OECD REVIEW ON LOCAL JOB CREATION: PREPARING FOR THE FUTURE OF WORK IN CANADA

Launch webinar
Thursday July 23, 2020

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COVID-19 has led to a labour market shock and the path to recovery remains unclear

- **Employment fell by 3 million** between February and April 2020, with gradual recovery starting in May and continuing in June
- **The unemployment rate sat at 12.3%** in June, a drop of 1.4 percentage points from a record-high of 13.7% in May

Unemployment rates, Canada provinces, April, May and June 2020

Source: Statistics Canada, Labour Force Survey June 2020
Several places were still struggling with the consequence of the previous 2008 crisis

- Almost half of Canada economic regions had experienced **higher unemployment rates in 2019 than in 2008**

### Share of economic regions within Canada provinces facing lower/higher unemployment in 2019 than 2008

<table>
<thead>
<tr>
<th>Province</th>
<th>Lower in 2019</th>
<th>Higher in 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manitoba</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Alberta</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>British Columbia</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ontario</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Quebec</td>
<td>16</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: the number in each column denotes the number of economic regions facing lower/higher unemployment rates in 2019 compared to 2008 within each province.

Source: OECD calculations on Statistics Canada.
COVID-19 is likely to accelerate the adoption of automation in the workplace

- **Automation accelerates in economic crises**, as firms replace workers performing routine tasks with a mix of technology and better skilled workers.

- **More firms could decide to invest in technology to automate the production of goods and services** to reduce their exposure to any future social distancing and lockdown measures.

- **Firms worldwide are starting to use robots to perform roles workers cannot do at home.** From 2020 to 2022 almost 2 million new units of industrial robots are expected to be installed in factories around the world.
Two potential scenarios of impact on a job from automation

High Risk
70% or above of tasks could be replaced (e.g. the job likely to be destroyed)

Significant Change
between 50% and 70% of tasks could be replaced (e.g. meaning skills training is likely required for those individuals to stay in the job).

Classical example of the bank teller

Did ATMs replace this job or change the types of tasks bank tellers perform?
The risk of automation varies across Canadian provinces

- The share of jobs at risk is highest in New Brunswick (47.1% or 160,000 jobs) and lowest in Ontario (44.9% or 3.2 million jobs)

Source: OECD calculations on Labour Force Survey
Differences are even more pronounced within provinces

- For example, in **British Columbia** there are almost **15 percentage points of difference** between the region facing highest and lowest risk.

**Regions facing the highest and lowest risk of automation within province in Canada, 2018**

Source: OECD calculations on Labour Force Survey
Some Ontario cities are more vulnerable than others

