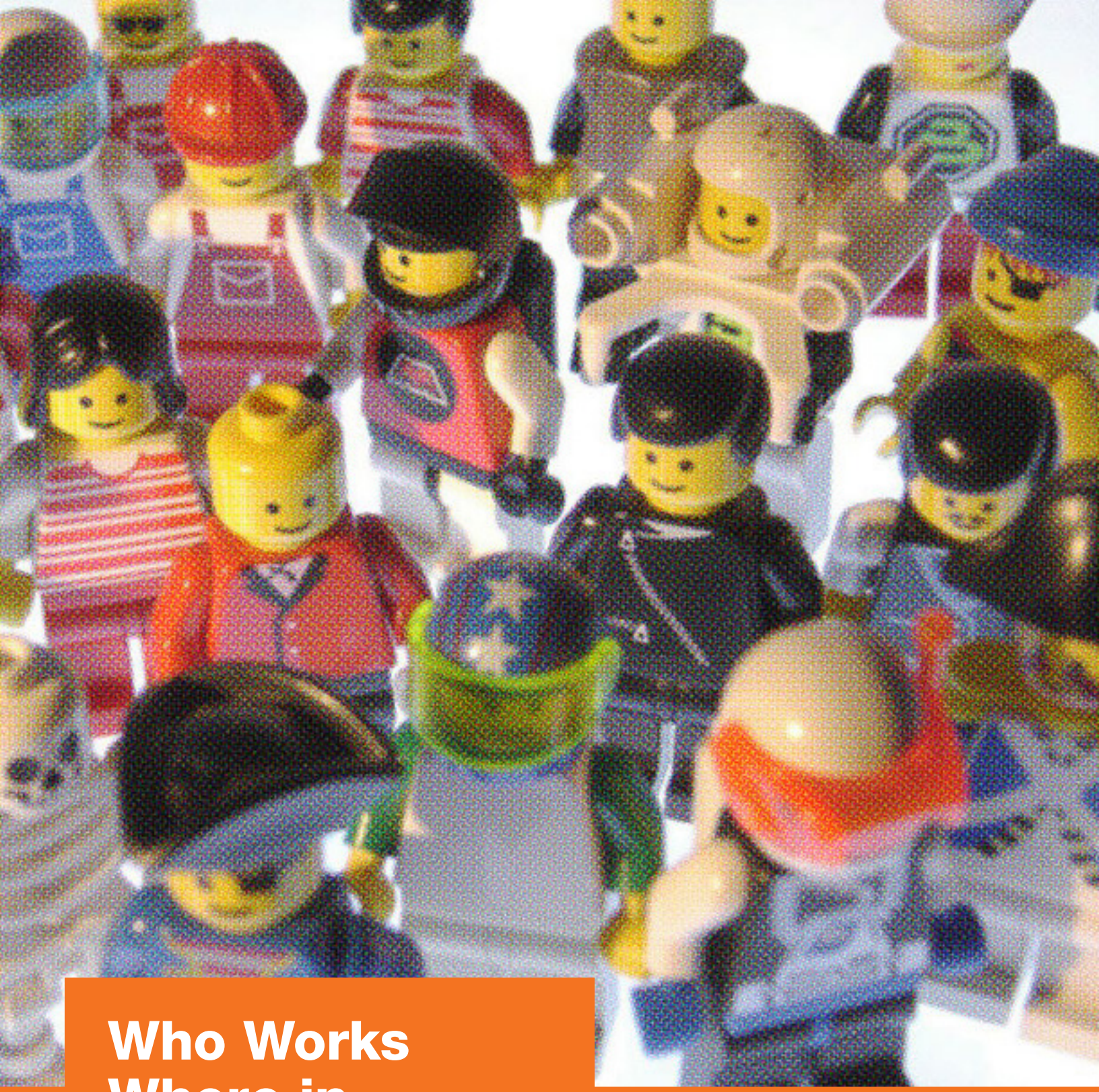
