro-adjacent and rural northern regions, although these regions remain more intensive in technical occupations (i.e. the LQ remains above 1) compared to the national average. There was an increase in the intensity of technical skills in predominantly urban regions.

However, in other cases, such as business services, predominantly rural regions increased their intensity of technical occupations in the 1990s.

Intermediate occupations have the least variation across regions

The intermediate occupations category has the least variation in intensity across regional types. For this skill level, the LQ tends to be relatively close to 1 in all regions, compared to the other occupational skill groups (see Figure 3 for the situation within scale-based manufacturing). In addition to less variation across regional types, the patterns for intermediate occupations are also less consistent when comparing among the regional types (Appendix Table A1). However, in most industry groups the intensity is lowest in rural northern regions. The exception is the construction industry, where rural northern regions had a relatively high intensity of intermediate occupations.

Figure 3 **Rural northern regions have a lower intensity of intermediate occupations**
(within scale-based manufacturing)



Source: Statistics Canada, Census of Population, 1991, 1996 and 2001.

The changes in the 1990s in the intensity of intermediate skills were small across all region types. However, the majority of the cases show a slight increase over time in the intensity of intermediate occupations in predominantly rural regions (blue and green cells in Appendix Table A1).

Predominantly rural regions have a higher intensity of unskilled occupations and this difference is generally widening over time

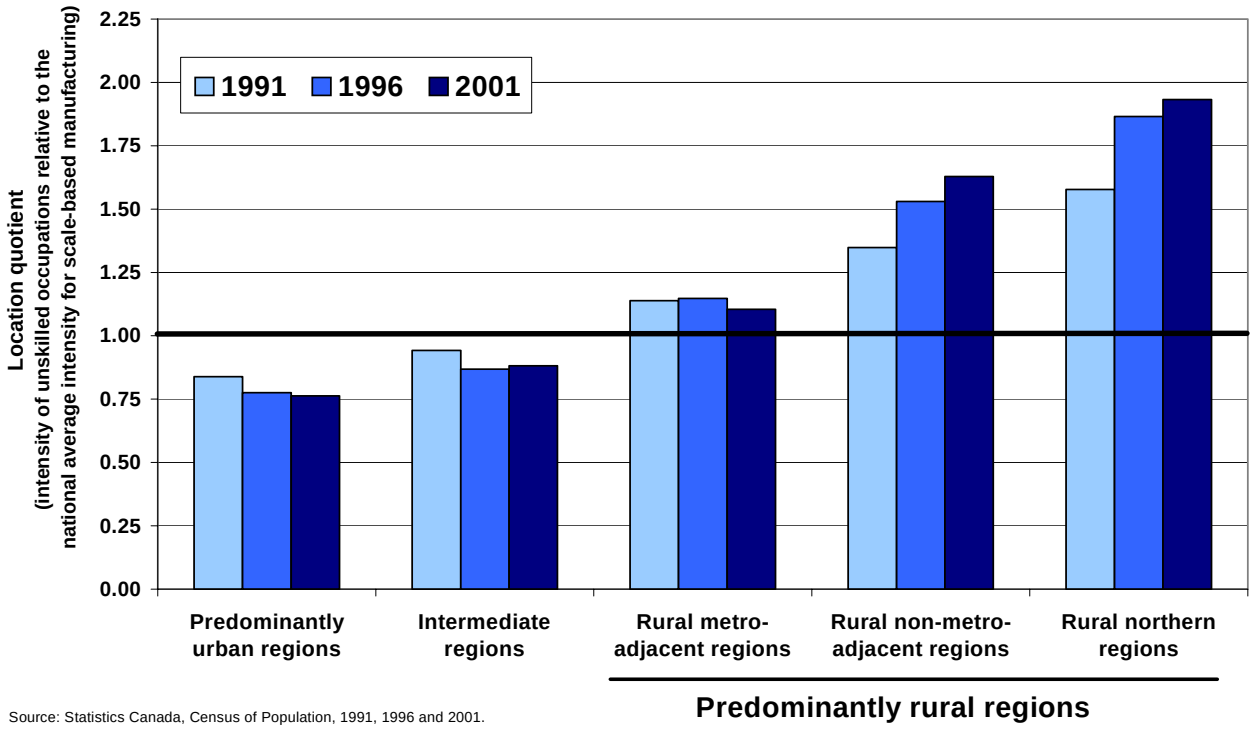
The intensity of unskilled work is higher in predominantly rural regions within nearly every industry group. Figure 4 shows the LQ pattern for unskilled occupations in scale-based manufacturing. The highest intensity of unskilled occupations is generally found in rural northern regions (Appendix Table A1). However, there are two exceptions – the other primary industries group and the labour intensive manufacturing group in rural northern areas have a relatively low intensity of unskilled occupations.

