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Working Without a Net

Rethinking Canada's social
policy in the new age of work

BY SUNIL JOHAL & JORDANN THIRGOOD

Mowat Centre

ONTARIO'S VOICE ON PUBLIC POLICY



School of Public Policy & Governance
UNIVERSITY OF TORONTO

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Authors

Sunil Johal

POLICY DIRECTOR

Sunil Johal is Policy Director at the Mowat Centre. He oversees the Centre's research agenda and manages the Centre's research team. Previously, he was a Director with the Ontario Ministry of Economic Development and Innovation and has also held senior management and policy roles with the Cabinet Office, Ministries of Finance and Intergovernmental Affairs and federal Treasury Board Secretariat. He holds degrees from the London School of Economics, Osgoode Hall Law School and the University of Western Ontario.

Jordann Thirgood

POLICY ASSOCIATE

Since joining Mowat in 2015, Jordann has contributed to a variety of projects on fiscal federalism, the sharing economy, and the impact of technological innovation on Canada's labour market and social programs. Prior to this, she spent two years working in the financial sector and ran a pro bono policy consulting firm for non-profit organizations in the GTA. Jordann holds a Master of Public Policy degree from the University of Toronto, and an Honours degree in International Development Studies from the University of Guelph.

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439 UNIVERSITY AVENUE
SUITE 2200, TORONTO, ON
M5G 1Y8 CANADA



School of Public Policy & Governance
UNIVERSITY OF TORONTO

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A black and white photograph showing the silhouettes of three people walking away from the camera in a large, modern interior space. The person on the left is a child, and the two adults are walking slightly ahead of them. The floor is highly reflective, creating clear mirror images of the people. In the background, there is a glass railing and large windows that let in bright light, which is the source of the silhouettes. The overall mood is contemplative and somewhat somber.

Without the right approach, Canada could find itself in a long-term period of economic stagnation, with many Canadians on the sidelines of a chaotic, churning labour market.

EXECUTIVE SUMMARY

Millions of Canadians might lose their jobs to automation in the next decade. Hundreds of thousands of others could see their full-time positions replaced with short-term, temporary gigs.

What will happen to the people currently holding these jobs? Will they end up cycling through unemployment benefits, drawing down their personal assets and surviving on social assistance? Will they have access to robust, effective training to re-skill and upgrade their skills for new opportunities?

What if they require access to medicine or mental health services, or their ability to afford housing diminishes? How long will it take them to re-enter the labour market as new tasks and types of jobs emerge, and will their new roles make them part of the ever-expanding precariously employed workforce?

These are vital questions that Canadian governments must start grappling with today. Autonomous vehicles are already on the road, robo-advisors are dispensing financial counsel and even lawyers and reporters are starting to see automation take over routine functions. The role of digital sharing economy platforms in creating micro-tasks that offer more supplemental income opportunities but less permanence and security must also be considered as a key part of the technological wave disrupting labour patterns.

This report argues that prevailing economic and labour market trends combined with emerging technological factors are creating a growing number of workers with little or no attachment to Canada's social architecture. Absent transformational policy change to recognize the new world of work, Canada's social policies and programs will prove woefully inadequate to sufficiently insure enough people to meet the challenges ahead.

1 INTRODUCTION

Canadians are facing an increasingly uncertain economic future. From the steady erosion of Ontario's manufacturing heartland to the rapid downturn of Alberta's oil and gas sector, challenges abound. Moreover, even if the price of oil does rebound, or manufacturing plants are reshored, how many new positions will be full-time with good benefits and how many will be replaced by automated processes, artificial intelligence or robots? There are no clear answers as to where and how the jobs of the future will be created, and if they will be as reliable or plentiful as the jobs of the past.

Increasingly, Canada's labour market is characterized by:

» **More part-time, precarious work**

Part-time positions accounted for 89 per cent of job creation in Canada between October 2015 and October 2016,¹ and more than half of all Greater Toronto Area workers are employed in positions with some degree of precarity.²

» **Anemic income growth**

Between 2000 and 2013, median after-tax income averaged 1.2 per cent real growth per year and only 1 per cent per year for the lowest 10 per cent of earners.³

» **Marked income inequality**

3 million Canadians live in poverty; and the gap between high and low earners continues to grow.⁴

These trends are not new, and they have many complex drivers. But there's a high likelihood that these trends will accelerate and become more pronounced in the face of rapid technological change, as digital peer-to-peer platforms such as Uber and rapid advancements in artificial intelligence and robotics continue to come online. Taxi drivers and accountants have already realized their jobs are on the brink of disappearing in the face of digital progress. Bankers and doctors could be next.

1 Statistics Canada (2016) "Table 1: Labour force characteristics by age and sex – seasonally adjusted," *The Daily*. <http://www.statcan.gc.ca/daily-quotidien/161104/t001a-eng.htm>.

2 Wayne Lewchuk et al. (2015) *The precarity penalty*, PEPSO, United Way, and McMaster. <http://www.unitedwaytyr.com/document.doc?id=307>.

3 Statistics Canada (2015) "Income of Canadians, 2000 to 2013," *The Daily*. <http://www.statcan.gc.ca/daily-quotidien/151217/dq151217c-eng.htm>

4 Employment and Social Development Canada (2016a) "Towards a poverty reduction strategy," http://www.esdc.gc.ca/en/reports/poverty_reduction.page; Conference Board of Canada (2013) "Income Inequality," *How Canada Performs: International Rankings*. <http://www.conferenceboard.ca/hcp/details/society/income-inequality.aspx>.

Losing even 1 million jobs to automation within a short time period would mean an unemployment rate touching 12 per cent. Given that there are more than 500,000 Canadians who drive for a living, the possibility of a quick transition to driverless technology for truck-driving (the second most common occupation for men), cabs and deliveries makes these prospects worryingly realistic.

To highlight what this scale of job loss and churn could mean to the economy, it is only necessary to look back eight years, when Canada lost 400,000 jobs during the 2008-2009 global financial crisis, causing the unemployment rate to jump by over 2 per cent, to 8.7 per cent. Canadian governments have been dealing with the aftermath ever since, spending hundreds of billions of dollars in stimulus on infrastructure, tax relief and cash transfers to individuals. In retrospect, the global financial crisis might look like a speed bump for Canada's economy when compared to the cliff's edge that we can see approaching.

Many of the job losses during the financial crisis were cyclical in nature, and people returned to jobs in their fields after a spell of unemployment. These cyclical downturns may soon yield to permanent, technologically driven structural changes to the way we work and live. Helping hundreds of thousands of blue and white-collar professionals with years of experience in their fields, suddenly out of a job and with no field to return to, is a daunting challenge.

A future that promises uncertainty and the sudden dislocation of entire sectors poses tough questions about how to best mitigate the risks generated in such an environment. Which burdens of the new digital economy should fall upon the shoulders of the worker juggling multiple gigs with no benefits? What is the

appropriate role for private industry? How can governments protect the most vulnerable and enforce fair ground rules for all?

For policymakers in Canada, the impact of technology on jobs represents an unknown. With the right strategies, skills and supports, Canada could position itself at the foreground of a new economy. Without the right approach, Canada could find itself in a long-term period of economic stagnation, with many Canadians on the sidelines of a chaotic, churning labour market.

The economic uncertainty and fear that these changes will unleash on Canadians up and down the income ladder means that we may see a broad constituency of the population supportive of more generous universal social programs to support those who are being affected by the digital economy. This affords governments and political parties a unique window to consider transformational changes across the policy spectrum.

This report explores the implications of new technologies on Canada's economy and labour market and the adequacy of current social programs and policies supporting workers. It proposes key considerations policymakers need to keep in mind as the nature of jobs evolves to ensure that they are designing policies that lead, and don't lag, rapid changes to the nature of work. The following topics are covered:

- » An overview of key economic trends that have been occurring over the past several decades and recently emerging technological issues.
- » An assessment of Canada's existing social architecture programs and their resilience and relevance in the face of societal and technological change.
- » A series of recommendations for policymakers.

A black and white photograph of a man with a beard and short hair, wearing a dark button-down shirt, focused on a laptop. He is standing in what appears to be a factory or industrial setting, with various mechanical parts and equipment visible in the background. The lighting is soft, highlighting the man's face and the laptop.

Policies and programs that are integral to the well-being of Canadians remain intimately tied to conventional ideas of employment, despite a new economy that demands new approaches.

2 UNDERSTANDING THE NEW ECONOMY

Canada's economy and labour market are products of decades of technological advances, cultural changes, and demographic shifts. Many of these trends have gradually been occurring for decades and come to a tipping point in today's digital era, including:

- » unequal prosperity
- » increases in precarious work
- » declining unionization

In addition, other issues have emerged swiftly and left governments, corporations and employers scrambling to understand their impact, including:

- » the unique nature of the digital economy
- » technology's impact on jobs
- » living in an on-demand society

Assessing what these trends and issues mean for jobs and the economy, and how they might continue to unfold in the coming years is an important first step to understanding the policy landscape.

Long-term Trends

UNEQUAL PROSPERITY

Conversations about income inequality have come into the mainstream in recent years, highlighted by the release of Thomas Piketty's *Capital in the Twenty-First Century* in 2013. His central argument holds that capitalism will systematically generate inequality and concentrate wealth in a small number of hands

as a consequence of returns from capital outstripping economic growth.⁵ Looking at Canada's experience, this argument appears to bear out across indicators including income inequality, corporate profits and wage growth.

Canada's income inequality has gradually crept up over the past 40 years, consistent with trends in many other developed countries.⁶ Figure 1 shows the change in Canada's Gini coefficient, a statistical representation of a nation's income distribution that is commonly used to measure inequality. Over time, inequality has continued to grow by all measures of income, both before and after government taxes and transfers.

Recent OECD studies highlight some other indicators of inequality in Canada:

- » The share of total income belonging to the richest one per cent of Canadians rose from 8.1 per cent in 1980 to 13.3 per cent in 2007.

⁵ Thomas Piketty (2014) "Capital in the Twenty-First century." Belknap Press of Harvard University, Translated by Arthur Goldhammer.

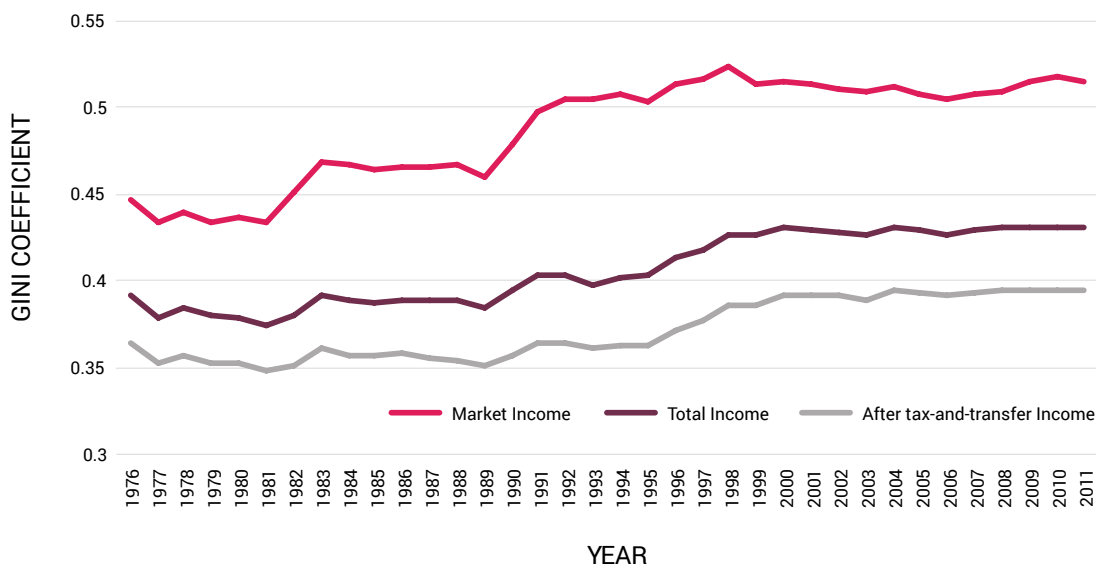
⁶ Conference Board of Canada, 2013.

- » Canada's top one per cent of earners accounted for 37 per cent of the country's overall income growth between 1981 and 2010 (a gain only exceeded by the United States among OECD countries).
- » Canada's top one per cent of earners held 15 per cent of household wealth in 2011.
- » The bottom 10 per cent of Canadians in 2011 accounted for just 2.8 per cent of total income, compared to 24.2 per cent for the top 10 per cent of Canadians.⁷

60% of employment growth since the mid-1990s among OECD countries has been in the form of non-standard work.

At a macro level, Canada has benefitted from a prosperous economy over the past four decades. Between 1981 and 2015, the economy grew by 54 per cent in real per capita terms while labour productivity (i.e., real GDP per hour worked) increased by 52 per cent, although neither has translated into real wage increases (see Figure 2).⁸ This trend has been termed the Great Decoupling, as the two halves of economic prosperity, the overall growth of the economy and wage growth, are no longer married.⁹

FIGURE 1
Canada's Gini Coefficient (Measure of Income Inequality)



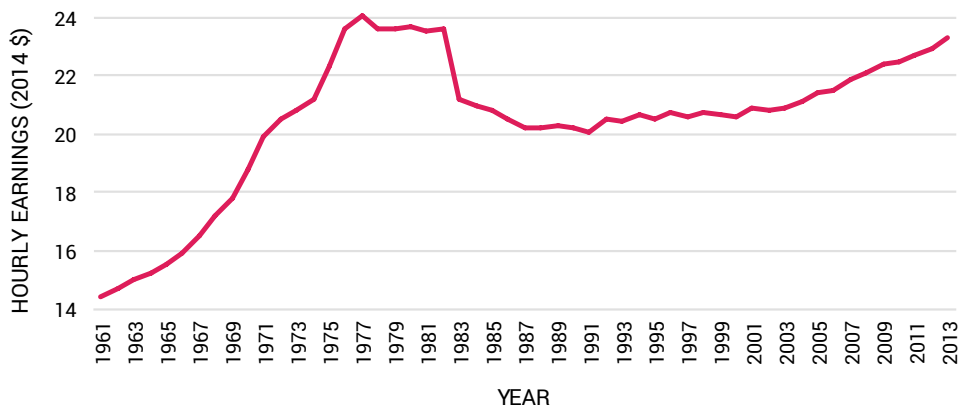
Source: CANSIM Table 206-0033

7 OECD (2015) "In it together: Why less inequality benefits all." OECD Publishing, Paris; OECD (2011) "Divided we stand: Why inequality keeps rising." OECD Publishing, Paris; OECD (2014a) "Focus on top incomes and taxation in OECD countries: Was the crisis a game changer?" OECD Publishing, Paris.