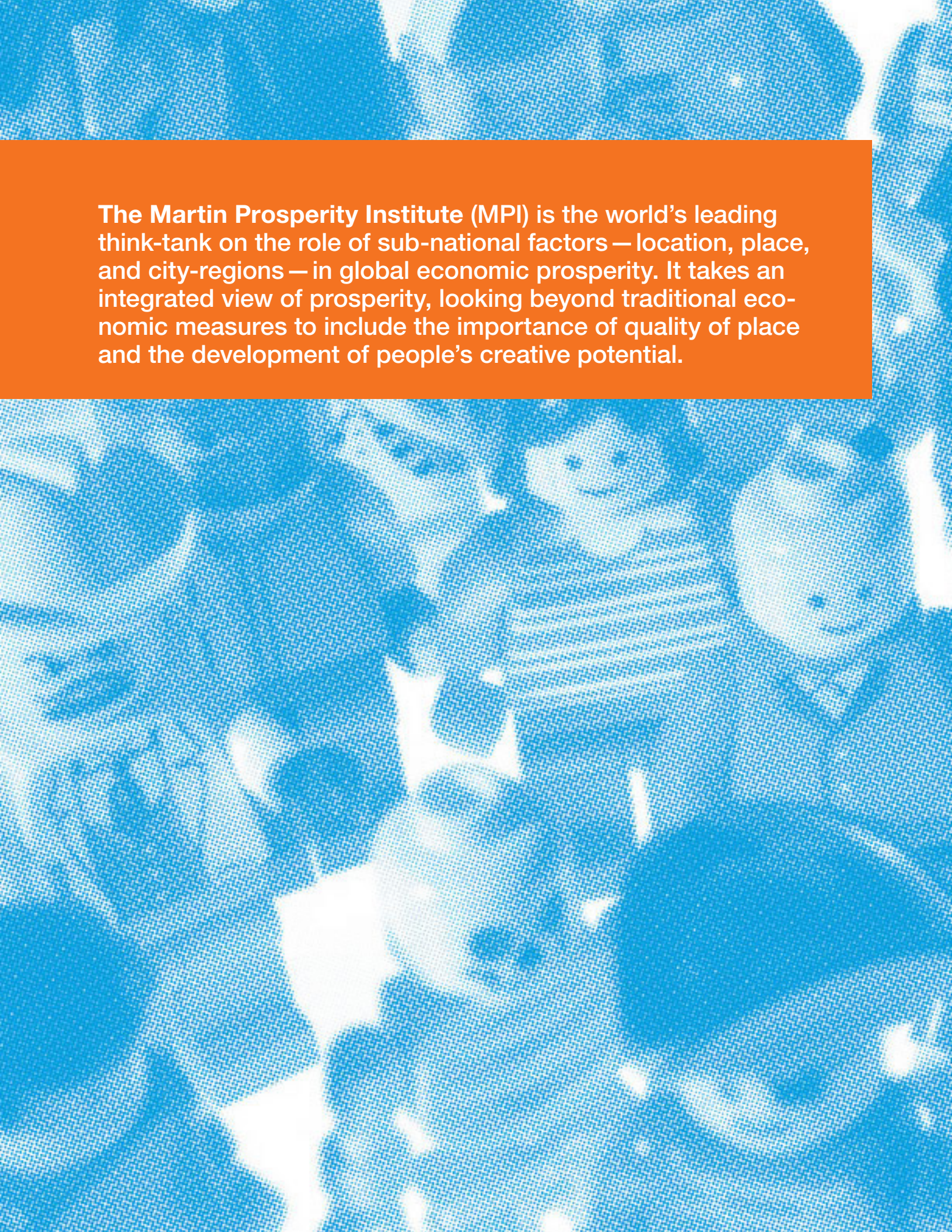
