

## **BENCHMARKING REPORT – WINNIPEG**

### **I. INTRODUCTION**

We conducted an international benchmarking analysis for the members of the Consider Canada City Alliance Inc., consisting of 11 (C11) large Canadian cities or Census Metropolitan Areas (CMAs). This analysis used information from both Canada and the United States which are available in the Local IDEAS database. The database includes an extensive set of social and economic indicators for all the city-regions in both countries.

International benchmarking of cities is generally more complicated than benchmarking within countries. The differences in the definition of indicators and data availability between the two countries imply that the information needed for benchmarking is not necessarily directly comparable. In this analysis, tables of concordance for all the required variables were integrated to the Local IDEAS database to facilitate cross-border comparability.

Benchmarking is one of the effective tools that could be used to provide more meaningful interpretation of data on various indicators available in the city-regions. In benchmarking analysis an appropriate data is created so that more accurate comparisons can be made. For example, if the reported current unemployment rate in the city of Toronto is 8%, with a suitable data or measure to compare to; more precise conclusion regarding its acceptability could be easily deduced. The results of this benchmarking analysis could help local governments generate important assessment of their city's social and economic status, thereby gaining vital information that could lead to improving their performance.

### **II. METHOD**

The primary source of data used for this benchmarking analysis is the Local IDEAS database which includes data from various government and private agencies in Canada and the United States. The data from Canada were mainly taken from Statistics Canada such as the 2006 Census of Population, Labour Force Survey (2003-2010) and the 2006 Canadian Business Patterns database. For the United States, the data sources include the American Community Survey (2003-2010) and the 2006 County Business Patterns.

The idea behind this benchmarking exercise is to compare each of the CMAs' economic performance against a group of "similar" American Metropolitan Statistical Areas (MSAs). The group of similar MSAs was determined by conducting an analysis which involves developing a set of indicators (population size, human capital, occupational structure and industrial structure) and then using a measure of "distance" or "similarity" to identify the 10 closest neighbours or most similar MSAs for each of the CMAs.

The human capital index includes population characteristics such as educational status; age distribution and immigration status. Information on educational status specifically includes: (1) proportion of individuals with less than High School educational attainment, (2) percentage with at least Bachelor of Science degree, and (3) number of PhDs per 1000. The age distribution of the population includes proportion of individuals: (1) under 18 years old, (2) 18-64 years old and (3) 65 year old and over. For immigration status, we used data on proportion of foreign-born individuals.

The occupational and industrial structures include the set of categories that are comparable in both countries. We identified 14 comparable occupational categories in the National Occupational Classification (NOC) and Standard Occupational Classification (SOC) and 19 comparable industrial classifications in the two-digit level North American Industry Classification System (NAICS). Details of these occupational and industrial groups are shown in Figures 3 and 4, respectively.

Using the group of similar MSAs, a detailed benchmarking analysis was performed on each of the C11 member CMAs. The key variables included as measures of economic performance are employment income, employment growth and unemployment level which may be updated annually depending on data availability.

### III. RESULTS

#### A. Similarity (Nearest Neighbour) Analysis

Presented in Table 1 is the result of the analysis conducted for Winnipeg. It contains the ranking of the MSAs based on the individual indicators and the overall index, with the lower numbers indicating “more similar” or “closer” to Winnipeg and higher numbers indicating “less similar” or “farther”. The overall index is basically the rank of each MSA based on the total score from all the four indicators.

We can see from Table 1 that Poughkeepsie is Winnipeg’s closest city-region among the MSAs in the United States as indicated by the computed Overall Index. Among these top 10 MSAs; Columbia (3<sup>rd</sup>) is the most similar to Winnipeg in terms of Population Size, Oxnard (12<sup>th</sup>) based on Human Capital, Rochester (1<sup>st</sup>) based on Occupational Structure, and Syracuse (1<sup>st</sup>) based on Industrial Structure.

Table 1: Top 10 most “similar MSAs” to Winnipeg by Overall Index

Metropolitan Statistical Areas		Indicators				Overall Index
		Population size	Human Capital	Occupational Structure	Industrial Structure	
Poughkeepsie	NY	8	28	45	16	1
Springfield	MA	4	82	3	13	2
Worcester	MA	17	65	10	17	3
New Haven	CT	32	58	12	11	4
Oxnard	CA	22	12	56	79	5
Allentown	PA	23	60	76	21	6
Syracuse	NY	13	164	14	1	7
Rochester	NY	90	120	1	40	8
Columbia	SC	3	199	20	41	9
Buffalo	NY	126	131	13	9	10

Table 2 below shows the top 10 most similar MSAs to Winnipeg by indicator. In terms of Population Size, the top 3 closest MSAs to Winnipeg are McAllen, Akron and Columbia with population size around 700 thousand. For the Human Capital indicator, Atlantic City ranks the closest while for the Occupational Structure indicator, the closest is Rochester and for Industrial Structure, the closest is Syracuse.