8 CANSIM Tables 380-0064, 0051-0001, 383-0008.

9 Erik Brynjolfsson and Andrew McAfee (2015). The Great Decoupling. *Harvard Business Review*, June 2015.

FIGURE 2
Real Wage Growth (Average Hourly Earnings, Adjusted)

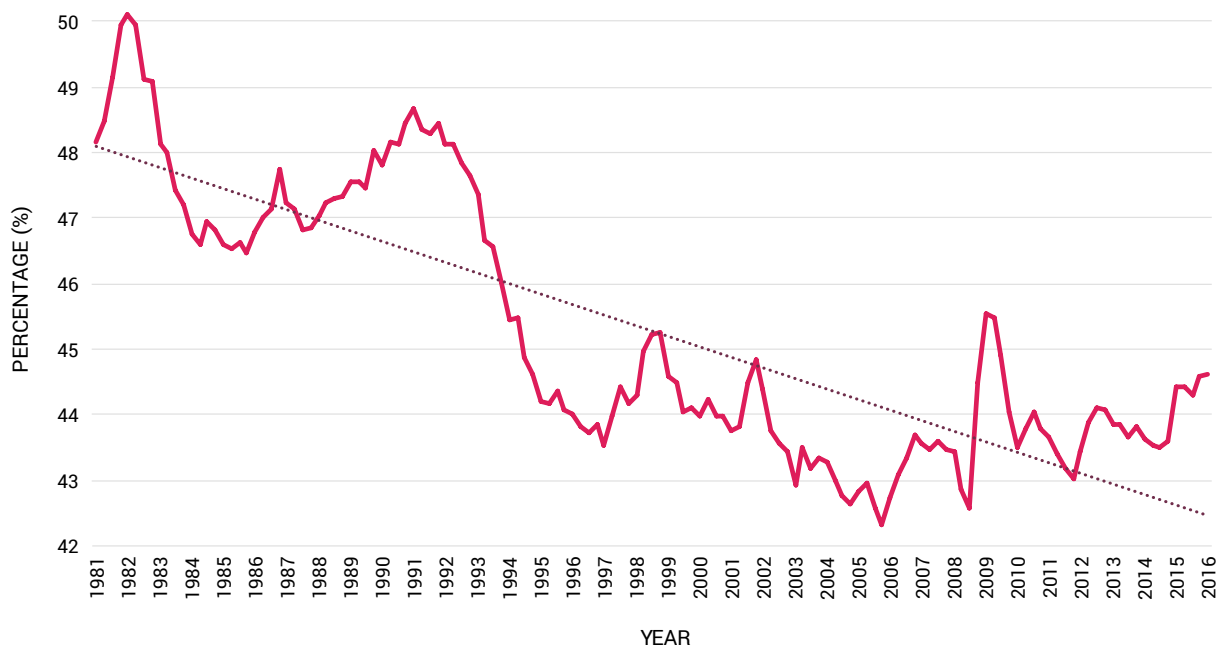


Source: CANSIM Tables 281-0022, 281-0008, 281-0030. Note: the method used by Statistics Canada to categorize employment changed in 1983 and again 1997. The slight shift upwards after 1997 can partially be attributed to this change in categorization, not substantial wage increases¹⁰

Since the late 1970s, the percentage of GDP that workers receive for their labour has been steadily declining:

» In Canada, the wage share of GDP fell by 10.7 per cent between 1981 and 2015 (see Figure 3).

FIGURE 3
Wages & Salaries as a Percentage of GDP

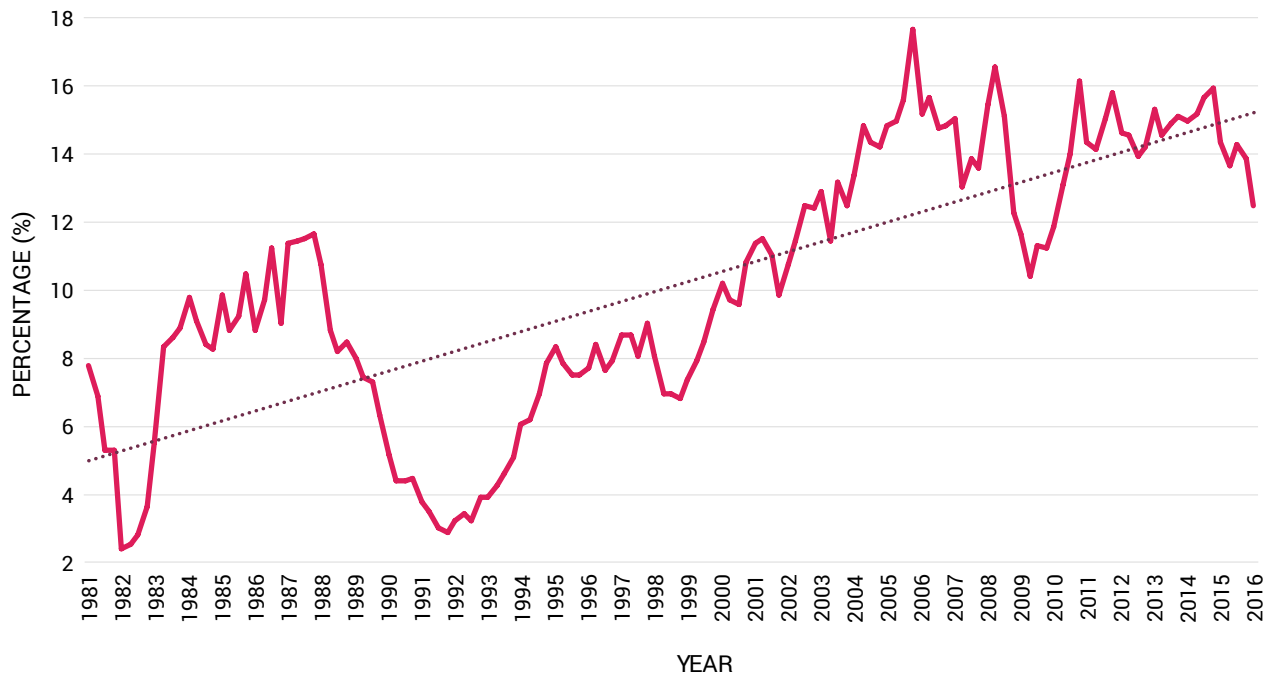


Source: CANSIM Table 380-0063

¹⁰ Ellen Russel and Mathieu Dufour (2007) "Rising profit shares, falling wage shares." Canadian Centre for Policy Alternatives. http://policyalternatives.ca/sites/default/files/uploads/publications/National_Office_Pubs/2007/Rising_Profit_Shares_Falling_Wage_Shares.pdf.

» Over the same time period, corporate profits after taxes as a share of GDP increased by 163.3 per cent (see Figure 4).

FIGURE 4
Corporate Profits (After Tax) as Percentage of GDP



Source: CANSIM Table 380-0078

A study by the Canadian Centre for Policy Alternatives notes that if real wages climbed with productivity, even if only from 1991 to 2005, Canadian workers would have received an average of an additional \$200 on their paycheck each week. For a full-time salaried employee, this would amount to an additional \$10,000 each year.¹¹ Wage stagnation continues to be a distressing problem for many Canadians, making it difficult to make ends meet amidst rising costs of living.

However, the story is not the same for all industries. The CCPA study also found that wages in the transportation industry fell by 16-17 per cent, while wages in finance, insurance and real estate rose by 15-20 per cent in the same period.¹²

¹¹ Ibid.

¹² Ibid.

The Standard Employment Relationship: Less Standard, More Uncertain

From the late 1940s to the early 1970s, the majority of Canada's labour force was engaged in a Standard Employment Relationship (SER). These workers were typically men in manufacturing or trades, earning a full-time wage that was sufficient to support a family along with benefits to cover unexpected expenses and retirement savings. This security made advancement in a single organization possible, and both unions and government policies protected the rights to bargain collectively, refuse unsafe work, and take refuge from unfair treatment.¹³ Many of Canada's core social programs were established during this time: our first mandatory unemployment insurance program came into effect in 1941, the public pension system in 1965, and the first comprehensive legislation for employment standards in 1969. It is no surprise, then, that these programs were tied to the notion of the SER.

Today, however, the traditional relationship between employee and employer is becoming increasingly rare. The nature of work is now characterized by increasing automation of industry, declining unionization, the rise of precarious employment, and the development of a digital on-demand economy. These trends have propelled a shift away from the SER and towards non-standard employment relationships, which ultimately drives a wedge between workers and existing social supports. Policies and programs that are integral to the well-being of Canadians remain intimately tied to conventional ideas of employment, despite a new economy that demands new approaches. For policymakers, this means thinking about how our social architecture can better reflect the new world of work.

Wages and Benefits: Standard vs. Non-standard Employment

FIGURE 5A

Access to Employer Benefits

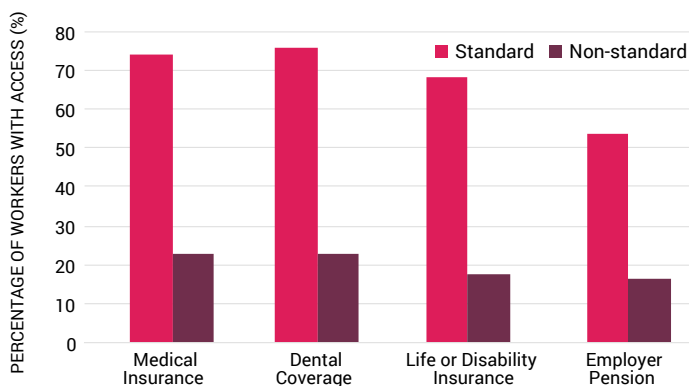
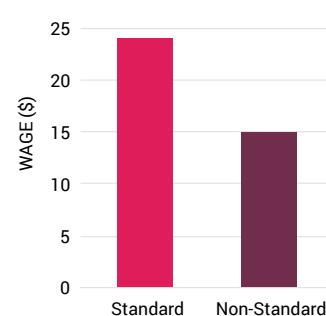


FIGURE 5B

Median Wage

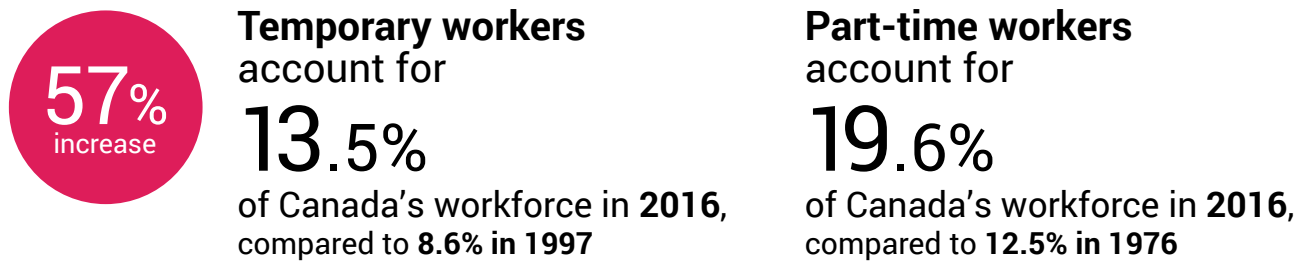


Source: Ministry of Labour (2016), "Changing Workplaces Review: Special Advisors' Interim Report"

13 Wayne Lewchuk et al. (2013) "It's more than poverty" PEPSO, United Way and McMaster University. <http://www.unitedwaytyr.com/document.doc?id=91>.

FIGURE 6

Canada's workforce: more part-time, temporary positions



Source: CANSIM Table 282-0087, CANSIM Table 282-0079

RISE OF PRECARIOUS WORK

The nature of work is also more precarious today than it was when our social architecture was designed, and there are numerous driving forces behind this shift. Precarious work is most commonly associated with uncertainty and instability in a job. The term typically includes non-standard types of employment such as part-time, temporary, contract, and self-employment, which are often less well-paid than traditional work and are tied to few or no benefits.

Precarious work is on the rise in Canada (see Figure 6), and all major industrialized countries (60 per cent of employment growth since the mid-1990s among OECD countries has been in the form of non-standard work).¹⁴ A 2013 study by Poverty and Employment Precarity in Southern Ontario (PEPSO), United Way, and McMaster University found that 20 per cent of workers in the Greater Toronto-Hamilton Area (GTHA) are precariously employed, with another 20 per cent employed in a job with some characteristic of precarity (e.g. earning a salary but receiving no benefits).¹⁵ These findings are consistent with

PEPSO's follow-up report, which also found that the percentage of people working in standard employment fell from 50.2 to 48.1 per cent in just three years. The prevalence of precarious work has increased by 50 per cent in the past 20 years in the GTHA.¹⁶

Precarious work can have damaging impacts on Canadians both economically and socially. Precarious workers earn substantially less than those in SERs: in Ontario, the median hourly wage is \$24 for a worker in an SER, and only \$15 for those engaged in non-standard work.¹⁷ These workers are often paid in cash and 10 per cent report sometimes not being paid at all.¹⁸ Such positions are less likely to be unionized and rarely receive benefits or training and skills development from their employer.