### Jobs at risk of automation by Census Metropolitan Area (CMA) in Ontario, 2018

<table>
<thead>
<tr>
<th>Census Metropolitan Area</th>
<th>Total employment (2018)</th>
<th>Jobs at high risk of automation</th>
<th>Jobs vulnerable to significant change</th>
<th>Total percentage of jobs that could be impacted</th>
<th>Total number of jobs that could be impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrie</td>
<td>106 750</td>
<td>16.1%</td>
<td>31.3%</td>
<td>47.4%</td>
<td>51 000</td>
</tr>
<tr>
<td>Brantford</td>
<td>55 500</td>
<td>18.7%</td>
<td>33.4%</td>
<td>52.2%</td>
<td>29 000</td>
</tr>
<tr>
<td>Greater Sudbury</td>
<td>68 289</td>
<td>15.3%</td>
<td>31.4%</td>
<td>46.7%</td>
<td>32 000</td>
</tr>
<tr>
<td>Guelph</td>
<td>75 695</td>
<td>15.3%</td>
<td>30.5%</td>
<td>45.8%</td>
<td>35 000</td>
</tr>
<tr>
<td>Hamilton</td>
<td>409 971</td>
<td>14.7%</td>
<td>30.1%</td>
<td>44.8%</td>
<td>184 000</td>
</tr>
<tr>
<td>Kingston</td>
<td>77 470</td>
<td>13.6%</td>
<td>29.3%</td>
<td>42.9%</td>
<td>33 000</td>
</tr>
<tr>
<td>Kitchener-Cambridge-Waterloo</td>
<td>287 332</td>
<td>15.6%</td>
<td>30.5%</td>
<td>46.1%</td>
<td>132 000</td>
</tr>
<tr>
<td>London</td>
<td>245 879</td>
<td>15.9%</td>
<td>31.1%</td>
<td>47.0%</td>
<td>116 000</td>
</tr>
<tr>
<td>Oshawa</td>
<td>215 875</td>
<td>15.0%</td>
<td>30.6%</td>
<td>45.6%</td>
<td>98 000</td>
</tr>
<tr>
<td>Ottawa-Gatineau, Ontario part</td>
<td>551 893</td>
<td>11.7%</td>
<td>27.8%</td>
<td>39.5%</td>
<td>218 000</td>
</tr>
<tr>
<td>Peterborough</td>
<td>50 871</td>
<td>16.3%</td>
<td>32.6%</td>
<td>48.8%</td>
<td>25 000</td>
</tr>
<tr>
<td>St. Catharines-Niagara</td>
<td>196 620</td>
<td>16.4%</td>
<td>32.0%</td>
<td>48.4%</td>
<td>95 000</td>
</tr>
<tr>
<td>Thunder Bay</td>
<td>49 280</td>
<td>15.3%</td>
<td>31.7%</td>
<td>47.0%</td>
<td>23 000</td>
</tr>
<tr>
<td>Toronto</td>
<td>3 336 159</td>
<td>14.0%</td>
<td>29.8%</td>
<td>43.8%</td>
<td>1 461 000</td>
</tr>
<tr>
<td>Windsor</td>
<td>159 836</td>
<td>16.8%</td>
<td>31.3%</td>
<td>48.0%</td>
<td>77 000</td>
</tr>
</tbody>
</table>

Source: OECD calculations on Labour Force Survey
Places facing a lower risk of automation have some characteristics in common across the OECD:

- Are more urbanised
- Have a larger service sector
- Have more educated workers
Which occupations tend to have the highest risk?

- Some occupations face a higher risk than others, given that they entail routine and repetitive tasks likely to be automated

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Average risk of automation</th>
<th>Total employment in Ontario (2018)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Preparation Assistants</td>
<td>63.9%</td>
<td>39 109</td>
</tr>
<tr>
<td>Labourers in Mining, Construction, Manufacturing and Transport</td>
<td>61.8%</td>
<td>188 975</td>
</tr>
<tr>
<td>Cleaners and Helpers</td>
<td>61.5%</td>
<td>132 448</td>
</tr>
<tr>
<td>Refuse Workers and Other Elementary Workers</td>
<td>59.5%</td>
<td>174 173</td>
</tr>
<tr>
<td>Assemblers</td>
<td>59.4%</td>
<td>40 418</td>
</tr>
<tr>
<td>Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers</td>
<td>59.0%</td>
<td>228 167</td>
</tr>
<tr>
<td>Drivers and Mobile Plant Operators</td>
<td>57.2%</td>
<td>241 388</td>
</tr>
<tr>
<td>Other Clerical Support Workers</td>
<td>56.9%</td>
<td>114 966</td>
</tr>
<tr>
<td>Personal Services Workers</td>
<td>55.2%</td>
<td>309 507</td>
</tr>
<tr>
<td>Market-oriented Skilled Forestry, Fishery and Hunting Workers</td>
<td>55.1%</td>
<td>27 015</td>
</tr>
</tbody>
</table>

Source: OECD calculations on Labour Force Survey
Automation will impact some segments of the population more than others:
- Low-skilled workers
- Youth
- Indigenous People
- Immigrants
The good news is that the future of work is also generating opportunities across Canada.

- In the large majority of regions across Canada, the risk of automation has decreased over the past decade. Between 2011 and 2018, 35% of regions have created jobs predominantly in less risky occupations.