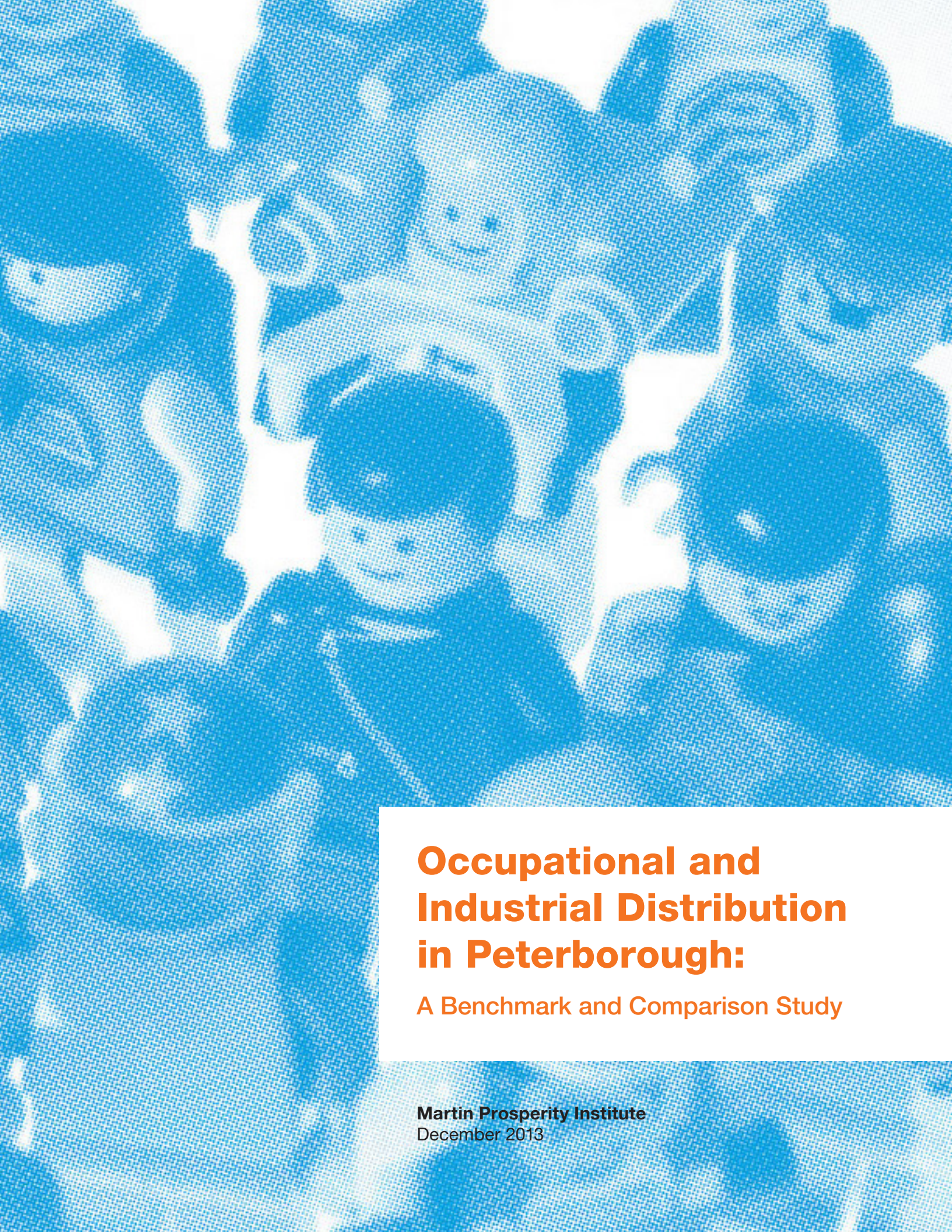


