MARTIN
Prosperity Insights

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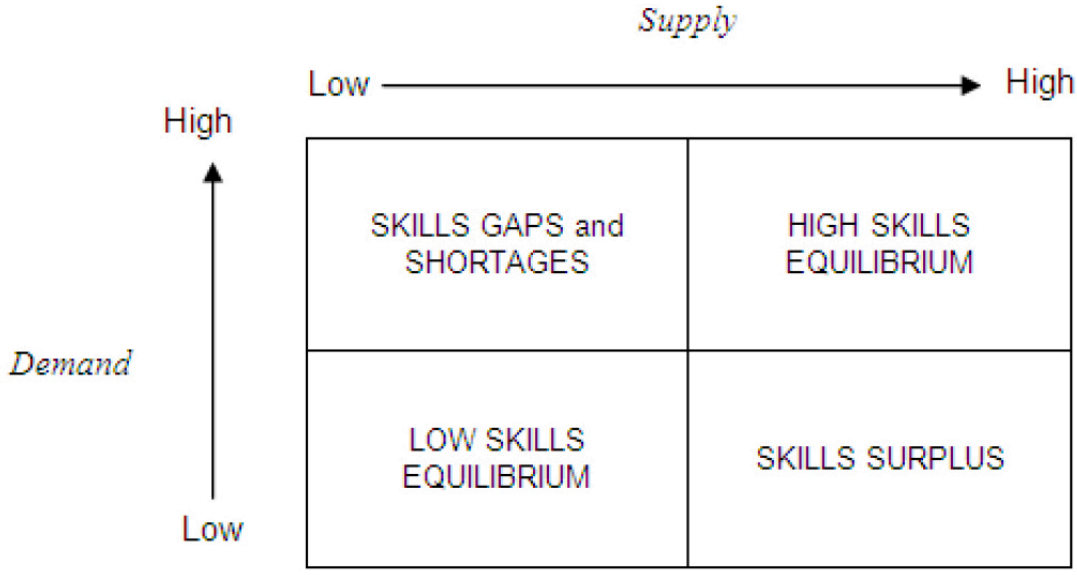
High Skill Equilibrium Insight

An ongoing project at the Martin Prosperity Institute has been analyzing occupational differences in the labour force, using skill as a lens through which to categorize labour force changes and demands in the knowledge economy. It has been argued that the creation of highly skilled jobs and workers is a key factor of innovation and growth. This week's Insight looks at highly skilled occupations in the OECD working paper; *Skills for Competitiveness: Country Report Canada*. The report is part of an ongoing project, Skills for Competitiveness, by the Organisation for Economic Co-Operation and Development (OECD) that covers three countries: Canada, the U.K. and Italy. The goal of the OECD study was to investigate how regions can move towards a higher "skill equilibrium" by examining the attributes of a high wage economy that has shifted from a low value equilibrium (defined as lower value products, services and wages) to a high value equilibrium (defined as higher value products, service and wages).

This Insight will discuss findings from the Canadian case study, which uses 2006 Census data that has been aggregated at the Employment Insurance (EI) level, to analyze the supply and demand of the labour force. In the Canadian context, it is argued it is important that the supply of highly skilled people is matched by the demand for higher skills within the workforce. Using Ontario as an example, the report explains the policies, institutions, educational institutions, employers, government and other factors influencing the move towards higher skills on both the demand and supply side. The exhibit below provides an example of how an economy can move towards the high skill equilibrium, which is essential for a successful, innovative high wage economy. A combination of a high demand for highly skilled individuals along with a high supply of these high skill workers, leads to the high skills equilibrium.

Moving from a low to high-skilled equilibrium (adapted from Green et al., 2003) Exhibit 1