**Job creation by risk of automation, Canada economic regions, 2011 to 2018**

- Creating jobs, predominantly in less risky occupations: 35%
- Creating jobs, predominantly in riskier occupations: 11%
- Losing jobs, predominantly in riskier occupations: 20%
- Losing jobs, predominantly in less risky occupations: 34%

Source: OECD calculations on Labour Force Survey
The process of job polarisation shows that most Canadian regions are shifting from middle to high-skill jobs

- The large majority of regions have also shifted towards high-skill jobs. Between 2011 and 2018, in 51 economic regions, the employment share of high-skill jobs has increased.

Source: OECD calculations on Labour Force Survey
Many Ontario regions are shifting towards high skilled employment, requiring higher levels of skills

- 6 out of 11 Ontario regions have shifted from middle to high skilled jobs

Job polarisation across economic regions in Ontario, 2011-2018

Source: OECD calculations on Labour Force Survey
Non-standard work presents both opportunities and challenges for local labour markets in Canada.

- The prevalence of non-standard forms of work varies across provinces in Canada.
- Non-standard work can provide flexibility to some workers. However, it can also be associated with deteriorating working conditions.
- COVID-19 has often exacerbated challenges for non-standard workers.

Percentage of permanent and temporary employees over total employees, Canada and Canadian Provinces, 2019

Source: Statistics Canada
What are the OECD’s key takeaways?

• Place matters when examining the potential impacts of automation

• Skills development is more than important that ever and a necessary step for recovery.
  – More flexible opportunities for training are needed to make skilling accessible to both people and firms
  – Programmes need to embed job-specific technical skills but also core competencies such as adaptability, communication, collaboration, and creativity.

• Community-based responses can lead to innovation in policy design and implementation

• Monitoring job quality will be critical going forward
  – Need to find opportunities for technology to enhance worker well-being, NOT diminish it
Going forward further action to future-proof communities could be helpful

- Both federal and provincial governments in Canada could look for opportunities to build in-demand skills while also promoting adult learning, especially for those workers most at risk.

- Other opportunities include:
  - The establishment of an employer skills survey, which would gather labour market information and insights on emerging needs, job vacancies, the prevalence of skills shortages, as well as firm investments in training.
  - Strengthening sector-focused training programmes, especially in those industries most vulnerable to technological change.
  - Encouraging SMEs to be aware of their training needs, while raising awareness on existing financial incentives for training and promoting the emergence of employer-led networks around skills.
What can Canada learn from other OECD countries?

United Kingdom

**Employer skills survey**: This annual survey interviews approximately 82,000 employers across all sectors and sizes in England, Wales and Northern Ireland. The survey collects information on apprenticeships, vacancies, recruitment, training, skill shortages, and future skill needs. The findings from the survey are used by policy-makers and industry to decide how to invest in national and local skills systems.

Ireland

**Skillnet** is a business support agency of the Government of Ireland. Its mandate is to advance the competitiveness, productivity and innovation of Irish businesses (especially SMEs) through enterprise-led workforce development. It currently supports over 18,000 businesses and provide a wide range of valuable learning experiences to over 70,000 individuals. Its mission is to facilitate increased participation in enterprise training and workforce learning in Ireland.

Australia

**The Regional Employment Trials** (RET) program provides grants of between AUD $7,500 and $200,000 to local stakeholders for employment-related projects. The trial takes into account regional variations to help ensure that local economic opportunities are better promoted to Australians looking for work and employment services providers. In trial regions, Employment Facilitators work with Regional Development Australia (RDA) committees to enable local stakeholders to address employment issues.

Netherlands

**Sectoral training funds in the Netherlands**: Facilitates investment in continuous skills development. Many of these funds play a role in the development of training, knowledge and productivity, including attracting new talent into a sector; developing new training programmes, either sponsored directly by the fund or in co-operation with other training providers; or sharing knowledge between firms in a sector.
Thank you

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