Table 2: Top 10 most “similar MSAs” to Winnipeg by Indicator

Rank	Population			Human Capital	Occupational Structure	Industrial Structure
	<b>Winnipeg</b>	<b>MB</b>	<b>(694,665)</b>			
1	McAllen	TX	(700,634)	Atlantic City	NJ	Rochester NY
2	Akron	OH	(700,943)	Las Vegas	NV	Syracuse NY
3	Columbia	SC	(701,464)	Reno	NV	Pittsburgh PA
4	Springfield	MA	(686,174)	Orlando	FL	Waco TX
5	Greensboro	NC	(685,378)	Ukiah	CA	Scranton PA
6	Sarasota	FL	(682,833)	Vallejo	CA	Lexington KY
7	Stockton	CA	(673,170)	Providence	RI	Indianapolis IN
8	Poughkeepsie	NY	(671,538)	Santa Rosa	CA	Fargo ND
9	Knoxville	TN	(667,836)	Salem	OR	Mobile AL
10	Little Rock	AR	(654,583)	Phoenix	AZ	Buffalo NY

**B. Population Similarity**

Figure 1 below shows the 2006 population size of Winnipeg and its top 10 closest MSAs by Overall Index. As pointed out in the previous Section, Columbia is the most similar MSA to Winnipeg in terms of population size which can be clearly seen in Figure 1. Springfield is the next closest with a population size almost the same as Poughkeepsie. We can further observe that the metropolitan area of Buffalo is the “farthest” from Winnipeg among the MSAs with a population size of over 1 million.

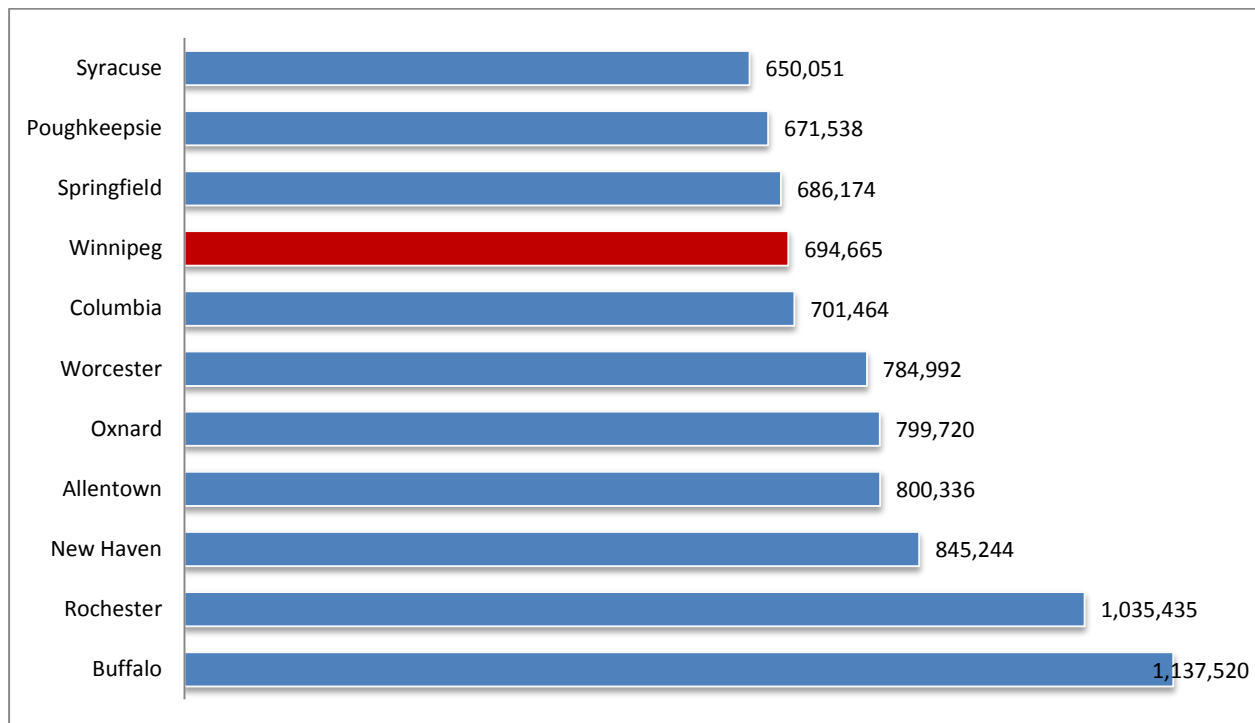


Figure 1: Population Size (2006) of Winnipeg with its top 10 closest MSAs by Overall Index