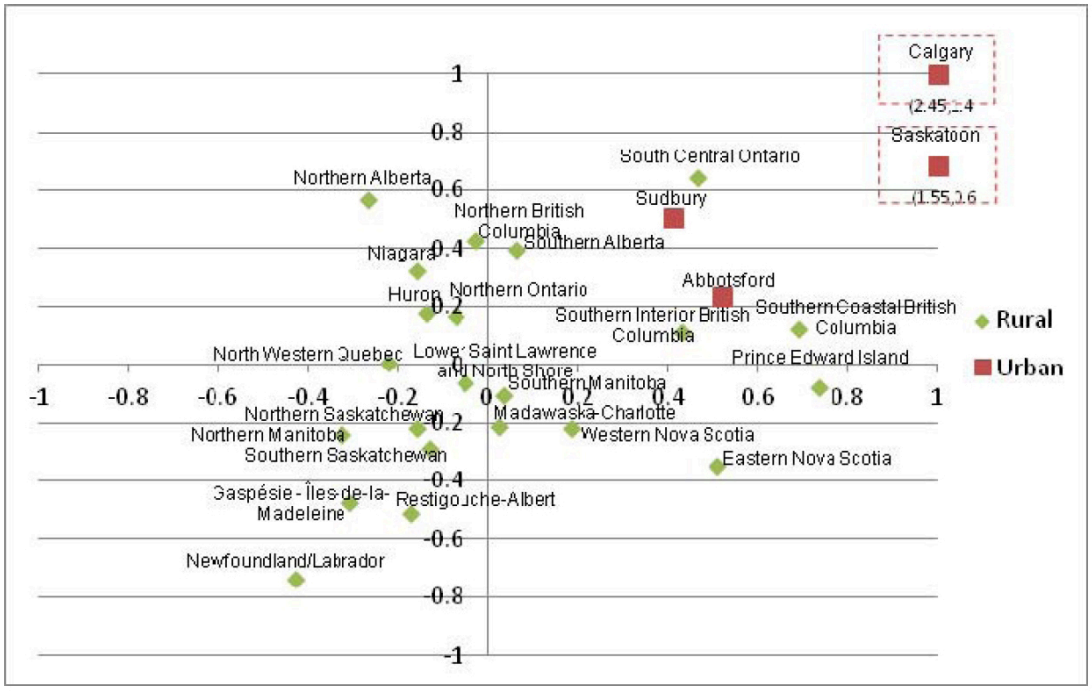
Source: OECD, 2009

Supply and Demand

Exhibit 1 was applied to the following charts below in order to display scatter plots for Canada according to where the main employer is within primary, secondary or service sectors. The primary sector is the sector of the economy that deal with natural resources (such as farming and oil), the secondary sector is the sector that deals with production of manufactured goods and the service sector encompasses the production of services. The charts display where different EI regions in Canada fall within the high skills equilibrium. EI regions are the 58 Employment Insurance regions within Canada that are designed to provide comparable employment insurance benefits to Canadians. The OECD used EI regions for supply and demand of skills data, as they incorporate travel to work areas, which are useful for this analysis. The regions are plotted on the graphs according to skills supply (X-axis) and skills demand (Y-axis). Urban EI regions are red dots, rural regions are green dots and metropolitan regions show up as blue dots on the graphs.

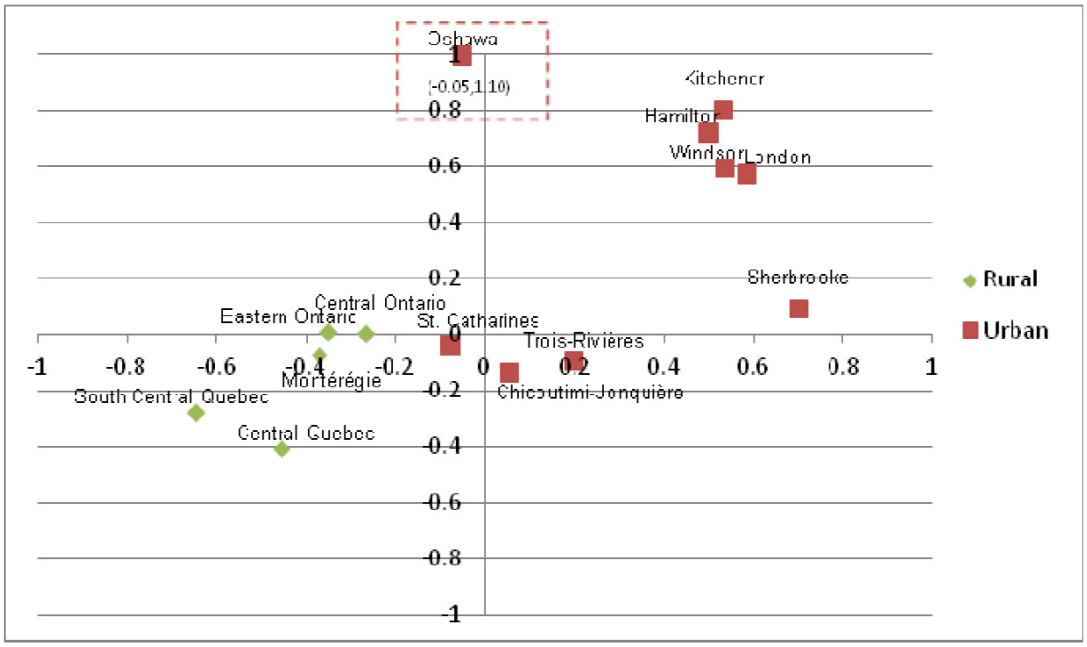
When looking at **Exhibit 2**, the four urban EI regions where the primary sector is the main employer, they all have high skill equilibrium. There are also some rural regions such as Southern Alberta and South Central Ontario in which this is also the case. Generally speaking though, **Exhibit 2** shows that for the most part, many rural areas have a low supply and demand for higher skills. For regions such as Niagara and Huron, we can see that there is a high demand for high skills, but that the supply is not sufficient. In contrast, regions such as Eastern Nova Scotia have an excess supply of highly skilled people, but a low demand for their skills. The exhibit allows us to see what policy changes need to be made in the different regions to address the needs within their own high skill economy. For example, Newfoundland and Labrador has a low supply and demand of high skills and is currently within the low skill equilibrium. Policy changes within investment in local education and skills training, along with tax incentives for businesses, could help a region like Newfoundland.