Who Works Where in Peterborough: Overview

MARTIN Prosperity Institute



The Martin Prosperity Institute (MPI) is the world's leading think-tank on the role of sub-national factors — location, place, and city-regions — in global economic prosperity. It takes an integrated view of prosperity, looking beyond traditional economic measures to include the importance of quality of place and the development of people's creative potential.



Occupational and Industrial Distribution in Peterborough:

A Benchmark and Comparison Study

Martin Prosperity Institute
December 2013

BACKGROUND

There has been a general consensus about the shift in industrial structure that has taken place over the last decades, where explanations for regional growth have transformed from exports and trade to post-industrial productivity based on innovations and divisions of labour to growth from knowledge and talent. However, most analyses made are based on industry data, and the categorization by industry is product focused – what is being made? But in order to really capture and understand these industry structure transformations and regional differences, we need to ask how is it made? The current economy is driven at least as much by services as manufacturing and the focus within industries includes a greater emphasis on process and process-improvement. Understanding today's economic structure requires investigating occupation (what you do) as well as industry (where you work).

While there has been increased interest in the role of occupations, e.g. in the work by Richard Florida and others, little has been done from a methodological and empirical approach to find out exactly how occupational analysis plays out on the ground in real places and how the study of the relationships among occupations and across industries can further illuminate national and regional economic performance. Prior work in cluster analysis has generally taken an "either/or" approach towards occupational and industrial analysis. Michael Porter's industrial clustering model, as typically implemented, has illuminated the cross-fertilizing linkages across industries, but this is only half the story. What drives these clusters is not only the industry, but also the people and their skills and occupations, and therefore, such cluster analysis must be expanded. In other words, occupations AND industries are both important and simultaneously evaluating them will lead to a better understanding of national and regional competitiveness and possibilities for growth.

However, earlier work by King, Mellander and Stolarick mapped the occupational distribution within industries in the United States, Canada and Sweden. In particular, it examined the occupational composition in terms of working task (what you do) and educational background (what did you study for) of the labour force within each industry. The research also identified the industry sectors with the largest concentrations of service and manufacturing occupations. In addition, the research examined whether certain industries have managed to harness creativity among the labour force to a larger extent in any of the three countries. The study by King, Mellander and Stolarick also compared the regions of Boston, Toronto and Stockholm in the same type of framework.

Currid and Stolarick specifically investigate a methodological and empirical approach to discover how the study of occupations can illuminate the study of industry. They present information to support the argument that an understanding of both regional industries and occupations is needed. They provide an illustrative case study of the ICT sector in Los Angeles to show how this approach leads to a better understanding of regional competitiveness and growth.

PROJECT GOALS

The idea behind this project to develop a matrix for Peterborough that shows which specific occupations are employed in which specific industries and then to compare the matrix for Peterborough with selected benchmark regions. If complete detailed employment data for all residents was available, such a matrix could be easily constructed. However, that is not that case. And while some sampled data is available, other more detailed information is limited to either industries or occupations. In order to develop as complete a picture of the regional economy as possible, multiple viewpoints are needed. This project identifies the key benchmark regions for Peterborough from Canada and the US and then delivers a variety of different viewpoint of this data.

This study maps and integrates data for Peterborough Ontario (CMA) in the same type of framework. Various data sources identify industrial and occupational structures in combination with educational structures. This creates a better understanding of the local economy, also in relation to selected benchmark regions in the US and Canada and provides a better understanding of the Peterborough industry and occupation structure in relation to Ontario and Canada.

The significant amount of output that follows includes a report, including maps, graphs, tables and a summary and contextualization of the results. The report focuses on the structures of occupations, education levels and industry structures. The report includes an appendix that shows how all occupations are allocated to the Creative, Service, Working, and Farming categories and how all industries are allocated to the Goods Producing, Service, Knowledge, and Farming Sectors. In addition to these higher level categories, more detailed information on industries and occupations both separately and jointly are presented.

OVERALL TAKEAWAYS — WHO WORKS WHERE IN PETERBOROUGH?

Peterborough is like Ontario — Especially the other non-major metro CMAs

In general, Peterborough's industry and occupation employment composition looks similar to the Province of Ontario – with a strong similarity at times to the other benchmark CMAs. Brantford has more manufacturing and working class. Guelph has more both working and creative class workers. Sudbury is stronger in extraction-related industries. Kingston has more both creative and service workers. But, in general, Peterborough stays generally in the middle of the ranking when compared across a variety of measures to the other Ontario CMAs. The one key exception is the median age of the population which is higher in Peterborough than in any of the Ontario or US benchmark regions.