Job instability can significantly weaken social cohesion, as precarious workers are two to three times more likely to report anxiety regarding work interfering with their personal life, and twice as

¹⁴ OECD, 2015.

¹⁵ Lewchuk et al., 2013.

¹⁶ Lewchuk, et al., 2015.

¹⁷ Ontario Ministry of Labour (2016a) "Changing workplaces review: Special advisors' interim report." https://www.labour.gov.on.ca/english/about/pdf/cwr_interim.pdf.

¹⁸ Lewchuk et al., 2013.

likely to find it difficult to make ends meet or run out of food.¹⁹ The precariously employed population is much less likely to be living with a partner or raising a child, but those who are trying to support a family have difficulty finding appropriate childcare, paying for school supplies, and getting their child involved in extracurricular activities.²⁰

The rise of precarious work can be viewed as part of a longer-term trend beginning in the 1970s, when corporations began to outsource tasks involving human resources and information technology to instead focus on their core competencies.²¹ A large portion of staff could then be available on an as-needed basis to improve productivity and cut costs. This move towards flexible work schemes such as outsourcing, contracting and freelancing was made even easier as technology evolved throughout the 1990s and 2000s, creating more ways to connect people looking for short-term work opportunities. Today, this tendency to work multiple short-term jobs and piece-work is often referred to as the “gig economy” and it is becoming increasingly commonplace.

Deconstructing a job and outsourcing its constituent tasks is referred to as the “unbundling” of work, and can be understood as part of a progression that moves from a full-time career to a job that can be entirely completed by artificial intelligence, with various precarious positions in between (see Figure 7).²² Work is reduced to part-time and contract jobs, to project and task-based jobs, to micro-task-based jobs and hybrid tasking with artificial intelligence. Each reduction is associated with a decrease in pay: a freelancer makes a paycheck of \$200, a task receives a median pay of \$5 and a microtask only a median of \$0.05 (per project/task).²³ As existing jobs move through this progression, workers will see pay reductions, instability and eventually a potential threat of job loss.

FIGURE 7
The Unbundling of Work



Source: Policy Horizons Canada (2016), “Canada and the Changing Nature of Work”

19 Ibid.

20 Ibid.

21 Noam Schreiber (2015) “Rising inequality tied to decades-long trend in employment practices.” *The New York Times*, July 12 2015 http://www.nytimes.com/2015/07/13/business/rising-economic-insecurity-tied-to-decades-long-trend-in-employment-practices.html?_r=1

22 Policy Horizons Canada (2016) “Canada and the changing nature of work.” <http://www.horizons.gc.ca/sites/default/files/Publication-alt-format/2016-0265-eng.pdf>.

23 Ibid.

DECLINING UNIONIZATION: WHO IS STANDING UP FOR TODAY'S WORKERS?

Historically, labour unions have played an important role in ensuring fair and equal treatment of employees by providing a collective voice to their members, a check on the power of employers, and an avenue of communication between the two groups. Unions have played a significant role in establishing decent wages, reasonable workday length, and safe workplaces in Canada. Some maintain that unions are no longer relevant or necessary in the modern workplace, but the increasing number of employees now engaged in precarious work and the gig economy poses new questions about the benefits of unionization.

While the actual number of union memberships has increased over time in Canada, coverage has not kept pace with employee growth: the unionization rate (i.e. the proportion of total employed individuals that are union members) has been steadily declining since the 1980s. The rate of unionization has fallen from 37.6 per cent in 1981 to 28.8 per cent in 2014, with a decline most noticeable among men, workers between the ages of 25-54, and those in the private sector.²⁴ Automation, globalization and outsourcing traditionally unionized jobs such as manufacturing have been important factors in this decline.

As the relationship between employers and employees changes, the expectations and responsibilities of each party become less clear. For example, there have been a growing number of legal challenges surrounding the rights of an

employee versus the rights of an independent contractor in the gig economy. Independent contractors are not afforded the same rights or degree of security as an employee, and can be vulnerable to mistreatment. Class action lawsuits on this issue have been more high profile in the United States, particularly involving ride-hailing companies such as Uber and Lyft, although there are some notable cases in Canada dealing with other industries.²⁵ These cases typically involve the claim that companies purposely misclassify their employees as a way of side-stepping payroll taxes and other responsibilities.

Despite a widespread assumption that new labour market entrants prefer the flexibility and casual nature of the gig economy, the reality seems to indicate the opposite - particularly regarding workers' rights. Some organizations are beginning to respond to their workers' demands for fairer treatment: Gawker became the first digital publication to unionize after a vote from its workers, which triggered other US media outlets (such as Vice, the Guardian America, Salon and Al Jazeera America) to follow suit.²⁶

Advocacy groups and labour union alternatives have recently emerged in an attempt to give precarious workers a voice for collective action in Canada, such as the Urban Workers Project and the Canadian Freelancers Union, a community chapter under Unifor.²⁷ While these groups offer some benefits, insurance discounts, and political representation, they are not unions in

24 Statistics Canada (2016) "Unionization rates falling." *The Daily: Canadian Megatrends* <http://www.statcan.gc.ca/pub/11-630-x/11-630-x2015005-eng.htm>; Statistics Canada (2015) "Union coverage rates" <http://www.statcan.gc.ca/pub/71-222-x/2008001/section/k-k-rates-taux-eng.htm>.

25 Amy L. Groff, et al. (2015) "Platforms like Uber and the blurred line between independent contractors and employees." *Computer Law Review International* (6); *Braiden v. La-Z-Boy Canada Ltd.*, 238 OAC 71 (2008); *Rennie and VIH Helicopters Ltd.*, Re, 236 ACWS 637 (2013).

26 Policy Horizons Canada, 2016.

27 See Urban Workers Project <http://www.urbanworker.ca/> and the Canadian Freelancers Union <http://www.canadianfreelanceunion.ca>.

the traditional sense. They do not intervene or negotiate contracts on behalf of employees, and the degree of influence they have on labour law and policy is not yet clear.

Whether, and how, unions move into spaces they have historically not had a strong role (e.g., for independent contractors) will be a key development in the coming years as these roles increase, as will their ability to maintain a strong foothold in traditionally union-dense sectors.

Emerging Issues

THE UNIQUE NATURE OF THE DIGITAL ECONOMY

The digital economy generally refers to the economic and social activities that have been enabled or transformed by information and communication technologies. Digital innovations are no longer simply a portion of the economy – they have penetrated nearly all aspects of how we live, work and do business.²⁸ Enterprises in this new digital economy can be characterized by the following key features:

- » **Small physical infrastructure footprints** due to cloud computing and focused investment in, and development of, intangible assets (e.g. software upgrades, patents, user data and brand recognition).²⁹
- » **Low costs of replication** enable firms to quickly and easily reproduce content for re-sale and licensing.

- » **Rapid scalability as a result of high levels of mobility** for enterprises' intangible resources, users, and business functions. Businesses can organize and carry out complex commercial activities over long distances and users can access services and goods across borders, rapidly expanding the ability to access remote markets.³⁰
- » **Diversity of revenue models:** firms no longer earn returns explicitly from the sale of goods and services, but also through advertising, subscriptions, content licensing, and the sale of user data.
- » **Multi-sided business models** in which several different groups are participating in marketplaces and transacting via an intermediary or platform.
- » **Powerful network effects** that generate value from a critical mass of users and vertical integration of layered applications.³¹
- » **Fewer full-time employees**, in part due to technological advancements that enable higher productivity. For example, AT&T was America's most valuable corporation in 1964, worth USD \$267 billion (adjusted) with 758,611 employees. Today, technology giant Google is valued at USD \$370 billion with only 55,000 employees.³²
- » **Low barriers to entry and constant development of new business models** can lend itself to volatile markets. The average lifespan of a company on the US S&P 500 was 90 years in 1935, but only 18 years in 2011.³³

28 Australian Law Reform Commission (2013) "Copyright and the Digital Economy." *Discussion Paper 79*. <https://www.alrc.gov.au/publications/3-policy-context-inquiry/concept-digital-economy/>; Lindsay Anderson and Irving Wladawsky-Berger (2016) "The 4 things it takes to succeed in the digital economy." March 24, 2016 *Harvard Business Review*. <https://hbr.org/2016/03/the-4-things-it-takes-to-succeed-in-the-digital-economy>.

29 Jacques Bughin and James Manyika (2013) "Measuring the full impact of digital capital." *McKinsey Quarterly*, July 2013. <http://www.mckinsey.com/industries/high-tech/our-insights/measuring-the-full-impact-of-digital-capital>.

30 OECD (2014b) "The digital economy, new business models and key features." in *Addressing the tax challenges of the digital economy*, OECD Publishing, Paris.

31 Ibid.

32 Derek Thomson (2015) "A world without work.", July/August 2015 issue. *The Atlantic*. <http://www.theatlantic.com/magazine/archive/2015/07/world-without-work/395294>.

33 Seeking Alpha (2014) "Increasing churn rate in the S&P 500: What's the lifespan of our stock?" <http://seekingalpha.com/article/2651195-increasing-churn-rate-in-the-s-and-p-500-whats-the-lifespan-of-your-stock>.

Taken together, these features enable digital firms to rapidly gain market share at a global scale thanks to lower barriers to entry. They can leverage their ideas and algorithms in place of large capital holdings and investments. This creates unique challenges for governments seeking to regulate, at the local or national level, firms that emerge quickly and operate globally.

Competition between digital firms is often for market attention in the form of audience or users, with monetization and profitability a later consideration. Yet, as suddenly as platforms like Uber or Airbnb achieve a critical mass of users, the ease of shifting to a competitor by downloading a new app or visiting a different website means that just as quickly a new entrant can make significant headway in a marketplace. How authorities can keep up with a landscape shifting between balanced competition and monopoly and back again within the relative blink of an eye is an unanswered question.

For consumers, the digital era has meant easier, more tailored access to goods and services and much easier points of comparison on pricing and product or service quality due to increased transparency.³⁴ For incumbent businesses it has meant scrambling to adapt to a new normal where digital channels and content are expected. For workers, it has raised a number of key questions around the sustainability of certain types of jobs in the face of technological progress.

34 Martin Hirt and Paul Willmott (2014) "Strategic principles for competing in the digital age." *McKinsey Quarterly*, May 2014. <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/strategic-principles-for-competing-in-the-digital-age>.

AUTOMATION OF INDUSTRY: THE END OF JOBS?

The fear that rapid technological change will displace jobs – technological unemployment – is not new. Successive waves of innovation and enhanced prosperity have historically been paired with a sense of panic that humans will “go the way of the horses” and become economically irrelevant.³⁵ The Luddites’ destruction of spinning frames and power looms introduced during the Industrial Revolution in Britain is the most well-known instance of this reaction. The end-of-work argument against technological change is often dismissed as the “Luddite Fallacy”, though it is important to keep in mind that many workers did in fact suffer tremendously at the advent of the Industrial Revolution.³⁶

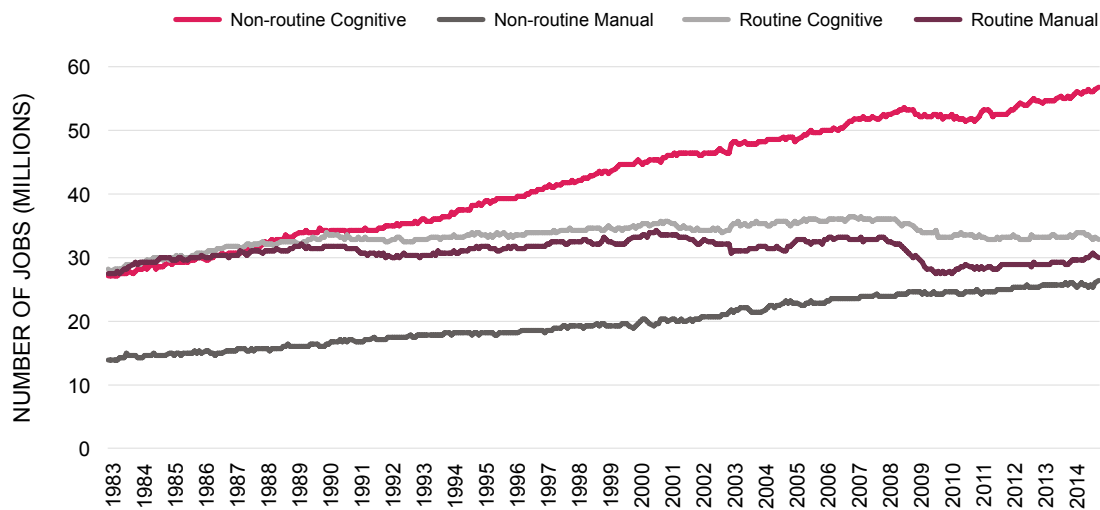
Some firmly believe that the loss of labour is a direct and unavoidable consequence of humans losing the war against machines.³⁷ Others believe that even permanently displaced workers will eventually be re-integrated into the labour market in unforeseen ways as new services and jobs are created. Empirical studies emphasize that past technological innovation has always led to overall job creation and will more likely complement jobs rather than destroy them.³⁸ Whether the scale and nature of innovation is different this time – as machines aren’t just out-muscling but out-thinking humans – no one can be sure.

35 Erik Brynjolfsson and Andrew McAfee (2015) “Will humans go the way of the horses?” *Foreign Affairs*. July/August 2015 Issue.