EI regions in Canada with a strong primary sector, 2006 — Exhibit 2



EI regions in Canada with a strong secondary sector, 2006

Exhibit 3



EI regions in Canada with a strong service sector, 2006

Exhibit 4

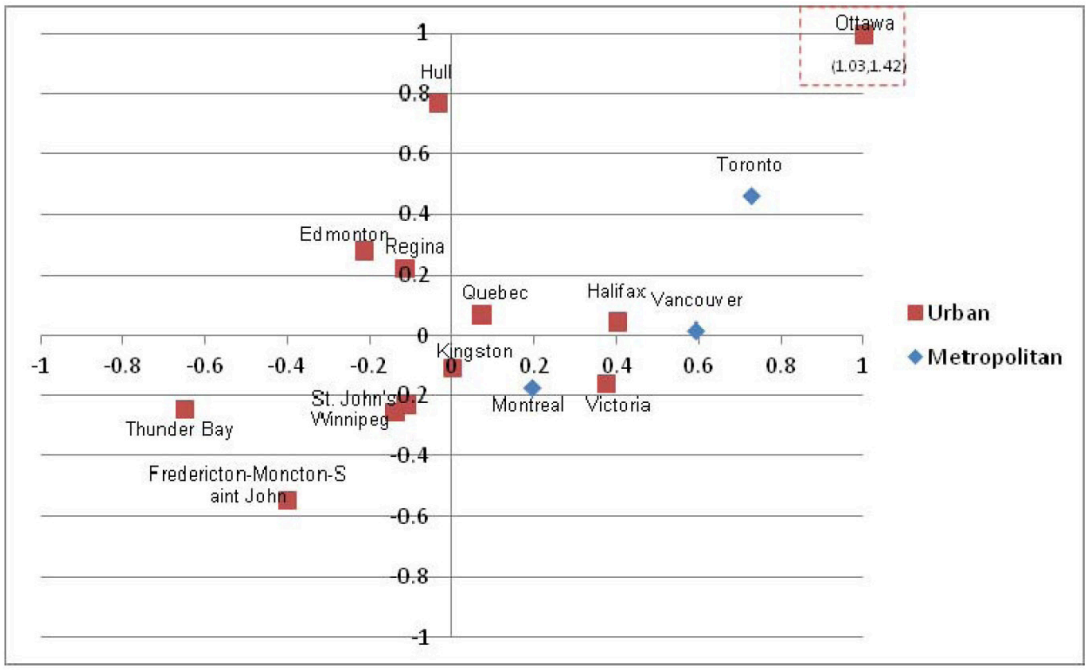


Exhibit 3 looks quite different from **Exhibit 2** as there are much fewer rural and many more urban regions in which the primary employer is within the secondary sector. Once again though, the urban areas fall on the higher skill plot of the graph, while the rural regions fall in the lower skill plot. Kitchener, London and surprisingly Hamilton are examples of regions that fall within the high skill equilibrium. Central and South central Quebec were the only regions on this scatter plot to have both a low supply and demand of high skills. It would be in the benefit of these regions to address the current low skills equilibrium through institutional changes such as educational funding and job training to increase the low supply of skills.

Lastly **Exhibit 4**, unlike the other exhibits, displays regions in which the service sector is the main employer. Metros and urban areas dominate this graph. Ottawa is the region that falls upon the highest point within the high skill equilibrium, of any of the graphs, as there is the highest demand and supply of high skills within Ottawa. This is consistent with the MPI's finding that Ottawa has the highest Creative Class occupational percentage in Canada. The metro of Toronto falls just below that of Ottawa and Fredericton unfortunately displays the poor economic trend that is felt by many other Maritime regions, which is low skill equilibrium.

Overall, this analysis found that on average, urban areas were found to be better situated than rural areas as many of them had a low supply or demand (sometimes both) for high skills. Within the last decade, there have been improvements, but this needs to continue. From 2001–2006 all of the regions displayed above increased their proportion of people with post-secondary degrees, while all but four regions also increased their fraction of people employed within medium to high skilled jobs. This increase needs to continue as many regions still have low education rates and a small number of high skill occupations. What analysis like this can help with is insight into the policy change to address the needs of a particular region. When looking at the graphs above, it is slightly clearer why many regions have been unable yet, to transition towards a high wage, globally competitive economy.

For more information regarding the OECD reports and the Canadian case study, please follow the links below. The Canadian case study focused on Ontario, using the regions of Niagara and Kitchener-Waterloo and the industries; food processing, hotels and food retailing for analysis. The main idea behind the case studies was to show how local networks foster and promote innovation and thereby high skill jobs on both the demand and the supply side.

Canada
http://www.oecd-ilibrary.org/docserver/download/fulltext/5k9bb1vz5jhb.pdf?expires=1348238594&id=id&accname=guest&checksum=C06A1D9E5AAE3C0F4D327FB1D11ED0C7

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