Notably, the rural-urban differences in the LQ are generally larger for unskilled occupations than for any of the other occupational groups. In most industry groups, rural non-metro-adjacent and rural northern regions have an LQ value for unskilled occupational groups that is well above 1.

One exception to this pattern might be noted. In the group of other primary industries, rural metro-adjacent regions have the highest intensity of unskilled occupations (Appendix Table A1).

Figure 4

Rural regions have a higher intensity of unskilled occupations (within scale-based manufacturing)



Source: Statistics Canada, Census of Population, 1991, 1996 and 2001.

Unskilled occupations within scale-based manufacturing had a relatively large increase in intensity between 1991 and 2001 (Figure 4). In rural non-metro-adjacent and rural northern regions, the intensity of unskilled occupations increased substantially. The intensity of unskilled occupations was already high in 1991 with a LQ of 1.35 and 1.58 in rural non-metro-adjacent and rural northern regions respectively. The LQ increased to 1.63 in rural non-metro-adjacent and increased to 1.93 in rural northern regions by 2001. Conversely, the intensity of unskilled occupations declined slightly in predominantly urban, intermediate and rural metro-adjacent regions.

Overall, the intensity of unskilled workers increased in predominantly rural regions within each manufacturing industry group and within each service industry group (blue and green-shaded cells in Appendix Table A1).

Changes in occupational skill intensity vary across industries

The shifts in skill intensity over time do not exhibit a consistent trend across industries (Appendix Table A1). Some changes are marginal and some changes are not consistent when comparing the 1991-1996 period and the 1996-2001 period. Nonetheless, the trends suggest, for several industries, a growing polarization of professional and unskilled occupations between urban and rural regions.

As noted above, we have colour-coded the cells in Appendix Table A1 for cases with a consistent, albeit often weak, trend in the LQ – see the colour scheme in Box 4. Some specific observations are:

- Predominantly rural regions are gaining a relative intensity of managerial and professional employees in the goods-producing industry sectors, but the share

of these workers in rural regions remain far below the national average for each of goods-producing industry groups. Note that, for managerial and professional occupations, the only "trends" in predominantly rural regions for the goods-producing sectors (agriculture, other primary, manufacturing, construction) is an increasing LQ but the LQ remains below 1 (i.e. the cells are shaded blue in Appendix Table A1); and

- Predominantly rural regions have a higher than average share of unskilled workers in the service-providing sectors and most manufacturing industry groups and this intensity is increasing.

Summary

The move toward a knowledge intensive economy has led to the need to understand not only the sectoral composition of employment in a region, but also the occupational skills intensity with each industry group. This paper presents an analysis of the occupational intensity across regional types within each industry group for the 1991 to 2001 period.

First, the intensity of occupational skills varies across regions within each industry. The general pattern is that predominantly urban regions have a greater concentration of higher skilled employment, while predominantly rural regions have a greater concentration of lower skilled employment. This indicates that the skills complement within an industry appears to be different across regions. Thus, we find different occupational skill groups in predominantly rural regions:

1. because rural has a different mix of industrial sectors; and, the main finding of this study,
2. because, within each industry group, rural workers have a different skill set than urban workers.

Second, within many industrial groups, predominantly rural regions are gaining, in a relative sense, unskilled workers. The intensity of unskilled workers increased (relatively) in the 1990s in predominantly rural regions and the intensity of unskilled workers declined (relatively) in predominantly urban regions.

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Appendix Table A1. Location quotients for each occupation within each industry group, Canada, 1991, 1996 and 2001