36 Thomson, 2015.

37 See Erik Brynjolfsson and Andrew McAfee (2011) “Race against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Economy.” Digital Frontier Press; Erik Brynjolfsson and Andrew McAfee (2014) “The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies.” W. W. Norton & Company; “The coming of robot dystopia.” *Foreign Affairs*. July/August 2015 Issue.

38 Ian Stewart et al. (2016) “Technology and people: The great job-creating machine.” Deloitte LLP; David Autor (2015) “Why are there still so many jobs? The history and future of workplace automation.” *Journal of Economic Perspectives*, Vol. 29 No. 3, pp. 3-30.

FIGURE 8**US Job Growth: Routine vs. Non-routine, Cognitive vs. Manual**

Source: Maximiliano Dvorkin (2016) "Jobs involving routine tasks aren't growing" Federal Reserve Bank of St. Louis

The role of technological advancements allowing firms to do the same job, often at higher quality levels, but with fewer employees cannot be understated. The advent of the sharing economy has also hastened the trend of disintermediation through the use of the peer-to-peer (P2P) models enabled by web-based platforms. These P2P models have replaced traditional employee-employer relationships and relatively stable independent contractor models (e.g., hotels, travel agencies, taxi brokerages, cleaning services) with a series of small gig engagements that are piecemeal in nature. Such changes have given consumers more choice and a jolt of competition to often stagnant sectors, but at a bottom-line cost to established service providers and employees.

These trends are industry-specific, and future job creation generated by increased automation is likely to occur within industries that are subject to a skills-bias. This is particularly true of STEM fields (science, technology, engineering and mathematics) that require increasingly specialized skill-sets. Whether or not a skills gap

exists in Canada and to what extent it will affect the labour market is often contested, but there is evidence that low-skill workers are already feeling these impacts in the US. A recent study from the Centre of Economic Performance at the London School of Economics found that robot densification did not impact the number of hours worked by high-skilled workers, but significantly reduced the number of hours worked by low-skilled workers and to a lesser extent, workers classified as middle-skilled.³⁹

The extent to which a job is premised on routine or non-routine tasks may be a key factor in determining the level of risk it faces of becoming automated. A recent study by an economist at the Federal Reserve in St. Louis highlights this trend in the US labour market over the past 30 years (see Figure 8).⁴⁰ His findings suggest that the

39 Georg Graetz and Guy Michaels (2015) "Robots at work." *CEP Discussion Paper No. 1335*. <http://cep.lse.ac.uk/pubs/download/dp1335.pdf>.

40 Maximiliano Dvorkin (2016) "Jobs involving routine tasks aren't growing." London School of Economics and Political Science, Federal Reserve Bank of St. Louis <https://www.stlouisfed.org/on-the-economy/2016/january/jobs-involving-routine-tasks-arent-growing>.

The extent to which a job is premised on routine or non-routine tasks may be a key factor in determining the level of risk it faces of becoming automated.

number of non-routine cognitive occupations (e.g. professional sectors and management) and non-routine manual occupations (e.g. service, care, and assistance) have been steadily increasing over time. In the same time period, cognitive routine occupations (e.g. sales and office administration) and manual routine occupations (e.g. construction, production and transportation) have been stagnant. Whether a job is comprised of cognitive or manual tasks may be less relevant than whether the tasks involved are primarily routine or non-routine in nature.

An influential 2013 study from two researchers at Oxford University analyzed which jobs are most susceptible to automation in the US. Estimating the probability of automation for over 700 occupations, they concluded that nearly half (47 per cent) of total US employment is at high risk of automation within the next 10 to 20 years.⁴¹ While the study was specific to the American labour force, its methodology has been replicated in many other regions.⁴²

41 Carl Benedikt Frey and Michael Osborne (2013) "The future of employment: How susceptible are jobs computerization?" University of Oxford http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf.

42 Mika Pajarinen and Petri Rouvinen (2014) "Computerization threatens one third of Finnish employment." *ETLA Brief*, No. 22. <https://www.etla.fi/wp-content/uploads/ETLA-Muistio-Brief-22.pdf> (for Finland); Carsten Brzeski and Inga Burk (2015) "The robots come: consequences of automation for the German labour market." ING DiBa Economic Research. <https://www.ing-diba.de/pdf/ueber-uns/presse/publikationen/ing-diba-economic-research-die-roboter-kommen.pdf> (for Germany); and Jeremy Bowles (2014) "The computerization of European jobs." Bruegel, Brussels. <http://bruegel.org/2014/07/the-computerisation-of-european-jobs/> (for Europe more generally).

A recent report from Toronto's Brookfield Institute applied the methodology of the Oxford study to Canada's labour market.⁴³ Perhaps unsurprisingly, given the similarities between the two economies, the results were fairly consistent:

- » Roughly 42 per cent of Canadian occupations are at high risk of automation in the next 10 to 20 years.
- » 36 per cent of occupations are at low risk of automation over the same time period.
- » Canadian jobs most at risk of automation are in industries such as trades, transportation and equipment operation, natural resources and agriculture, sales and services, manufacturing and utilities, administration and office support.
- » Jobs at the lowest risk of automation are in industries such as arts and culture, recreation and sport management, and professional positions in various industries such as law, education, health and nursing.

Issues of equality are evident when the Oxford study's results are placed in the context of wages and education. Jobs identified to be at high risk tend to pay significantly lower wages than those at lower risk. Higher risk jobs pay around \$33,000 each year on average – nearly \$29,000 less than a low-risk job. Employees at higher risk also tend to be less educated: 45.6 per cent of low-risk employees hold a university degree or higher, compared to only 12.7 per cent of high-risk employees.⁴⁴

43 Creig Lamb (2016) "The talented mr. robot: The impact of automation on Canada's workforce." Brookfield Institute. <http://brookfieldinstitute.ca/wp-content/uploads/2016/07/TheTalented-MrRobotReport.pdf>.

44 Frey and Osborne, 2013.

It is important to acknowledge some potential pitfalls around the methodology employed in the Oxford study. Critics have noted that it tends to ignore macroeconomic feedback mechanisms that increase labour demand, as well as the actual speed, capability, and relative costs of technology. Importantly, there has been concern surrounding the focus on occupations, as any given occupation is simply a bundle of individual tasks.⁴⁵

The consulting firm McKinsey and the OECD responded to this last criticism by initiating a discussion around task-based approaches to estimating potential job losses to automation. Both organizations found it unlikely that many jobs will be fully automated to the point of redundancy, but rather the majority of occupations will be complemented by technology through the automation of select tasks.⁴⁶ Using a

task-based methodology, the OECD instead found that only 9 per cent of the workforce is at high risk due to automation in both Canada and the United States – in line with the OECD average.⁴⁷ In this case, governments and businesses should be more concerned with job redefinition, business transformation, and skills development rather than the outright disappearance of jobs.⁴⁸

Figure 9 outlines the results of these different approaches, and how each translates into the number of jobs lost. Even at the lowest end of these estimates, Canada could lose over 1.6 million jobs in the next 10 to 20 years. The extent to which these job losses will be offset by new jobs in other areas of the economy is unknown, but we do know that there will be a period of transition in which Canadians will require adequate support from government to adapt to the new labour market.

FIGURE 9
Comparing Job Loss Estimates

Study	Estimated risk of job loss to automation over 10-20 years	Percentage of workforce	Number of jobs
OCCUPATION-BASED METHODOLOGY			
Frey & Osborne (Oxford)	USA	47%	68,031,090
Lamb (Brookfield Institute)	Canada	42%	7,537,572
TASK-BASED METHODOLOGY			
Arntz et al. (OECD)	USA	9%	13,027,230
	Canada	9%	1,615,194


Source: Lamb (2016), Frey and Osborne (2013), CANSIM Table 282-0008, United States Bureau of Labour Statistics, Mowat Centre calculations

45 Lamb, 2016.

46 Michael Chui et al. (2015) "Four fundamentals of workplace automation." McKinsey Quarterly, November 2015. <http://www.mckinsey.com/business-functions/business-technology/our-insights/four-fundamentals-of-workplace-automation>.

47 Melanie Arntz et al. (2016) "The risk of automation for jobs in OECD countries: A comparative analysis." *OECD Social, Employment and Migration Working Papers 189*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5jlz9h56dvq7-en>.

48 Chui et al., 2015.



“Advancements
in technology
have given
rise to ‘social
robots’ that can
communicate
with people in a
way that could
put many
human-centric
jobs at risk.”

CASE STUDY 1

Social Robots



Occupations in health and social services are estimated to be relatively resistant to automation and for good reason – jobs in these fields require empathy, good communication and usually years of expert training to understand human behaviour. However, advancements in technology have given rise to the “social robot” that can communicate with people in a way that could put many human-centric jobs at risk. For example, researchers around the world have already found value in automating tasks to assist in elder care, from home-assistance technologies to companionship.⁴⁹

More recently, social robots have also emerged as a potential solution to challenges in mental health fields. Interactive technologies have previously been used for some mental health treatments, including computer-based or virtual reality approaches to cognitive-behavioural psychology. But the use of a physical robotic therapist has now become a reality thanks to University of Southern California’s Institute for Creative Technologies. Their model, Ellie, uses cameras to track facial expressions and gestures, and microphones to evaluate the inflection and tone of a patient’s voice. A recent study proved Ellie’s worth: participants who believed she was controlled by a person were much less forthcoming, more fearful of sharing personal information, and more carefully managed the emotions they expressed compared to those who understood that she was a robot.⁵⁰



These findings, generated by trained (human) psychologists who analyzed the transcripts of the sessions, imply that people feel more comfortable discussing difficult emotional issues with an unbiased party. Experts see opportunities in a number of fields, such as diagnosing and treating Post Traumatic Stress Disorder (PTSD) in members of the military before symptoms escalate. Similarly, research has shown that individuals with Autism Spectrum Disorder (ASD) may be more responsive to social robots than human therapists, mainly due to a difficulty with social cues.⁵¹

49 Will Knight (2014) “Your retirement may include a robot helper.” *MIT Technology Review*, October 27 2014. <http://www.technologyreview.com/news/531941/your-retirement-may-include-a-robot-helper>.

50 Gale M Lucas et al. (2014) “It’s only a computer: Virtual humans increase willingness to disclose.” *Computers in Human Behaviour*, Vol 37 pp 94-100; The Economist (2014) “The computer will see you now.” August 16 2014 <http://www.economist.com/news/science-and-technology/21612114-virtual-shrink-may-sometimes-be-better-real-thing-computer-will-see>.

51 Romeo Vitelli. “The rise of the robot psychologist.” *Psychology Today*, November 17 2014 <https://www.psychologytoday.com/blog/media-spotlight/201411/the-rise-the-robot-therapist>.

CASE STUDY 2

Robo-Advisors



While many occupations in business, finance and administration could be performed by a computer, one would assume financial advisors to be an exception. Traditionally, you would pay someone to carefully examine your finances and make recommendations as to how you should invest. However, not all advisors in the investment industry are providing “fiduciary” services, meaning they do not have a legal obligation to put clients’ needs first. Instead, they are often incentivized to freely endorse expensive and unsuitable accounts.⁵² The coming of the robo-advisor could eliminate this scenario. Computer software, registered as a fiduciary service, uses algorithms to automatically transfer money to low-cost exchange-traded funds, rebalance portfolios and seek tax savings to meet a client’s needs.⁵³

Companies such as Wealthfront and Betterment have already attracted \$2 billion each in client money, and consulting firm AT Kearny estimate that assets managed by robo-advisors could increase 68 per cent in just five years to \$2.2 trillion.⁵⁴ The advice provided is generic, which may not be suitable for those with complex finances or who feel more comfortable having someone walk them through their decisions. However, traditional advisors seem to have neglected young investors who are likely to favor automated services. According to an estimate by research firm Celent, self-directed financial advisory services have grown 4.9 per cent a year in the US.⁵⁵ At the same time, Cerulli Associates estimates that the number of human financial advisors in the US has declined by more than 39,000, or 12 per cent, since 2008.⁵⁶

52 Ben Steverman and Margaret Collins (2015) “The robots are coming to put you in an index fund” *Globe and Mail*, June 25 2015. <http://www.theglobeandmail.com/globe-investor/investment-ideas/the-robots-are-coming-to-put-you-in-an-index-fund/article25112108>.

53 Ibid.

54 Ibid; Michael P Regan, “Robo-advisors to run \$2-trillion by 2020 if this model is right” *Globe and Mail*, June 18 2015. <http://www.theglobeandmail.com/globe-investor/investment-ideas/robo-advisors-to-run-2-trillion-by-2020-if-this-model-is-right/article25022321>.

55 Isabella Fonseca et al. (2015) “The state of brokerage platforms.” Celent. <http://info.scivantage.com/rs/scivantage/images/State%20of%20Online%20Brokerage%20Platforms-Scivantage.pdf>.