In the next three sub-sections the actual data on the three indicators for Winnipeg and its top 5 closest MSAs are plotted in radial diagrams. These diagrams will give us an overview of the degree of closeness of the top 5 closest MSAs to Winnipeg in terms of Human Capital, Occupational Structure and Industrial Structure. As shown in Table 1, the top 5 closest city-regions based on the Overall Index include Poughkeepsie, Springfield, Worcester, New Haven and Oxnard. Note that in the graphs for sections C, D and E, a red line is used in plotting the data for Winnipeg and a blue line for the other 5 city-regions.

### **C. Human Capital Similarity**

The Human Capital index as described in the methodology section includes three population characteristics: educational attainment, immigration level and age distribution. All of these are in percent except for the number of PhDs per 1000 population.

The following information can be deduced from Figure 2:

- Among the top 5 closest MSAs it appears that Oxnard is the most similar to Winnipeg in terms of the Human Capital indicator.
- The majority of the 5 MSAs have a slightly lower percentage of foreign-born individuals and individuals with No High School educational attainment compared to Winnipeg.
- These MSAs tend to have a higher percentage of individuals with at least a Bachelor of Science degree among the educational levels considered which is also higher compared to that of Winnipeg's.
- Considering the various age groups, these city-regions are similar to Winnipeg with a higher percentage of individuals in the 18-64 years old age group.