	Agriculture and related services industries			Other primary industries			Manufacturing (natural resource related)			Manufacturing (labour intensive)			Manufacturing (scale-based)			Manufacturing (product-differentiated plus science-based)			Construction industries			Distributive services industries			Business service industries			Consumer service industries			Public service indusries		
	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001	1991	1996	2001
Managerial occupations																																	
Predominantly urban regions	2.30	2.38	2.28	2.25	2.19	2.07	1.25	1.22	1.19	1.07	1.05	1.03	1.28	1.31	1.26	1.06	1.06	1.05	1.14	1.12	1.11	1.11	1.11	1.12	1.03	1.03	1.04	0.99	0.99	0.99	1.05	1.06	1.04
Intermediate regions	1.47	1.57	1.11	0.89	0.91	0.98	1.01	1.02	1.02	1.05	1.09	1.13	0.87	0.87	0.93	1.01	0.97	0.96	1.01	1.05	1.04	0.98	1.01	1.01	1.00	1.02	0.99	1.00	1.01	0.98	0.95	0.97	0.97
Rural metro-adjacent regions	0.71	0.65	0.81	0.80	0.86	0.83	0.80	0.81	0.84	0.76	0.78	0.89	0.82	0.78	0.86	0.78	0.82	0.87	0.87	0.89	0.90	0.81	0.80	0.79	0.86	0.90	0.85	1.03	1.01	1.03	0.95	0.93	0.94
Rural non-metro-adjacent regions	0.47	0.49	0.49	0.55	0.63	0.66	0.53	0.57	0.61	0.74	0.82	0.67	0.69	0.77	0.68	0.73	0.81	0.79	0.70	0.74	0.75	0.74	0.72	0.67	0.86	0.85	0.80	1.02	1.03	1.03	0.89	0.87	0.90
Rural northern regions	x	x	x	0.57	0.64	0.66	0.40	0.43	0.54	0.87	1.33	1.30	0.53	0.59	0.50	0.42	1.03	0.70	0.66	0.74	0.67	0.74	0.74	0.72	0.86	0.87	0.73	1.00	1.04	1.05	1.19	1.22	1.23
Professional occupations																																	
Predominantly urban regions	2.35	2.37	2.44	2.75	2.85	2.93	1.25	1.26	1.27	1.03	1.04	1.08	1.22	1.20	1.24	1.17	1.24	1.21	1.32	1.27	1.28	1.26	1.28	1.27	1.11	1.10	1.09	1.31	1.32	1.31	1.05	1.06	1.07
Intermediate regions	1.26	1.39	1.31	0.92	1.06	0.97	1.14	1.05	1.02	1.18	1.29	1.09	0.98	1.04	1.01	0.86	0.74	0.75	0.92	1.03	1.00	0.96	0.96	0.95	0.90	0.90	0.91	0.80	0.78	0.78	1.01	1.01	1.01
Rural metro-adjacent regions	0.68	0.65	0.69	0.41	0.48	0.49	0.65	0.61	0.64	0.94	0.72	0.77	0.74	0.78	0.78	0.57	0.52	0.58	0.59	0.57	0.64	0.53	0.50	0.52	0.70	0.71	0.76	0.62	0.66	0.66	0.92	0.90	0.88
Rural non-metro-adjacent regions	0.62	0.56	0.49	0.34	0.40	0.39	0.47	0.53	0.53	0.53	0.59	0.54	0.70	0.72	0.67	0.44	0.38	0.40	0.57	0.64	0.55	0.42	0.44	0.40	0.62	0.67	0.67	0.58	0.57	0.56	0.90	0.89	0.86
Rural northern regions	x	x	x	0.81	0.79	0.78	0.58	0.87	0.92	x	0.76	0.41	0.70	0.72	0.63	0.18	0.22	0.15	0.75	0.97	0.80	0.39	0.45	0.51	0.74	0.67	0.68	0.50	0.55	0.48	0.83	0.88	0.83
Technical occupations																																	
Predominantly urban regions	0.80	0.82	0.80	0.75	0.78	0.73	0.97	0.93	0.96	0.93	0.94	0.93	0.89	0.95	0.98	0.97	0.97	0.94	1.00	1.01	1.01	0.93	0.94	0.93	0.94	0.94	0.92	0.97	0.97	0.98	0.98	0.98	0.97
Intermediate regions	0.94	0.93	0.90	1.10	1.11	1.08	1.11	1.12	1.14	1.10	1.11	1.13	1.04	1.01	1.00	1.03	1.04	1.09	1.01	0.99	1.01	1.04	1.03	1.03	1.07	1.06	1.06	0.99	0.99	0.98	1.04	1.04	1.04
Rural metro-adjacent regions	1.04	1.04	1.06	1.00	0.96	0.98	0.99	1.00	0.97	1.05	1.00	1.04	1.03	1.01	0.99	1.03	1.00	1.06	0.99	1.00	1.00	1.09	1.05	1.08	1.17	1.16	1.22	1.05	1.05	1.04	1.00	1.01	1.03