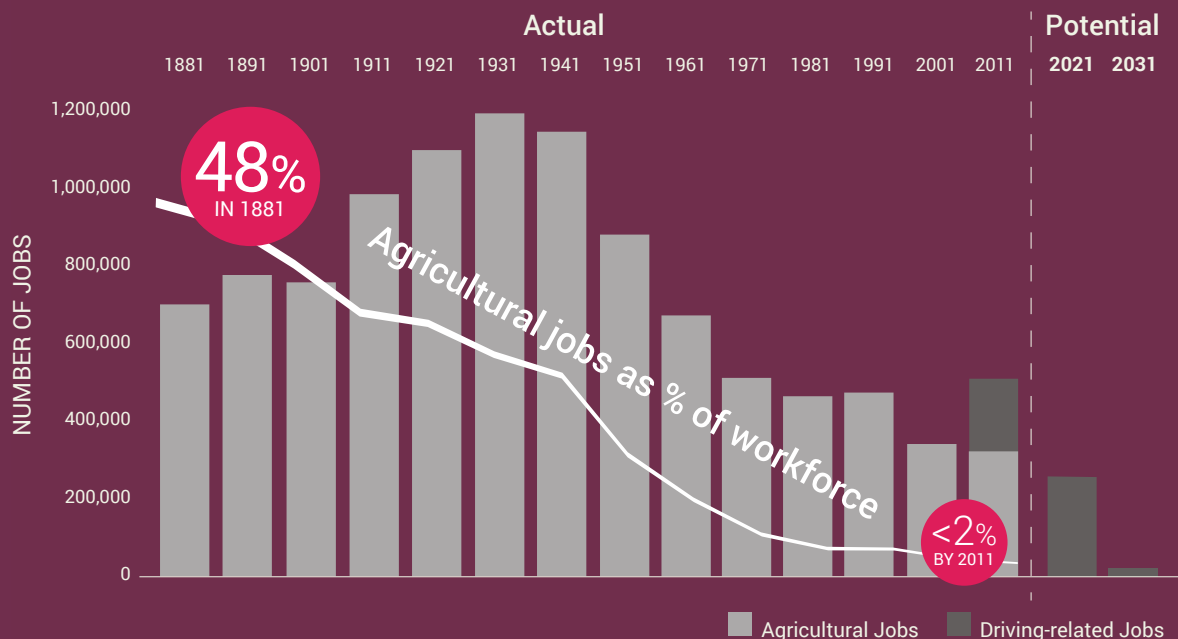
56 Reuters. “Number of US financial advisors fell for fifth straight year - report.” *Reuters*, February 11 2015 <http://www.reuters.com/article/2015/02/11/wealth-cerulli-advisor-headcount-idUSL1NOVL23920150211>.

The Pace of Disruption

The sheer speed with which automation and artificial intelligence threaten to disrupt sectors is also worth noting. Agricultural workers steadily declined in Canada over the course of 130 years from 48 per cent to less than 2 per cent of the workforce, as a result of technological innovations, a shift to larger-scale commercial farming operations, free trade and social changes.⁵⁷ By comparison, the 500,000 Canadians who drive for a living could see a similar proportional decline compressed into the relative eye blink of ten or twenty years as a result of autonomous vehicle technology (see Figure 10).⁵⁸

FIGURE 10

Decline of agricultural jobs (actual) and driving-related jobs (potential)



Source: Statistics Canada Historical Data Series D1-7, 2011 National Household Survey



Decline of
agricultural jobs took
150 years



Decline of
driving-related jobs might take
20 years

57 Statistics Canada. "Table D1-7: Population of working age and either gainfully occupied or labour force, in non-agricultural and agricultural pursuits, census years 1881 to 1971 (Archived)." http://www.statcan.gc.ca/pub/11-516-x/sectiond/4057750-eng.htm#D1_7

58 Statistics Canada. "National Household Survey Data: National Occupation Classification (NOC) 2011 (691)."

LIVING IN AN ON-DEMAND SOCIETY

Technological advancements and the rise of precarious work are both connected to the development of an on-demand economy. Online platforms and smartphone applications have been crucial in this evolution, their use becoming increasingly more affordable and ubiquitous in everyday transactions. These technological advancements have made it possible to quickly and easily connect a driver with someone seeking a ride, a renter with a tourist seeking a room, or a one-off task with an individual seeking additional income.

The business models that support these new digital enterprises often blur the boundaries of who is considered an employee. While this type of gig work is appealing in its flexibility, it further erodes the distinction between work and home life that has traditionally characterized employment relationships and their associated protections and benefits.

Demographic shifts and cultural changes have also, in some ways, made the standard employment relationship much less relevant. The labour market entrants of this generation are more likely to delay marriage and less likely to have children. There is also a much greater diversity in life-courses today, which may make flexible work arrangements more appealing and the need for stability and benefits less urgent.⁵⁹ Yet, unstable and casual employment may also simply be a reflection of tough economic times. When the global economy fell into recession in 2008, income and job prospects suffered for many Canadians, and a lack of income and employment security in the recovery may only make matters worse. To what extent life and job

choices are being made as a result of economic circumstance rather than personal choices is difficult to discern.

The on-demand economy, rapid adoption of artificial intelligence and automation of industry could mean many things for individuals. For example, a person's job could be taken over by a machine and they could be displaced from that industry entirely, left unemployed and seeking work elsewhere. Alternatively, a person could remain working in the industry for a lower wage, as some economists maintain that the "iron law" of automation (i.e., that a robot's increased substitutability with human skills puts downward pressure on the wages of people engaged in similar tasks) will intensify.⁶⁰

In either case, many will see the nature of their employment change. If their wage is not livable or re-entry into the labour market is difficult, they may opt for the scenario of working multiple part-time jobs or temporary "gigs" in order to make ends meet. If these jobs are part-time, they may not receive adequate benefits from employers. If the gigs are completed through an on-demand platform, they may not be considered an employee at all. These are the characteristics of precarious work that are increasingly becoming the norm for Canadians, who often fall into a cycle that can be difficult escape.

Despite these many uncertainties, there are some occupations and industries in which automation seems inevitable and it is important to begin thinking about how this challenges cultural norms surrounding labour and leisure. Mass intermittent unemployment could become more common and

59 Peter Hicks (2015). "The enabling society." Institute for Research on Public Policy. <http://irpp.org/wp-content/uploads/2015/04/policy-horizons-2015.pdf>.

60 Richard Freeman (2015) "Who owns the robots rules the world." *IZA World of Labour* Vol. 5 <http://wol.iza.org/articles/who-owns-the-robots-rules-the-world-1.pdf>.

less stigmatized, and excess leisure time might translate into more opportunity for innovation.⁶¹ This could result in a radical change in the way we think about work and what it means to be a valued member of society, but it is important to ensure adequate institutional supports accompany this shift as we start contemplating what jobs might look like in the future.

It is also important to consider the types of jobs that might be most relevant in the new economy, and the skills that would be required for them. Organizations such as the Institute for the Future and the World Economic Forum have attempted to forecast what the skills of the future look like in a transformed labour market.⁶² These studies tend to agree on key areas:

- » **Social and emotional intelligence** are key skills that computers have not yet mastered. The ability to provide care, establish relationships, coordinate with others and manage and develop people will be crucial.
- » **Adaptability, creativity, and a desire for constant learning** will be of critical importance in an economy that is changing rapidly. This includes having a design mindset, new media literacy, business acumen, and ultimately becoming a “perpetual student”⁶³.
- » **Computational and analytic thinking** are exceptionally important in complementing new technology. The ability to think critically, solve complex problems, and manage mass amounts of data will be necessary to reap the full benefits of innovation.

Aligning education and training policy to focus on these types of skills would require a fundamental rethink of priorities and execution at all levels of government in Canada and for stakeholders as varied as colleges, universities and private employers.

SUMMARY

Consumption is central to the way our economy currently functions – most economic growth and prosperity relies on consumers earning an income and then spending it on goods and services. The movement towards a labour-light economy presumably should threaten the very basis of consumerism. But, as the decoupling of economic growth from wage growth suggests, the economy writ large may well continue to grow. In fact, if automation and the on-demand economy increase productivity and corporations continue to generate large profits as a result, economic growth can continue on an upward trajectory. The issues that arise in this scenario are ones of inequality and wealth distribution.

Much of the literature surrounding technological innovation maintains that available jobs will be those with high wages and requiring high levels of education – implying that while unemployment may not necessarily spike, inequality will continue to bedevil society.⁶⁴ Similarly, automation is likely to increase the concentration of wealth through capital holdings and investment in robotics, as robots potentially become the capital embodying modern innovation. This would accelerate the income distribution shift from labour to capital in nearly all developed countries.⁶⁵

61 Nicholas Colin and Bruno Palier (2015) “The next safety net.” *Foreign Affairs*, July/August 2015 Issue.

62 Alex Gray (2016) “10 skills you need to thrive in the fourth industrial revolution.” World Economic Forum. <https://www.weforum.org/agenda/2016/01/the-10-skills-you-need-to-thrive-in-the-fourth-industrial-revolution>; Anna Davies et al. (2011) “Future work skills 2020.” Institute for the Future. <http://www.iftf.org/futureworkskills>.

63 Davies et al., 2011.

64 The Economist (2015) “The onrushing wave.” *The Economist* January 18 2015. <http://www.economist.com/news/briefing/21594264-previous-technological-innovation-has-always-delivered-more-long-run-employment-not-less>; Graetz and Michaels, 2015.

65 Freeman, 2015.

If the future of work is, in fact, characterized by short-term jobs, longer spells of unemployment, and excess leisure time, there may be significant opportunities to generate creativity and innovative ideas. But this optimistic perspective must be tempered by the reality that innovation is inherently associated with repeated failure and volatility, and if Canadians are to take risks on innovative ideas, they must have adequate supports in place. If our economy continues along its current trajectory, a relative handful of individuals will find success and security, while many others will be forced to find new and uncertain ways to make ends meet.⁶⁶ If benefits to sustain well-being continue to stay tied to full-time jobs, too many people will find themselves falling through the increasingly wide gaps in our inadequate, ill-fitting social architecture.

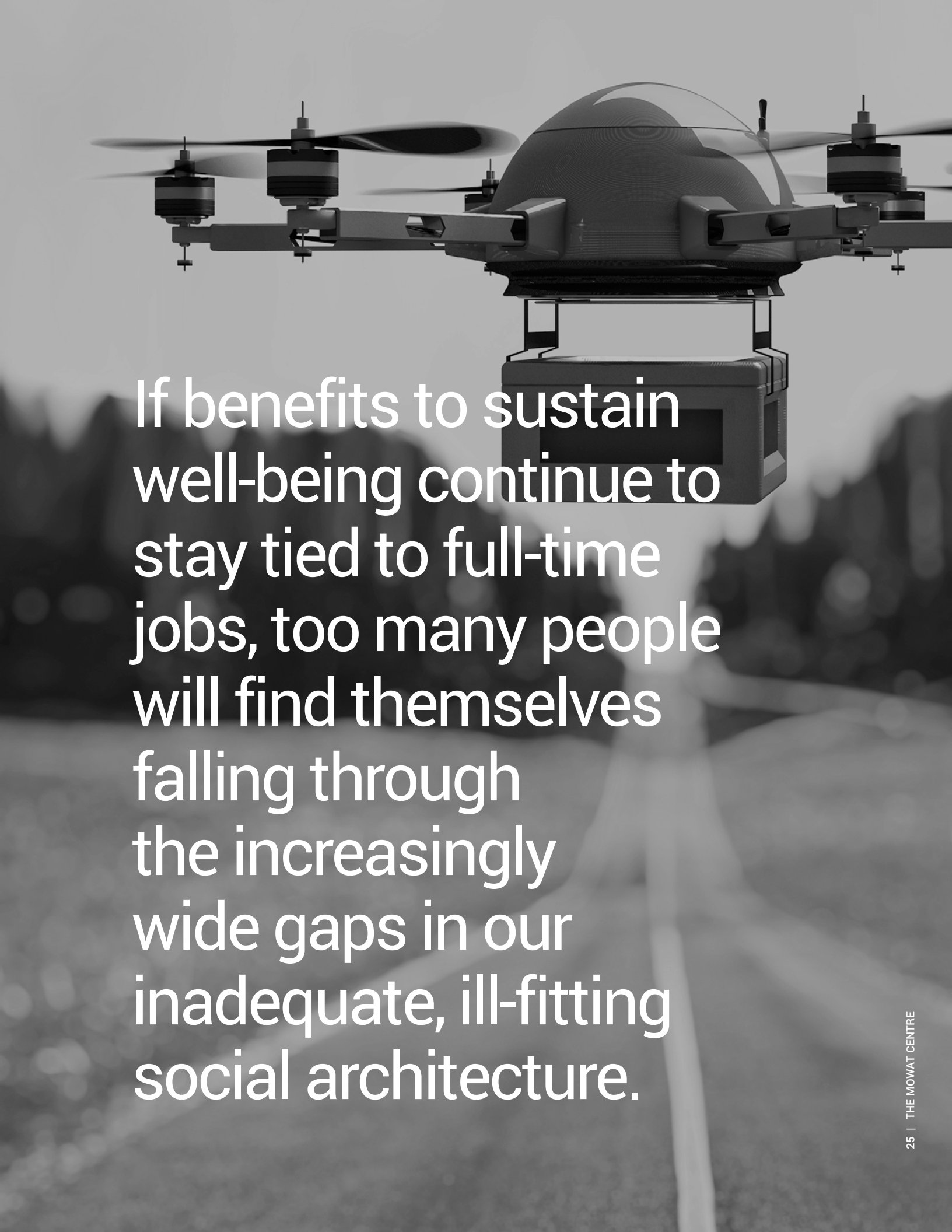
Policymakers must decide how to build and maintain a system that allows Canadians to prosper in an economy that may do well on traditional markers of growth and productivity, but be light in labour. Furthermore, governments must ensure that benefits are still adequate despite the fact that employment relationships are dramatically different than they once were. This will require policies and programs that ensure social and economic inequalities do not outpace our ability to manage them.

Canada's labour market and economy are often said to be in the midst of transformative times. Yet, this truly does seem to be an era where fundamental changes in the nature of our labour markets and economy need to be reckoned with. The digital economy has been with us for over two decades in various forms, and will continue to unleash tremendous convenience and consumer value as well as unforeseen effects on our economy and society. How ongoing

trends in income inequality and precarious work are affected by technological trends is a key question. How employees' rights are protected in this new landscape is also uncertain, given the waning power of unions and the individualized nature of the gig economy.