Incomes are occupation not industry driven

When looking at employment, the data clearly illustrate that incomes are determined more by the occupation in which an individual is employed rather than their industry. For example, people working in Creative class occupations earn higher incomes than those in the other occupational classes, regardless of the industry in which they work. More specifically, these higher incomes were earned regardless of employment in the knowledge, service, goods producing or commodities industries. Interestingly, in Peterborough, Creative class employees within the service and good producing industries had higher employment income than any occupation within the knowledge industry. It is clear that among Peterborough, the Province of Ontario and the peer benchmarking CMAs, occupations are more important as a determinant of employment incomes than employment industry with the Creative class earning the highest incomes.

Employment — Occupation/Industry

Service Class: Found within many industries

In both Peterborough and the benchmark CMAs, many industries employed a large number of people in Service class occupations. Some of the largest industries in Peterborough have a large share of employment in the Service class. For example, the retail trade, and accommodation and food services industries have more than 80 percent of the total employment within Service class occupations. Similarly, other top industries, such as the health care and social assistance, also have a large share of the total employment in the Service class though in different occupations. The occupations which employ the largest number of people in Peterborough are primarily in the Service class. There was limited diversity in the industries of employment as the retail trade accounts for a large share of the total employment in many of the top occupations.

Creative Class: Education, professional services, healthcare

In line with expectations, Creative class workers are most likely to work in education, professional services, and health care occupations. In Peterborough, Creative class occupations are found in numerous industries. For example, Peterborough displays some interesting findings as the manufacturing industry has a great opportunity to leverage the large number of Creative class workers in the natural and applied sciences within manufacturing. Also, within the top three largest Creative class occupations in Peterborough, manufacturing was found to be the largest or second largest industry employer.

Working: Manufacturing (creative employment), construction, transportation

In Peterborough, the working class is working in traditional fields associated with blue collar workers: manufacturing, construction, and transportation occupations. As the earlier maps displayed, manufacturing, primarily construction, has been moving outside of the city of Peterborough into its surrounding areas. While this may be a concern, Peterborough has a unique opportunity as it has many Creative class employees in goods producing industries.

Creative occupations — diversity across many different occupations

In Peterborough, the creative employment is distributed across many occupations and further within in each industry while Service class occupations often dominate the total employment within particular industries. Creative class employment is distributed more evenly across many different industries.

Industry distribution — Peterborough (CSD) and the rest of the CMA

Industries are generally concentrated in the city of Peterborough rather than the greater CMA, with exceptions. Industries that generally cluster within cities such as cultural industries or arts and recreation have consistently remained within the city of Peterborough from 2007–2011. Retail trade, wholesale trade and real estate are examples of industries that have had a consistent presence in Peterborough's city limits and across the CMA as a whole. The city has been able to attract employment in the professional, scientific and technical services industry within the city from 2007–2011. This is a positive as this industry often includes higher paying Creative class occupations that often lead to greater productivity and job creation.

Expected employment growth — more of the same but more creative

Projected growth (through 2020)

Creative 23%
Service 19%
Working 11%

Creative workers in Service Industry — Less average education; highest pay

Creative class workers in Peterborough's Service industries on average have less education than Creative class workers in knowledge industries, but they earn more. This is likely attributed to the unique nature of these occupations within the service industry which can include managers in sales and other higher paying Creative class occupations.