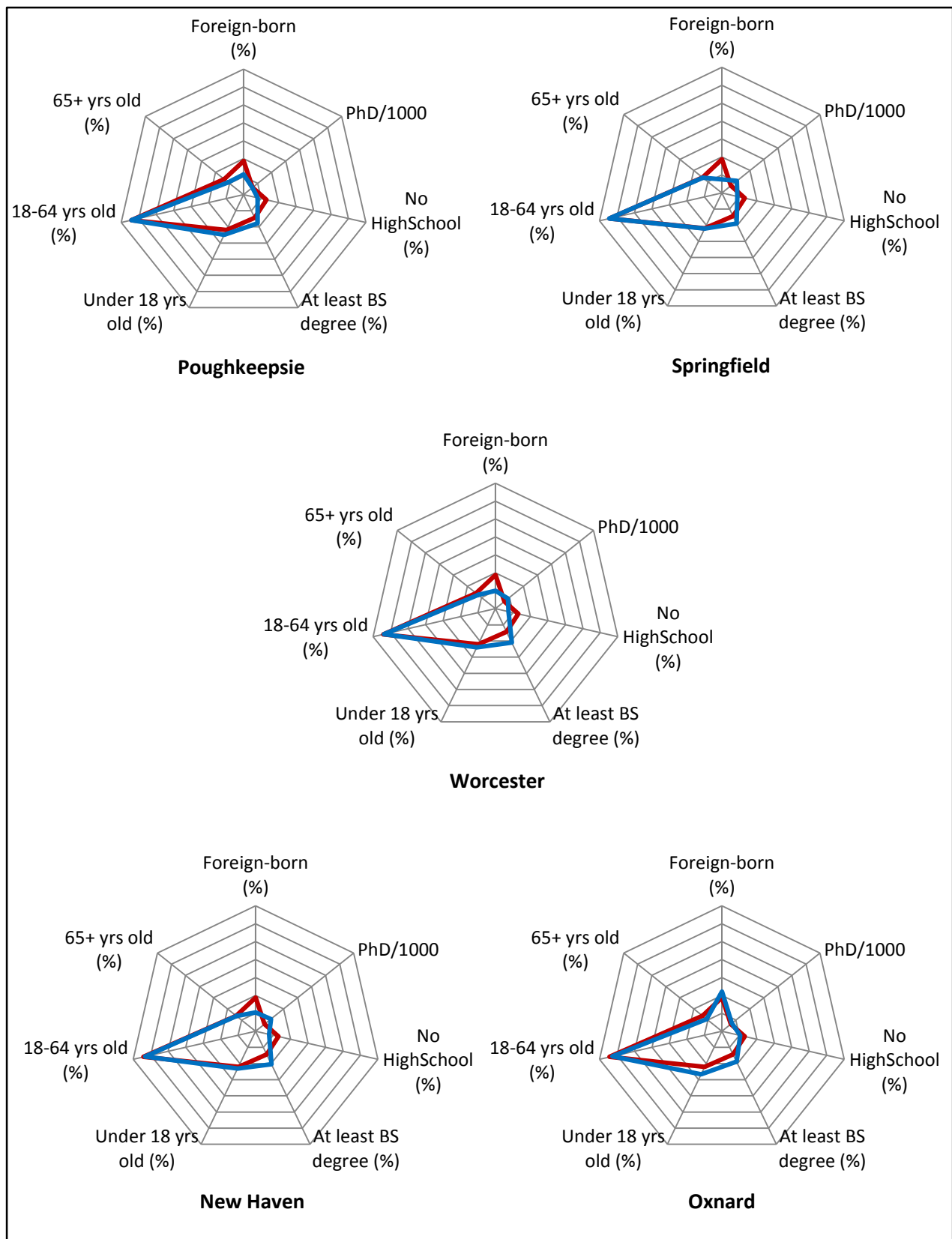


Figure 2: The actual data on the Human Capital indicator for Winnipeg and its top 5 most similar MSAs

#### **D. Occupational Similarity**

The Occupational Structure covers 14 occupational categories which are comparable for both Canada and the United States. The list of occupational categories is included in Figure 3 below.

We can see from the radial diagrams in Figure 3 that:

- The distribution of the employment level in various occupational groups of the metropolitan area of Springfield appears to be the closest to Winnipeg among the top 5 MSAs.
- Except for Winnipeg's slightly higher percentage of individuals employed in Productions Occupations (OC51), it generally appears to be similar to the top 5 MSAs in terms of the distribution of employment levels in various occupational groups.
- Similar to Winnipeg, the five MSAs tend to have a higher proportion of individuals in the Professional and Related Occupations (OC15); Management, Business, Financial Occupations (OC11); Office and Administrative Support Occupations (OC43); and Sales and Related Occupations (OC41). On the other hand, these MSAs have lower proportion of individuals in the Healthcare Support Occupations (OC31) and Farming, Fishing, and Forestry Occupations (OC45).