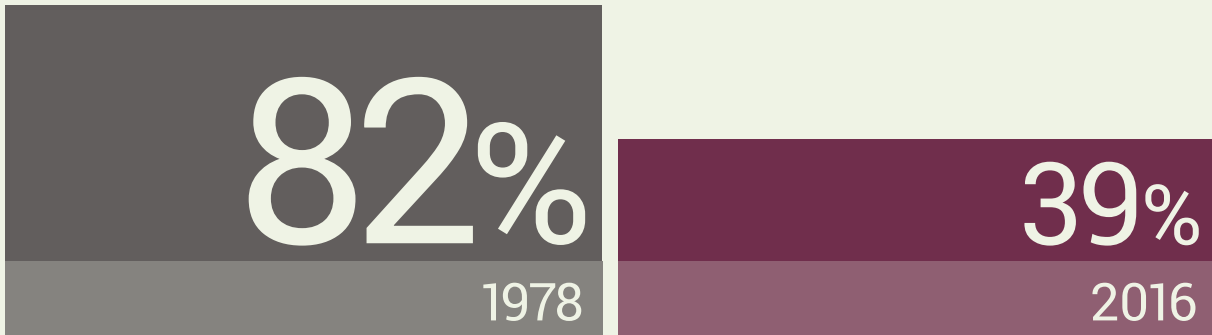
What is certain, however, is that the future of industry, government and work itself will look significantly different in the coming decades than they do today.

⁶⁶ Colin and Palier, 2015.



If benefits to sustain well-being continue to stay tied to full-time jobs, too many people will find themselves falling through the increasingly wide gaps in our inadequate, ill-fitting social architecture.

Unemployed Canadians receiving regular EI benefits



Nearly half of
working-aged
Canadians



have not started or are currently
not saving for
their retirement

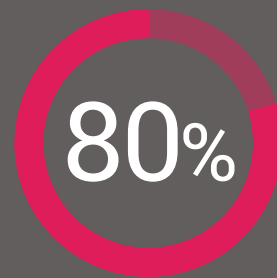
There are only enough regulated
child care spaces for



22%
of children aged
0-5 years old

A growing number of Ontarians
may not be entitled to various protections
in the **Employment Standards Act**
as it currently stands

**Stagnant incomes at the
bottom of the income distribution scale**
have been outpaced by
private market rental prices



Over 80 per cent
of precarious workers in
Ontario have no access to
benefits such as:



VISION



DENTAL



LIFE INSURANCE



DRUG

3 IMPLICATIONS FOR CANADA'S SOCIAL ARCHITECTURE

Are Canada's existing social policies and programs fit for the task of meeting today's and tomorrow's labour market challenges? Many of Canada's core social programs operate on the assumption that traditional employment relationships are the norm. As a result, eligibility for many programs is tied to jobs. As the number of Canadians working in the traditional workplace dwindles, so too does the number of Canadians that can access supports through our existing social architecture.

We explore six key social policy areas that will face significant pressures to modernize as the future of work evolves:



Employment Insurance
& Training Programs



Child Care



Public Pensions



Affordable Housing



Healthcare



Employment Standards

While some programs may be intuitive in the ways in which they relate to employment, others are more complex. If trends continue on their current trajectory, the gaps in each of these programs appear set to widen and pose more challenges for Canadians.



Employment Insurance & Training Programs

KEY BACKGROUND

- » Canada's Employment Insurance (EI) system consists of a suite of federal contributory programs that aim to support Canadians who are temporarily out of work. The bulk of program funding is directed towards temporary income assistance for those who have recently lost a job through no fault of their own (i.e., regular benefits).
- » A number of special benefits also exist for those who are sick, pregnant, caring for a newborn or adopted child, or caring for a seriously ill family member. Over \$18 billion in EI benefits were transferred to individuals in 2014-15.⁶⁷
- » EI also provides employment training and skills upgrading initiatives to some recipients as a way to aid in their transition back into the workforce. Most of these programs are carried out by the provinces and territories, in part funded by agreements such as the Canada Job Fund and the Canada Job Grant Agreement. In 2015-16, federal and provincial governments allocated roughly \$3.6 billion in spending towards various labour market policies.

HOW WELL IS IT HOLDING UP?

- » EI is based on an outdated conception of the labour market – its components have aged poorly and no longer work well together.⁶⁸ As the labour market shifts away from traditional employment, the proportion of Canadians who do not qualify for regular benefits rapidly grows: as of January 2016, only 39 per cent of unemployed Canadians were receiving regular EI benefits, compared to 82 per cent in 1978.⁶⁹ The lack of coverage is even more pronounced in Ontario, with only 28 per cent of unemployed workers receiving benefits in October 2015.⁷⁰
- » Most employment training and skills upgrading initiatives are tied to EI benefits, which leaves many people ineligible for training and skills programs. This is especially true for new labour market entrants, such as youth or newly landed immigrants, and those witnessing extended spells of unemployment due to more large-scale and disruptive economic forces.⁷¹

68 Mowat Centre (2011) "Making it work: Final recommendations of the Mowat Centre Employment Insurance Task Force: Mowat Centre." <http://www.mowateitaskforce.ca/sites/default/files/MakingIt-Work-online.pdf>

69 CANSIM Tables 267-0001 and 282-0087; Statistics Canada (2016) "Employment Insurance January 2016." *The Daily*. <http://www.statcan.gc.ca/daily-quotidien/160324/dq160324a-eng.htm>.

70 CANSIM Tables 267-0001 and 282-0087; Statistics Canada (2016) "Employment Insurance, October 2015." *The Daily*. <http://www.statcan.gc.ca/daily-quotidien/160324/dq160324a-eng.htm>.

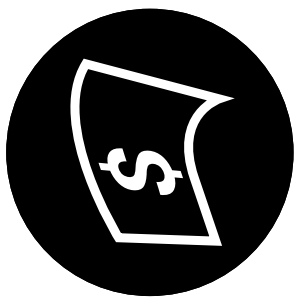
71 Andrew Galley (2015) "Renewing Canadas Social Architecture: Employment and skills training." Mowat Centre. <http://social-architecture.ca/wp-content/uploads/EmploymentSkillsTraining.pdf>.

67 Public Accounts of Canada 2015, Volume II: Details of expenses and revenues.

- » Spending on workforce development as a portion of GDP continues to shrink each year in Canada, and has fallen to one of the lowest levels in the OECD.⁷²
- » The current system was designed to most effectively deal with frictional unemployment (i.e. transitional) and cyclical unemployment from short-lived economic downturns. Our EI programs are not well-placed to address the unemployment that arises from structural declines of entire sectors, where industry-specific jobs are unlikely to return in the future and longer spells of unemployment are common.
- » While factory workers who experienced job loss in the early 2000s had the opportunity to transfer their skills to a job in the booming fields of energy and construction, there are simply fewer options for these workers in 2016.⁷³ As automation takes hold in sectors such as retail and services, the question of how to quickly and effectively upgrade skills for tens of thousands of workers will become even more pronounced.

72 Donna Wood (2015) "Hollowing out the middle." Canadian Centre for Policy Alternatives. https://www.policyalternatives.ca/Harper_Record_2008-2015/11-HarperRecord-Wood.pdf.

73 Michael Babad (2016). "Blue-collar blues: Why Canadian men are worse off this time." *Globe and Mail*, July 12 2016 <http://www.theglobeandmail.com/report-on-business/top-business-stories/blue-collar-blues-why-canadian-men-are-worse-off-this-time/article30880523>.



Public Pensions

KEY BACKGROUND

- » Canada's public pension system has three fundamental components that aim to support Canadians in maintaining a standard of living beyond retirement that is comparable to that of their working lives. The Canadian Pension Plan (CPP) and equivalent Quebec Pension Plan (QPP) are contributory pension schemes, whereas Old Age Security (OAS) is a monthly payment funded out of general federal revenues. In addition, the federal government administers a non-taxable Guaranteed Income Supplement (GIS) to low-income seniors.
- » In 2014-15, the federal government paid out \$33.5 billion in OAS payments and \$10.1 billion in GIS payments. The government transferred a total of \$38.75 billion through various CPP programs, \$29.58 billion of which were retirement pensions.⁷⁴
- » In addition to the public pension system are private and voluntary savings, often referred to as the "third pillar" of retirement income. Additional income is sometimes provided privately through the workplace, and otherwise through savings plans to which individuals contribute voluntarily, such as a Registered Retirement Savings Plan (RRSP).

HOW WELL IS IT HOLDING UP?

- » Both private and voluntary saving have eroded over the years, leaving many to rely on public pensions as their primary source of retirement income.⁷⁵ The provision and quality of workplace pensions has been on the decline, especially in the private sector and in small organizations, and the median Canadian earner faces great difficulty saving adequately in the absence of privately sponsored pensions.⁷⁶
- » Two decades of low interest rates have significantly reduced returns on any retirement assets: plummeting bond yields for example have increased the cost of a secure old age by nearly one third.⁷⁷ HSBC's most recent global analysis on the Future of Retirement revealed that nearly half of working-aged Canadians (48 per cent) have not started or are currently not saving for their retirement.⁷⁸

74 Employment and Social Development Canada (2016b) "Annual report of the Canadian pension plan, 2014-2015." http://www.esdc.gc.ca/en/reports/pension/cpp_2015.page.

75 Richard Shillington (2016) "An analysis of the economic circumstances of Canadian seniors." *Broadbent Institute*. https://d3n8a8pro7vbm.cloudfront.net/broadbent/pages/4904/attachments/original/1455216659/An_Analysis_of_the_Economic_Circumstances_of_Canadian_Seniors.pdf?1455216659.

76 Tyler Meredith (2015) "Lower risk, higher reward: Renewing Canada's retirement income system." Mowat Centre. <http://social-architecture.ca/wp-content/uploads/LowerRiskHigherReward.pdf>.

77 Ian McGugen. "Four retirement strategies to counteract miserly bond yields." *Globe and Mail*. July 17 2016. <http://www.theglobeandmail.com/globe-investor/retirement/retire-planning/four-retirement-strategies-to-counteract-miserly-bond-yields/article30951093>.

78 HSBC (2016) "The future of retirement: Generations and journeys, Canada report." https://www.hsbc.ca/1/PA_ES_Content_Mgmt/content/canada4/pdfs/personal/for-canada-report.pdf.

» Recent federal reforms to expand the CPP, beginning in 2019, are expected to benefit those who are less likely to receive employer-sponsored pensions, such as young employees and new labour market entrants.⁷⁹ However, the expansion of the CPP could create burdensome costs for self-employed individuals who are required to pay both the employee and employer contributions to the CPP – both of which are increasing.⁸⁰

» Contractors, temporary workers and multiple job holders must also often ‘double contribute’ to the CPP in this manner if their employer is not required to contribute on their behalf.⁸¹ When their employer does contribute, temporary employees are often disadvantaged as CPP is paid out based on average earnings over a contributory period – temporary periods of earnings can lower overall pension payments, even if those earnings were high.⁸²

» The expansion will not be of much value to those retiring in the near term, or who have already been retired for several years. It also does little for those who do not contribute to the CPP in the first place, such as those working piecemeal jobs paid in cash. Those who do not pay into the CPP at all risk falling into poverty after retirement in the absence of other savings. This scenario has already occurred with a high proportion of senior women in Canada who did not contribute to the CPP during their years as a homemaker and now live in poverty after retirement.⁸³

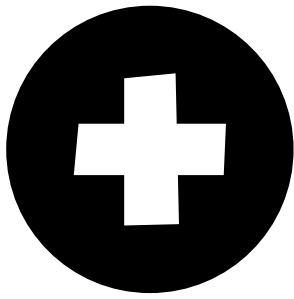
79 Ibid.

80 Andrew Harrison (2016). “What does the CPP mean for self-employed workers?” *Globe and Mail*, June 24 2016 <http://www.the-globeandmail.com/report-on-business/small-business/sb-money/what-does-the-cpp-expansion-mean-for-self-employed-canadians/article30611000>.

81 Leroy O. Stone. (2006) “The impact of precarious employment on financial security in retirement.” In Statistics Canada, *New Frontiers of Research on Retirement*, chapter 19. <http://www.statcan.gc.ca/pub/75-511-x/2006001/ch/5203531-eng.htm>.

82 Ibid.

83 Ibid. and Shillington (2016).



Healthcare

KEY BACKGROUND

- » Healthcare provision is a provincial responsibility but is influenced heavily by federal funding through the Canada Health Transfer (CHT). These payments are conditional on the provincial and territorial governments providing services that meet set criteria outlined in the Canada Health Act. The CHT was valued at \$32.1 billion during the 2014-15 fiscal year.
- » The Canadian Institute for Health Information (CIHI) estimates that overall healthcare spending in Canada will have exceeded \$219 billion in 2015, or \$6,105 per capita, representing 10.9 per cent of Canada's GDP.⁸⁴
- » There are essentially two parallel systems at work in Canadian healthcare: the single-payer system that includes hospital and physician services, and residual systems comprised of all other services, usually with combined public and private funding.⁸⁵ According to CIHI's National Health Expenditure Trends, approximately 71 per cent of total spending comes from the public sector, and around 29 per cent is financed by the private sector.⁸⁶

HOW WELL IS IT HOLDING UP?

- » Gaps exist within both systems, particularly those involving privately provided residual services. For example, Canada is the only country that provides universal health care without also providing universal drug coverage.⁸⁷ While most provincial governments provide some limited coverage, the extent to which any individual Canadian receives coverage depends on his or her age, means, and province of residence, resulting in wide variation in coverage across the country.⁸⁸
- » While some may have sufficient coverage to meet their needs, many face significant barriers to accessing pharmaceuticals. Those who are ineligible for public drug coverage through this patchwork system are left to rely on either privately purchased or employer-based insurance plans, which may not be an option for many low-income Canadians.

84 Canadian Institute for Health Information (2015) "National health expenditure trends, 1975 to 2015." <https://www.cihi.ca/en/spending-and-health-workforce/spending/national-health-expenditure-trends/nhex2015-topic1>.