Creative workers in manufacturing industry — 18% of total manufacturing employment

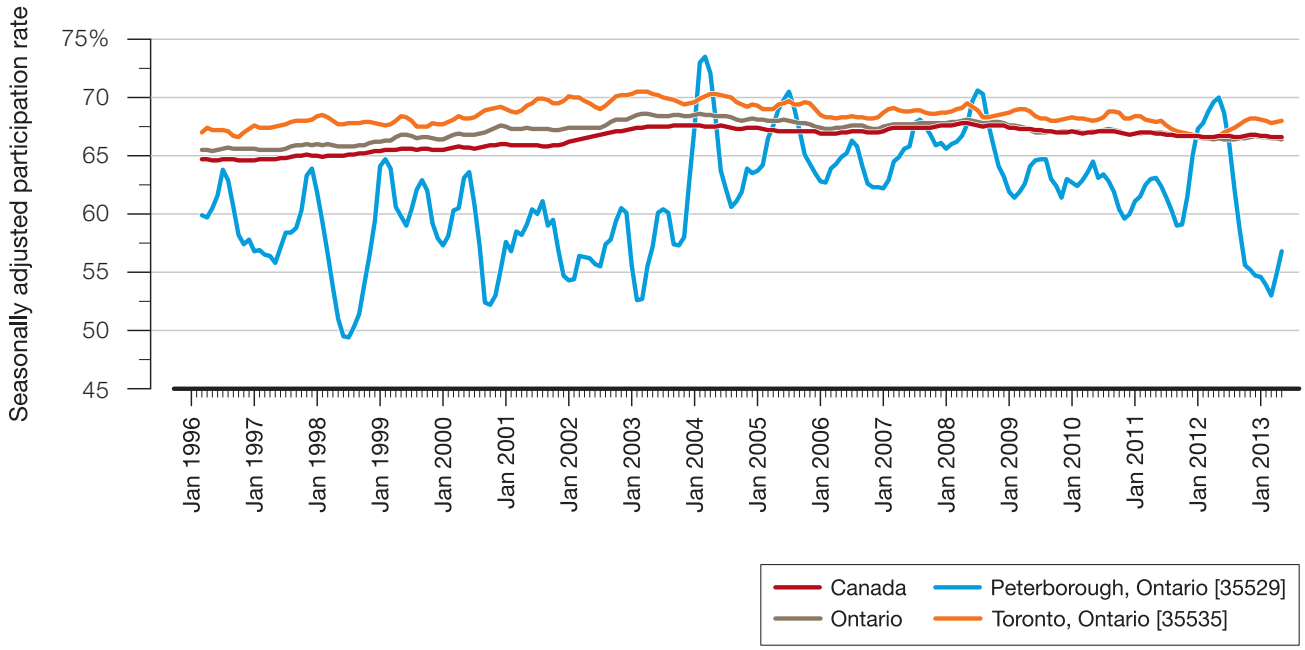
Interestingly, Peterborough has a higher than average share of its Creative class workers employed in the manufacturing industry. Creative class comprises 18 percent of all employment within Peterborough's manufacturing industry which is much higher than most of the Canadian benchmarking CMAs.

More recent data on Peterborough's employment situation

The exhibits below were created using labour force survey estimates for the CMAs of Peterborough and Toronto, based on 2006 census boundaries, along with Ontario and Canada. The data is seasonally adjusted (employment x 1,000) by Statistics Canada which attempts to adjust the data by eliminating fluctuating data due to seasonal movements like holidays, climate, cycles related to crops and other variables. Statistics Canada has also applied a 3 month moving average to the data. Questions and concerns have arisen in regards to the reliability, credibility, and accuracy of selected Statistics Canada data, especially for smaller metros, and this can be seen in the extreme fluctuation in Peterborough's employment data.