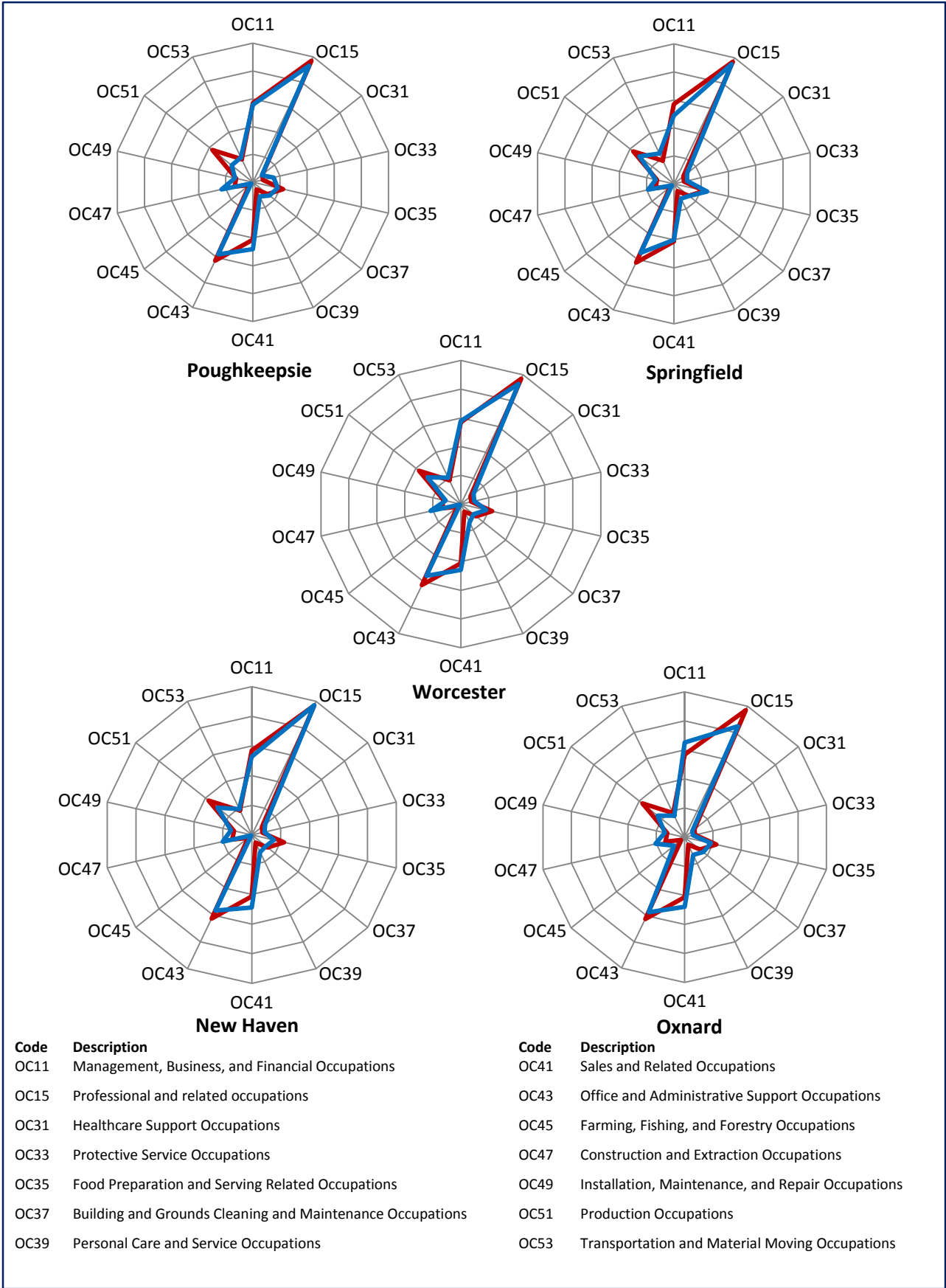


Figure 3: The actual data on Occupational Structure for Winnipeg and its top 5 most similar MSAs

## **E. Industrial Similarity**

The Industrial Structure indicator covers the 2-digit level NAICS codes that are comparable in both countries. The list of industrial categories included in the analysis is shown in Figure 4.

From Figure 4 we can observe the following:

- Among the 5 MSAs, New Haven appears to have the most similar distribution of employment levels in various industries to Winnipeg.
- The majority of the MSAs have higher employment levels in Healthcare and Social Assistance (62), Retail Trade (44) and Manufacturing (31) which are generally higher than that of Winnipeg's.
- Winnipeg has a slightly higher employment level in Educational Services (61) than most of the top 5 MSAs.