85 Sarah McKenna and Jamison Steeve (2015) "Renewing Canada's social architecture: Modernizing medicare." Institute for Competitiveness and Prosperity. <http://social-architecture.ca/wp-content/uploads/ModernizingMedicare.pdf>.

86 Canadian Institute for Health Information, 2015.

87 Steven G. Morgan and Jamie R. Daw (2012) "Canadian pharmacare: Looking back, looking forward." *Health Policy* Vol 8 No 1, pp. 14-23.

88 Lindsay Handren (2015) "Unfilled prescriptions: The drug coverage gap in Canada's health care systems." Mowat Centre. <http://social-architecture.ca/wp-content/uploads/UnfilledPrescriptions.pdf>.

- » Workplace-provided health and drug plans are becoming increasingly uncommon. Such benefits are typically tied to secure, full-time permanent employment, while those engaged in precarious work are significantly less likely to be eligible for prescription drug coverage. Over 80 per cent of jobs classified as precarious in Ontario do not receive any benefits such as vision, dental, drug and life insurance. Even those who do receive some degree of benefits believe their plans are insufficient to cover family needs.⁸⁹
- » Those engaged in precarious employment tend to have poorer mental health outcomes than those working secure jobs, and there has been growing concern that our current healthcare system does not provide adequate support in this regard.⁹⁰
- » There is also growing concern surrounding the preparedness and adequacy of our healthcare system to address the needs of a rapidly aging population: if our current healthcare system remains stagnant, seniors will account for nearly 60 per cent of all healthcare spending by 2031.⁹¹ Caring for the chronically ill in hospital can cost nearly \$1000 a day, compared to only \$55 per day through home care.⁹²
- » Many studies that estimate the cost of establishing a national pharmacare program in Canada also highlight significant potential savings. According to a recent study, universal drug coverage could cost government approximately \$958 million.⁹³ Other studies have indicated that savings from a national pharmacare program could be as high at \$11.4 billion each year, with \$1 billion of those savings derived from eliminating duplicate costs in the current system.⁹⁴

89 Lewchuk et al., 2013.

90 CSDH (2008) "Closing the gap in a generation: Health equity through action on the social determinants of health." Final report of the Commission on Social Determinants of Health. Geneva. World Health Organization.

91 Canadian Medical Association. "Code gridlock: Why Canada needs a national seniors strategy." Address to the Canadian Club of Ottawa by Dr. Christopher Simpson, President, CMA, November 18 2014. https://www.cma.ca/En/Lists/Medias/Code_Gridlock_final.pdf.

92 Ibid.

93 Steven G. Morgan et al. (2015) "Estimated cost of universal public coverage of prescription drugs in Canada." *Canadian Medical Association Journal*. <http://www.cmaj.ca/content/early/2015/03/16/cmaj.141564.full.pdf+html>.

94 Marc-André Gagnon (2014) "A roadmap to a rational pharmacare policy in Canada." Canadian Federation of Nurses Unions.



Child Care

KEY BACKGROUND

- » Child care falls under provincial jurisdiction, although service delivery is typically carried out by municipal governments. The primary role of the federal government is to provide funding to the provinces and territories through the Canada Social Transfer (CST). A portion of CST is notionally allocated towards support of early childhood development, early learning and child care, and child care spaces. In 2014-15, this earmarked amount was worth \$1.31 billion, 10.4 per cent of the total CST during that fiscal year.⁹⁵
- » Provinces have a great deal of freedom to determine how such programs are carried out, resulting in wide variances in child care policies.⁹⁶ While Quebec, for example, has a universal subsidized system, Canadians who live elsewhere face significant access and affordability barriers.
- » There are also a variety of child-related initiatives and tax programs that exist at the federal level to indirectly assist families with the cost of childcare, such as the new streamlined income-tested Canada Child Benefit.⁹⁷

HOW WELL IS IT HOLDING UP?

- » Childcare has been identified as an area that needs improvement in Canada for quite some time. A 2008 UNICEF report ranked Canada last among 25 economically advanced nations, meeting only one out of ten recommended standards for child care efforts.⁹⁸
- » Available regulated childcare space is deeply inadequate: as of 2012, there were only enough centre-based spaces to care for 22.5 per cent of children aged zero to five years old.⁹⁹
- » Affordability is also an issue: the price of childcare services can be prohibitively high in some areas, with Canada paying more as a percentage of average income than the average OECD country. This is particularly true in larger cities such as Toronto, where one can expect fees as high as \$1676 each month for infant care.¹⁰⁰ Most provinces do provide subsidized childcare services for qualifying low-income families, although the shortage of spaces tends to result in long waiting lists.

95 Treasury Board of Canada Secretariat (2015) "Early learning and childcare: Plans, spending and results." <https://www.tbs-sct.gc.ca/hidb-bdih/initiative-eng.aspx?Hi=41&YrAn=2016>.


96 Sunil Johal and Thomas Granofsky (2015) "Renewing Canada's social architecture: Growing pains: Childcare in Canada." Mowat Centre. http://social-architecture.ca/wp-content/uploads/Growing-Pains_ChildcareinCanada.pdf.

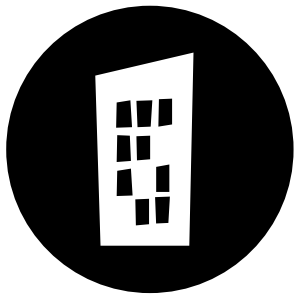
97 Canada Revenue Agency (2016) "Canada child benefit – Overview." <http://www.cra-arc.gc.ca/bnfts/ccb/menu-eng.html>.

98 UNICEF (2008) "The child care transition." *Innocenti Report Card 8*. https://www.unicef-irc.org/publications/pdf/rc8_eng.pdf.

99 Martha Friendly, et al. (2013) "Early childhood education and care in Canada 2012." Childcare Resource and Research Unit. http://childcarecanada.org/sites/default/files/CRRU_ECEC_2012_revised_dec2013.pdf.

100 Johal and Granofsky, 2014.

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- » The flexibility of the gig economy could potentially be very beneficial for those with children. Part-time hours and task-based jobs that can be done from home can provide flexibility and free time to care for a child. At the same time, unpredictable scheduling and low wages make it difficult to arrange care when it is needed, especially for low and middle-income Canadians holding insecure jobs.
 - » The cost of addressing the “child care gap” is challenging to estimate, as the size of the gap itself is contested. The cost of creating new spaces is difficult to ascertain and dependent on a host of factors such as staffing model and ratios. To give a rough estimate of potential costs, during the 2015 election campaign the federal NDP promised to create 1 million spaces for \$5 billion.



Affordable Housing

KEY BACKGROUND

- » In Canada, affordable housing has historically been a gray area in terms of jurisdictional authority. While federal funds are provided to the provinces and territories, municipal governments often deliver housing-related services. Our current approach to affordable housing primarily consists of rent-geared-to-income units owned by provincial or local government housing agencies or non-profit organizations, and cash supplements for landlords to cover the gap between rent received from low-income households and market rents.¹⁰¹
- » Despite major investments in affordable housing through the 1960s to 1980s, the federal government largely stepped away from subsidized housing projects in the 1990s. Federal spending has decreased from \$98 per capita in 1993 to only \$63 per capita in 2013, and its operating spending for social housing is set disappear entirely by 2040.¹⁰² Today, the majority of projects are financed by a patchwork of initiatives at various levels of government, private and non-profit organizations.

- » The Canadian Mortgage and Housing Corporation (CMHC) continues to transfer some funds to the provinces and territories through the Canada Social Housing Agreement as well as the Investment in Affordable Housing program, a cost-matching agreement with the provinces to which the federal government has committed \$1.9 billion over 8 years.¹⁰³ However, new affordable housing programs are significantly less ambitious than they once were, in terms of both breadth and depth.¹⁰⁴

HOW WELL IS IT HOLDING UP?

- » Canada does not have a long-term national strategy for affordable housing. Our current approaches have generally been poorly funded, subordinate to policies geared towards home ownership promotion, and insufficient to correct the severe shortage of affordable rental housing stock across the country.

101 Noah Zon (2015) "Renewing Canada's social architecture: Access to affordable housing." Mowat Centre. <http://social-architecture.ca/wp-content/uploads/AccessstoAffordableHousing.pdf>.

102 Jane Londerville and Marion Steele (2014). "Housing policy targeting homelessness." Canadian Alliance to End Homelessness.

103 Public Accounts of Canada, 2015; Canadian Mortgage and Housing Corporation (2016) "Investment in affordable housing (IAH)." <https://www.cmhc-schl.gc.ca/en/inpr/afhoce/fuafho>.

104 Zon, 2015.

» Housing policy in Canada has historically focused on ownership: a series of home purchase assistance programs implemented since the 1970s have resulted in a consistent home ownership rate of about two thirds.¹⁰⁵ This emphasis on home ownership has never been accompanied by a policy of tenure neutrality to treat homeownership and renting equally; in fact, this has worsened over time.¹⁰⁶

» The new employment landscape can be problematic for both home owners and renters. For aspiring home owners, unstable employment can be a major barrier to accessing a mortgage. Part-time or temporary jobs are often not given much weight during the application process, and applicants may have to rely on a second earner with more security for approval.

» Affordability is more of an issue for renters, who have on average half the income of homeowners.¹⁰⁷ For a renter who is precariously employed, sporadic shift work and inconsistent pay can make it extremely difficult to meet rent obligations. Low-income individuals or families who face this difficulty may qualify for existing supports such as subsidized housing, but are then faced with surmounting the shortage of available units.

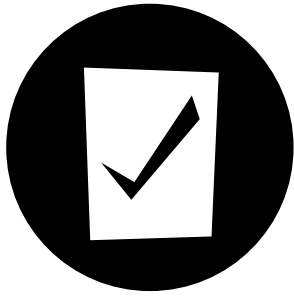
» Stagnant incomes at the bottom of the income distribution scale have been outpaced by private market rental prices. This has become abundantly clear in Canada's large cities such as Toronto and Vancouver, both of which have witnessed housing booms in the past decade. Rising rental prices have been unrelenting, and governments are only now beginning to intervene.¹⁰⁸

105 David Hulchanski (2007) "Canada's dual housing policy: Assisting owners, neglecting renters." University of Toronto Centre for Urban and Community Studies, *Research Bulletin No. 38*. <http://www.urbancentre.utoronto.ca/pdfs/researchbulletins/CUCSRB38Hulchanski.pdf>.

106 Ibid.

107 Ibid.

108 Bill Curry (2016) "Four major changes to Canada's housing rules." *Globe and Mail*, October 3 2016. <http://www.theglobeandmail.com/real-estate/four-major-changes-to-canadas-housing-rules/article32223470/>; British Columbia Ministry of Finance (2016) "Additional property transfer tax on residential property transfers to foreign entities in the Greater Vancouver Regional District." Tax Information Sheet 2016-006. <http://www2.gov.bc.ca/assets/gov/taxes/property-taxes/property-transfer-tax/forms-publications/is-006-additional-property-transfer-tax-foreign-entities-vancouver.pdf>.



Employment Standards

KEY BACKGROUND

- » Governments have an important role in setting minimum standards and defining the rights and responsibilities of both employees and employers. Over time, labour legislation at both the federal and provincial levels of government has come to be an important catalyst in ensuring that workers receive fair and equitable treatment in the workplace.
- » At the federal level, Part III of the Canada Labour Code applies to those employed in federally regulated businesses and industries, such as banks, radio broadcasting, postal service, as well as marine, air and railway transport. The code sets minimum standards for hours of work, vacation and leave, termination and dismissal, sexual harassment, and employer compliance for approximately 6 per cent of Canadian employees.¹⁰⁹
- » For all other industries, work conditions are regulated by provincial and territorial labour ministries. Generally speaking, employee rights at the sub-national level include protections similar to those at the federal level, such as hours of work and overtime, minimum wage, pay intervals, rights to annual vacation and scheduled breaks.

HOW WELL IS IT HOLDING UP?

- » As labour conditions change, gaps in provincial and federal labour legislation continue to become evident. To take one example at the provincial level, Ontario's Employment Standards Act (ESA), which was initially conceived in 1968, has failed to keep pace with the changing nature of work despite many amendments over the years. The Act was designed to protect the average Ontarian engaged in an SER, but as employment changes, fewer people are engaged in this type of employment. This means that a growing number of Ontarians may not be entitled to various protections in the ESA as it currently stands.
- » People who serve several clients rather than a single employer are considered an independent contractor rather than an employee, and are at risk of unfair treatment.¹¹⁰ Many have identified this as a potential loophole, allowing some employers to purposely misclassify their workers in order to side-step direct costs associated with compliance with labour legislation, such as: 4 per cent vacation pay; approximately 3.7 per cent of wages for public holiday pay; overtime pay; termination pay; severance pay; and premiums for EI and CPP.¹¹¹

109 Employment and Social Development Canada (2016c). "Federally regulated businesses and industries." http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/regulated_industries.page.


110 See recent Ontario Court of Appeal case: *Keenan v. Canac Kitchens Ltd.*, 2016 ONCA 79, which has been cited as a potential precedent-setting victory for precarious workers in the province.

111 Ontario Ministry of Labour, 2016a.

» Ontario is currently reviewing both the ESA and the Labour Relations Act (LRA) to examine the impacts of recent workplace trends, such as an expanding service sector, globalization and trade liberalization, workplace diversity, accelerating technological change, and the rapid growth in non-traditional employment relationships.¹¹²



112 Ontario Ministry of Labour (2016b) "The changing workplaces review." <https://www.labour.gov.on.ca/english/about/workplace>. While the Changing Workplaces Review is still ongoing, preliminary findings can be found in the Special Advisors' Interim Report; see Ontario Ministry of Labour (2016a).