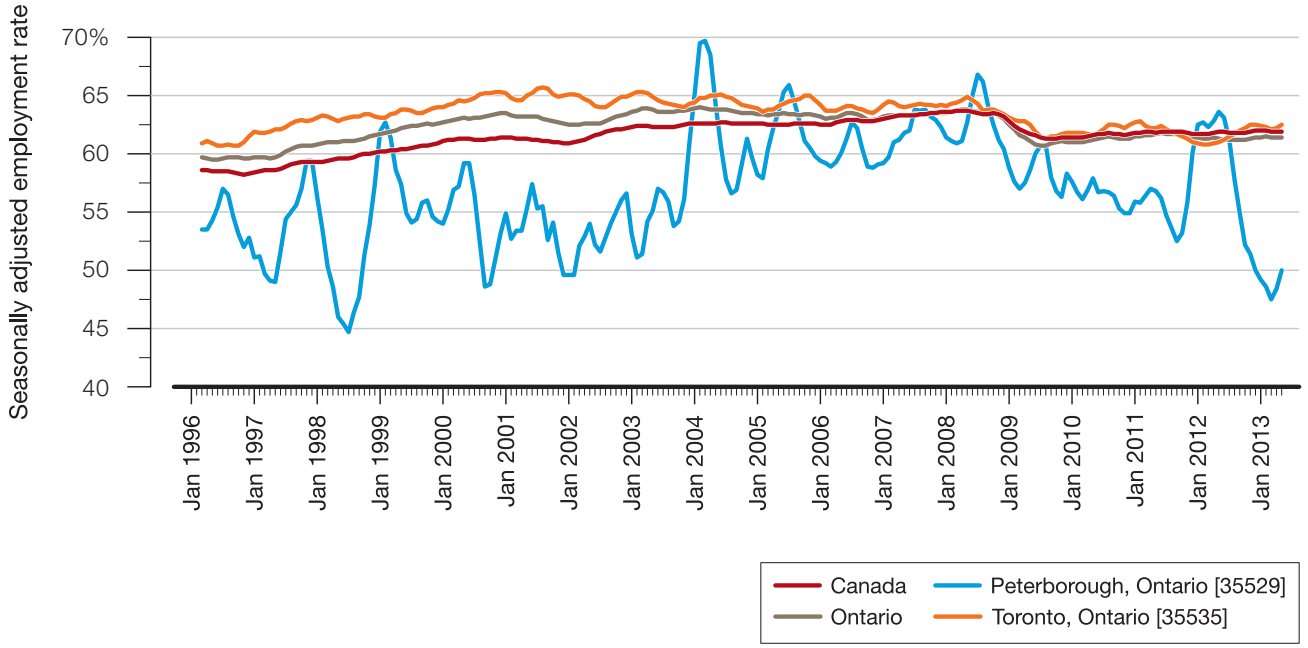
Exhibit 1, **2**, and **3** present the participation, employment, and unemployment rates for Canada, Ontario, Toronto CMA, and Peterborough CMA from January 1996 to May 2013. As the exhibits display, the Peterborough participation rate fluctuates at a greater rate than Toronto, Ontario and Canada. While Toronto, Ontario, and Canada's participation rate as presented in **Exhibit 1** are unstable at times, and possibly inaccurate, the employment and unemployment levels of these three are generally very similar. Peterborough's employment and unemployment rates on the other hand bounces from being similar to the other three to much lower or higher. If these fluctuations are true, then thousands of employees are laid off and hired within a period of a few months. For example, in October 2012 the unemployment rate in Peterborough was 6.1 percent, which is much lower than Toronto, Ontario and Canada, but in the short time span to May 2013, the unemployment rate jumped to 11.9 percent, which then was much higher than the others three areas. This jump equates to 4,000 people becoming unemployed within this period. The opposite is also found within the 1996 to 2013 time frame where within a few months thousands of people that were unemployed gained employment.