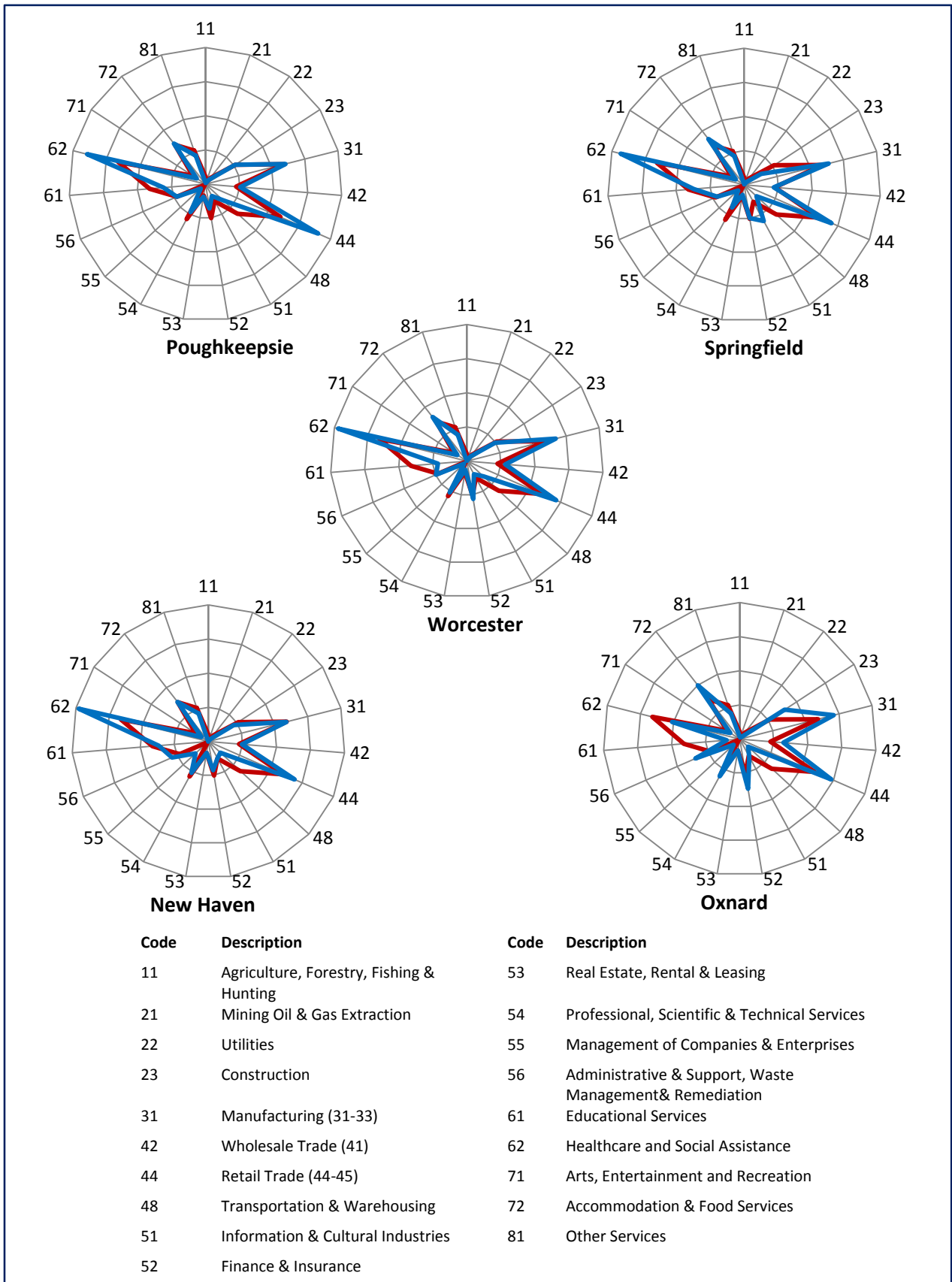


Figure 4: The actual data on the industrial structure for Winnipeg and its top 5 most similar MSAs

## F. Benchmarking Analysis

The data on economic measures such as employment growth rate (compound annual growth rate), employment income (median employment earnings) and unemployment rate of the top 10 closest MSAs to Winnipeg were gathered and is summarized in Table 3 below. Included in the table are the rankings of the city-regions data which are located on the right side of each value. Based on the information presented in Table 3, we can see that:

- Winnipeg performs better than all its closest neighbours in terms of employment growth rate (highest) and unemployment rate (lowest). The CMA's median employment income is also among highest (top 4).
- Among the closest neighbours of Winnipeg, the metropolitan area of Worcester seems to be not performing so well for having the lowest employment growth rate and the second highest unemployment rate. However this MSA has the second highest employment income which is almost equivalent to the income level of the top ranking city - Poughkeepsie.
- Columbia is another MSA that appears to be lagging behind with its lowest employment income and highest unemployment rate in 2010. However its employment growth rate is recorded as the second highest among the city-regions.

Table 3: Benchmarking survey for the city of Winnipeg

City-Regions (CMAs/MSAs)		Employment Growth Rate (2003-2009)	Employment Income in USD (2010)	Unemployment Rate (2010)
<b>Winnipeg</b>	<b>MB</b>	<b>1.16% (1)</b>	<b>\$31,574 (4)</b>	<b>5.7% (1)</b>
Poughkeepsie	NY	-0.66% (9)	\$33,859 (1)	9.3% (4)
Springfield	MA	0.07% (4)	\$30,068 (8)	10.3% (7)
Worcester	MA	-1.19% (11)	\$33,573 (2)	11.4% (10)
New Haven	CT	-0.64% (8)	\$32,994 (3)	10.9% (9)
Oxnard	CA	-0.37% (5)	\$31,062 (5)	10.2% (6)
Allentown	PA	0.20% (3)	\$30,736 (6)	10.8% (8)
Syracuse	NY	-0.71% (10)	\$30,247 (7)	8.7% (3)
Rochester	NY	-0.47% (6)	\$29,977 (9)	8.3% (2)
Columbia	SC	0.40% (2)	\$26,281 (11)	11.5% (11)
Buffalo	NY	-0.50% (7)	\$28,954 (10)	9.7% (5)