Rural non-metro-adjacent regions	1.08	1.08	1.08	1.06	1.06	1.10	0.94	1.02	0.95	1.21	1.15	1.09	1.15	1.06	1.05	1.13	1.11	1.16	0.99	0.99	0.97	1.14	1.15	1.15	1.17	1.21	1.34	1.09	1.08	1.09	0.99	1.00	1.02
Rural northern regions	0.77	0.81	0.82	1.16	1.11	1.07	1.02	1.33	1.14	1.74	1.25	1.61	1.36	1.24	1.17	1.61	1.51	1.51	0.90	0.92	0.93	1.27	1.22	1.28	1.10	1.15	1.24	0.96	0.97	0.96	1.06	1.04	1.05
Intermediate occupations																																	
Predominantly urban regions	1.10	1.08	1.11	0.80	0.75	0.71	0.97	1.02	1.01	1.03	1.02	1.02	1.04	1.02	1.00	0.99	0.96	0.97	0.89	0.88	0.87	1.01	0.99	0.98	0.98	0.98	0.96	1.03	1.03	1.04	0.99	0.97	0.96
Intermediate regions	1.03	1.08	1.09	0.87	0.87	0.91	0.96	0.95	0.95	0.93	0.92	0.92	1.01	1.04	1.04	0.99	1.03	1.01	1.03	1.05	1.01	0.99	0.99	0.99	1.01	1.02	1.06	1.01	1.03	1.02	0.95	0.95	0.95
Rural metro-adjacent regions	0.99	0.98	0.95	1.11	1.12	1.14	1.01	1.03	1.03	1.00	1.01	1.01	1.00	1.01	1.03	1.08	1.13	1.09	1.11	1.08	1.11	1.02	1.05	1.06	1.05	1.07	1.11	0.95	0.95	0.95	1.07	1.09	1.10
Rural non-metro-adjacent regions	0.95	0.94	0.95	1.13	1.09	1.08	1.11	1.00	1.01	0.97	0.97	1.03	0.90	0.90	0.91	1.03	1.11	1.10	1.18	1.16	1.22	0.98	0.99	1.04	1.07	1.08	1.09	0.93	0.92	0.90	1.06	1.08	1.12
Rural northern regions	1.22	1.22	1.22	0.94	1.04	1.06	1.11	0.79	0.81	0.63	0.96	0.69	0.75	0.73	0.80	0.86	0.87	0.78	1.10	1.20	1.27	0.93	0.96	0.97	1.00	0.98	1.08	0.97	0.91	0.91	0.95	0.96	1.00
Unskilled occupations																																	
Predominantly urban regions	1.88	1.79	1.66	0.80	0.82	0.77	0.94	0.89	0.87	1.00	0.97	1.02	0.84	0.78	0.76	0.90	0.91	0.89	0.98	0.96	0.98	0.86	0.85	0.88	0.97	0.95	0.92	0.97	0.97	0.95	0.85	0.86	0.82
Intermediate regions	1.20	0.99	1.44	1.03	0.94	0.95	0.92	0.95	0.92	0.99	1.02	0.94	0.94	0.87	0.88	1.05	1.09	1.08	0.93	0.96	0.93	1.01	1.00	0.97	0.95	0.99	1.03	1.01	1.00	1.03	1.01	1.01	1.05
Rural metro-adjacent regions	0.79	0.86	0.75	1.18	1.24	1.20	1.16	1.09	1.12	1.07	1.10	1.01	1.14	1.15	1.10	1.31	1.26	1.33	1.04	1.04	1.01	1.15	1.15	1.16	1.13	1.18	1.22	1.04	1.04	1.05	1.15	1.15	1.19
Rural non-metro-adjacent regions	0.71	0.77	0.73	1.06	1.06	1.05	1.11	1.26	1.33	0.89	0.99	0.99	1.35	1.53	1.63	1.32	1.14	1.30	1.08	1.10	1.12	1.43	1.50	1.43	1.24	1.14	1.38	1.06	1.05	1.07	1.30	1.29	1.34
Rural northern regions	2.08	1.44	1.11	0.89	0.76	0.93	1.08	1.38	1.43	0.64	0.79	0.64	1.58	1.87	1.93	1.14	1.27	1.64	1.45	1.26	1.26	1.38	1.47	1.29	1.56	1.74	2.05	1.12	1.14	1.16	1.48	1.35	1.48
All occupations																																	
Predominantly urban regions	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Intermediate regions	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Rural metro-adjacent regions	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Rural non-metro-adjacent regions	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Rural northern regions	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Source: Statistics Canada, Census of Population, 1991, 1996 and 2001.

"x": too few observations for a reliable estimate

Colour coding for predominantly rural regions: blue is LQ<1 & increasing; green is LQ>1& increasing; pink is LQ<1 & decreasing; and yellow is LQ>1 & decreasing.

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