Seasonally adjusted participation rate, March 1996–May 2013 — Exhibit 1



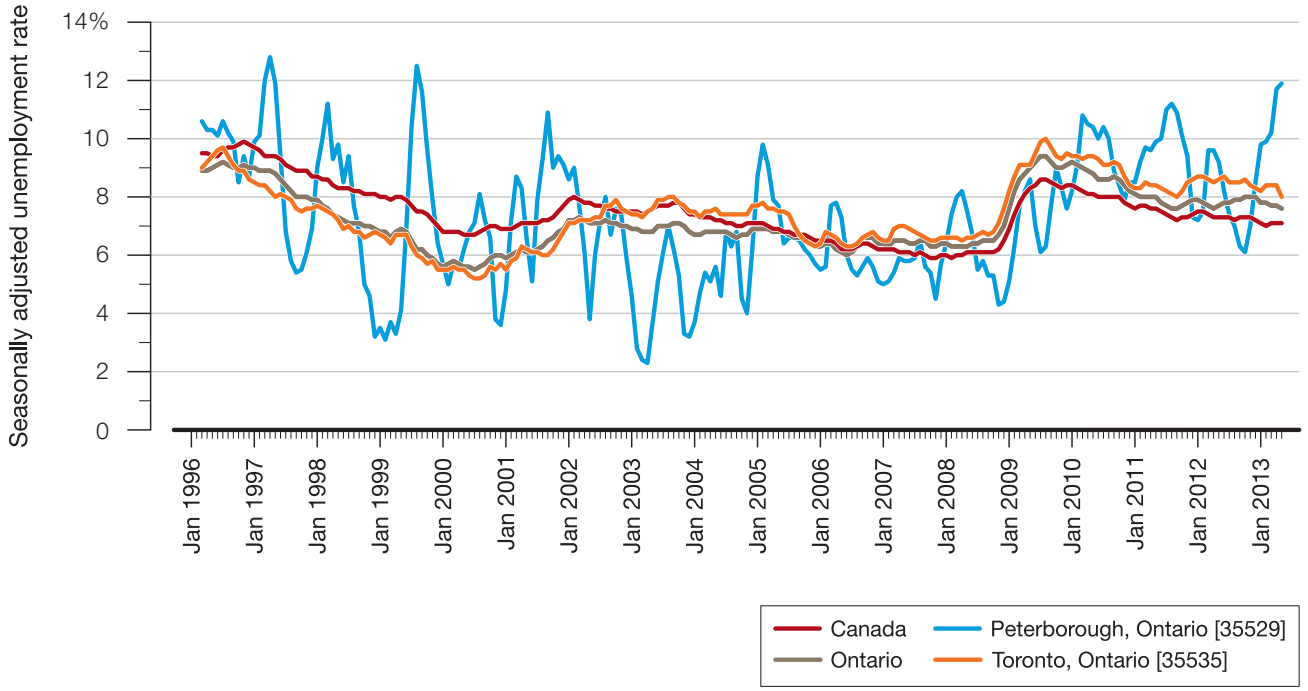
Seasonally adjusted employment rate, March 1996–May 2013

Exhibit 2



Seasonally adjusted unemployment rate, March 1996–May 2013

Exhibit 3



Additional research opportunities

Additional reports to be explored should examine in greater detail the exact companies within the occupations in Peterborough (for example what companies are fuelling the Creative class growth in manufacturing), perhaps through stakeholder interviews. Additionally, it is worthwhile to carry out similar studies for Peterborough's peer non-major metros in order to further compare their economic structure. Finally, these comparisons to benchmark peer cities in the US may also yield interesting results.

Final Comments

Our analysis produced two unique trends that have significant impacts on Peterborough's growing economy that can be leverage through innovative policy initiatives. First, Peterborough's manufacturing sector has a high percentage of its workforce employed in Creative class occupations. These highly skilled workers typically drive research and innovation while also developing more efficient and viable manufacturing processes. Leveraging this unique talent pool, is likely spur entrepreneurship and consequently, manufacturing growth. Second, Peterborough has a unique demographic position—it is the oldest community in Ontario. An aging demographic will likely lead to growth in the health services sector as well as low-skilled service sector occupations in multiple industries. Economic development policies would do well to build upon the professional and experiential assets of its aging community members to mentor younger generations of entrepreneurs, professionals, and high-skilled manufacturers already living in the metro.

Peterborough's economic structure is very similar to that of Ontario as a whole. There are advantages for being 'like' Ontario but also disadvantages for not being 'unique' in terms of non-major CMAs in the Province. Its similarities allow the metro to act as a test market for development strategies that can then be rolled our across the provinces. Its similarities also mean that it has to compete with other non-major CMAs for ever limited amount of Provincial Economic development resources.

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