An aerial, high-angle photograph of a parking lot. Several solar panel arrays are installed on the ground, some of which are partially covered by vehicles. A dark-colored sedan is parked on the left, and a large white box truck is parked on the right. The solar panels are dark and rectangular, arranged in rows. The ground is paved with light-colored tiles. The overall scene suggests a focus on sustainable energy and infrastructure.

Our social insurance schemes, meant to spread risk among the population and prevent catastrophe from befalling the most vulnerable in society, are seriously challenged.

4 ANALYSIS AND RECOMMENDATIONS

The tide of progress has left Canada as a whole better off in many regards in recent decades – the economy has grown steadily, people live longer and healthier lives and many people from around the world view us as a first-choice destination to improve their lives. Yet, there have always been people and groups within society who have been left behind on the path to prosperity. Technological progress now risks leaving many more behind, and in rapid fashion.

The fissures in existing social programs and policies are already evident, whether it is unemployed workers ineligible for EI, a shortage of affordable childcare spaces or barriers to accessing mental health services and pharmaceuticals. As more people enter the gig economy of self-employed, independent contractors or lose out to automation, their place within Canada's social architecture will become even more tenuous.

Our social insurance schemes, meant to spread risk among the population and prevent catastrophe from befalling the most vulnerable in society, are seriously challenged. They insure those with a certain type of job, and leave others to fall between the cracks or rely on programs of last resort. Is there a better way forward that recognizes impending tectonic shifts in how jobs are created or eliminated and the quality of those jobs?

Our recommendations, designed to develop more resilient policies and programs to withstand technology shocks to the labour market, are premised on some key assumptions:

- » Many corporations and some workers operate in a global marketplace. They can and will shift their location based on considerations such as quality of life, tax regimes and regulatory environment.
- » Automation and artificial intelligence are unlikely to lead to a job-free landscape in the near future, as new uses and demands for labour emerge.
- » More frequent and large-scale 'temporary' displacements of workers within sectors can be expected and risk significant damage to workers' incomes and long-term employment prospects.
- » No sector or job is completely immune to disruption, though some are less likely to be affected where they involve non-routine tasks.

The march of technological disruption means that the political calculus of those who are shielded from risks has to be recalibrated. This opens up political space for a rethink of how Canada insures its citizens and how we best move forward with a society that provides all citizens with basic needs and positions them for success in this tumultuous time.

In such a rethink, it is important that an individual's particular position within society should not be determinative.¹¹³ A useful thought experiment could be to imagine what choices we, as a society, would make if our individual positions within society were unknown, such that each one of us could potentially end up in any position. Such an approach would likely result in more progressive or egalitarian distributive policies as we would strive to ensure a floor of protections acceptable to all in society.¹¹⁴

Technology's impact on jobs creates a perfect opportunity to adopt such a lens, given the unpredictable and far-reaching changes to occupations up and down the income scale. As the constituency of those faced with technological disruption is broad, so too should the scale of transformation and scope of coverage of the programs supporting Canadians be broad.

There are also institutional and cultural factors at play – governments do not always move both quickly and thoughtfully when faced with major, sudden shifts in economic and social conditions. They often face a status quo bias from stakeholders that inhibits proactive decisions. Major policy resets across multiple levels of government and multiple departments are notoriously vexing. Overcoming these limiting factors when faced with such a transformational challenge is daunting, and must be considered.

Policy Recommendations

There is a clear choice confronting policymakers as labour markets continue to shift. Stay the course with existing programs and make minor tweaks to adapt to changing conditions, or go back to the drawing board and begin anew. Our recommendations take account of both options, recognizing that political and stakeholder realities may make a complete overhaul challenging, if not impossible to fully achieve. We outline three categories of policy changes:

- » Foundational programs and policies that are broadly universal in nature and will benefit many in society.
- » Targeted programs and policies that are designed to support those impacted by rapid technological disruption.
- » Transformational initiatives that replace or reinvigorate traditional approaches.

Finally, we make some recommendations to address the cultural and institutional factors that might hinder significant transformations facing governments.

As the constituency of those faced with technological disruption is broad, so too should the scale of transformation and scope of coverage of the programs supporting Canadians be broad.

¹¹³ John Rawls (1971) *A Theory of Justice*. Belknap Press of Harvard University.

¹¹⁴ Ibid.

STRENGTHENING FOUNDATIONAL PROGRAMS AND POLICIES

Many Canadians are unable to access affordable, high quality childcare, mental health services, home care, pharmacare or affordable housing. In an ever more precarious, fluid labour market, it is likely that even fewer Canadians will be able to access these programs and services.

- » Consequently, policymakers at all levels of government need to carefully **examine the costs and benefits of expanding access to foundational programs**. While the initial upfront fiscal costs in all of these areas are imposing, the costs of inaction could be even more alarming. A universal pharmacare program would improve patient outcomes while saving over \$11 billion in health care costs per year. Studies in the US have shown a return on investment of between \$4 and \$17 for each dollar invested in preschool programs.¹¹⁵ Investments in social and affordable housing would yield spinoff benefits across a range of domains including employment, educational attainment and reduced healthcare costs.¹¹⁶
- » Means-tested sliding scale measures that require those with higher incomes to pay more should be considered for all of these programs (e.g., Quebec's move away from a universal \$7 a day childcare to charging additional fees to parents making above \$50,000). However, a simpler and less administratively burdensome approach would see **governments adopting universal programs, and a more progressive tax system to fund them**.

A worker in the gig economy bouncing between platforms and with highly variable income would be in a much more stable, secure position if their housing, childcare, pharmacare and

other essential needs with high costs were substantially addressed.

Broad, transformational investments of this nature are challenging to envision given the strained fiscal circumstances of governments across Canada. But, they are also the cleanest answer to the question of how governments can play the role of social insurer most effectively.

It is also worth noting that two of the areas we identify as foundational programs – childcare and home care – are heavily reliant on labour. They are also unlikely to, in the medium-term at least, be disrupted by technology given the sensitivity of working with children and the elderly as well as technological limitations that make non-routine tasks more challenging to automate.

- » Ramping up investments in childcare to meet existing demand, and homecare to address the impending “gray tsunami”, would require the **training of thousands of new childcare and homecare workers**. Governments should carefully consider how those entering the labour market for the first time as well as those in need of skills training could be mobilized to meet these two high-need areas.
- » The federal government and provinces should **continue to examine reforms to the Canada Pension Plan and Guaranteed Income Supplement** to mitigate the risk of more Canadians sliding into poverty in retirement. Broadening eligibility requirements and increasing benefits should both be closely considered, as well as ensuring low-income

¹¹⁵ Royal College of Physicians and Surgeons of Canada (2014) “Early childhood development.” Royal College Position Statement.

¹¹⁶ Noah Zon et al. (2014) “Building blocks: The case for federal investment in social and affordable housing.” Mowat Centre. https://mowatcentre.ca/wp-content/uploads/publications/98_building_blocks.pdf.

seniors aren't adversely affected by GIS clawbacks.¹¹⁷ As fewer Canadians have access to workplace pensions and struggle to put away personal savings, the importance of robust retirement income security programs for all Canadians will continue to be a pressing public concern.

- » A host of other supports administered through the tax system, such as the Working Income Tax Benefit (WITB), and the Canada Child Benefit (CCB), must also be **reviewed for adequacy and coverage**. The unintended interactions between a range of federal and provincial programs creating disincentives to rejoin the labour market or earn income should be policy renewal priorities.

TARGETED PROGRAM AND POLICY ADJUSTMENTS

Even if major investments are made in universal programs, there are targeted policy adjustments that governments should consider to protect workers and position them for success in tomorrow's labour market. And if these major investments aren't made, then the following recommendations become even more pressing as the insurance of last resort for many Canadians.

- » Both the federal and provincial governments must establish **clear guidance around the classifications of independent contractors and employees**. Clarifying and modernizing these classifications to ensure that companies aren't shunting employees into independent contractor provisions to reduce benefit obligations and financial costs such as EI and CPP contributions, vacation pay, termination and severance pay is imperative in the gig economy. This type of misclassification also cuts workers out of EI benefits and skills training programs which are premised on traditional employer-employee relationships.
- » Policymakers should explore **whether independent contractors in the new gig economy merit additional protections that they have not traditionally been afforded**. For example, provisions around minimum wage for Canadians working through sharing economy platforms would help provide a certain level of income security. Some platforms, such as Favor, an Austin delivery company, and Hello Alfred, a service platform, have voluntarily instituted site-wide minimum wages.¹¹⁸ Extending other partial

117 Kevin Milligan and Tammy Schirle (2016), "The pressing question: Does CPP expansion help low earners?" CD Howe Institute. <https://www.cdhowe.org/public-policy-research/pressing-question-does-cpp-expansion-help-low-earners>.

118 Sarah Kessler (2016) "Could a minimum wage work in the gig economy?" Fast Company. <https://www.fastcompany.com/3058599/could-a-minimum-wage-work-in-the-gig-economy>; Heesen Wee (2016). "Look what start-ups already pay \$15 minimum wage." CNBC News. <http://www.cnbc.com/2016/04/05/some-gig-economy-start-ups-already-paying-15-an-hour.html>.

or full employment protections and minimum requirements to gig workers who are 'dependent contractors' could go some ways towards preventing platforms from a classification race to the bottom.¹¹⁹

- » **Enhance the enforcement and public awareness of employment standards requirements for employers.** A 2012 Law Commission of Ontario report noted that the reactive, complaint-based approach which underpins employment standards legislation in Ontario is not working.¹²⁰ Stronger penalties and investigation powers for authorities would serve as a powerful disincentive for companies to game the system by misclassifying workers as independent contractors, or otherwise attempting to curtail their legal rights. Greater awareness of workers' rights would also serve to help balance out the employer/employee dynamic.
- » **Provincial governments should review existing social assistance programs and ensure that they are not overly punitive with regards to divestiture of assets or income clawbacks.** As people transition from EI to social assistance, or directly to social assistance, the primary goal of governments should be to enable them to quickly bounce back into the labour market with some level of savings. Current systems instead, too often, strip people of savings and claw back money they make from taking on additional employment (in addition to high marginal effective tax rates flowing from the loss of benefits).

Otherwise, the rebound effect of those leaving social assistance briefly and re-entering the labour market with an uncertain footing, only to slide back immediately onto social assistance and government support will continue to perpetuate a negative cycle. There are broader challenges around the adequacy of existing social assistance rates (a single person in Ontario receives about \$8,000 a year) as well as the design and delivery of the programs, which is often characterized as overly punitive and restrictive.¹²¹

- » Temporary employment agencies have long connected workers with jobs for shorter-term, casual assignments. While in theory serving a useful function, they've often undertaken this role in a manner that puts workers' health and safety at risk and keeps them in permanently 'temporary' employment through restrictive covenants.¹²² **Provincial governments should enhance enforcement and regulation of temporary employment agencies to ensure protection of workers. Governments should also explore whether a non-profit or government body could more effectively play the role of job matchmaker,** given the availability of platform technology that reduces transaction costs and enhances the efficiency of marketplaces.

119 Caroline O'Donovan (2016) "What a new class of worker could mean for the future" *BuzzFeed*, June 18 2016 <https://www.buzzfeed.com/carolineodonovan/meet-the-new-worker-same-as-the-old-worker>.

120 Law Commission of Ontario (2012) "Vulnerable workers and precarious work: final report." <http://www.lco-cdo.org/en/vulnerable-workers-final-report>.

121 Alex Himmelfarb and Trish Hennessy, eds. (2016) "Basic income: rethinking social policy." Canadian Centre for Policy Alternatives. https://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office%2C%20Ontario%20Office/2016/10/CCPA%20ON%20Basic%20Income_FINAL.pdf.

122 Winnie Ng et al. (2016) "A public health crisis in the making: The health impacts of precarious work on racialized refugee and immigrant women." Centre for Labour Management Relations, Ryerson University. [http://www.ryerson.ca/content/dam/clmr/publications/Final%20Report%20\(Precarious%20Work\).pdf](http://www.ryerson.ca/content/dam/clmr/publications/Final%20Report%20(Precarious%20Work).pdf); Ellen MacEachen et al. (2012) "Workers' compensation experience rating rules and the danger to worker safety in the temporary work agency sector." *Policy and Practice in Health and Safety*, Volume 10, No. 1, pp. 77-95.; Mary Gellatly (2015) "Still working on the edge: Building decent jobs from the ground up." Workers' Action Group. http://www.workersactioncentre.org/wp-content/uploads/dlm_uploads/2015/03/StillWorkingOnTheEdge-WorkersActionCentre.pdf.

» Governments should also not ignore their own role as employer and purchaser. The public sector employs over 3.6 million people in Canada, and some of their roles will be impacted significantly by technology. **Public sector entities across the country need to re-examine collective agreements and introduce greater flexibility** to make it easier to shift people between jobs, retrain staff and, where necessary, let staff go if their jobs are redundant. These savings should be re-invested in universal programs.

On the purchasing side of the ledger, the federal government alone spends \$18 billion a year, while many broader public sector organizations also carry significant procurement budgets (e.g., Ontario hospitals and universities spend nearly \$10 billion a year).¹²³ All levels of government and the broader public sector in Canada should **explore opportunities to drive robust, fair labour market practices through their roles as key anchor institutions**. They should also prioritize opportunities to target groups disproportionately impacted by the rise of precarious work (e.g., young people, women, recent immigrants).

» The **federal government should consider introducing emergency credit lines for Canadians in need of short-term financial assistance** while in between jobs or under-employed. Too many Canadians of modest means are forced to turn to payday lenders charging exorbitant interest rates when they need to make ends meet. Broadening the mandate of the Business Development Bank of Canada to provide emergency credit at a low premium to the Bank of Canada's overnight lending rate would provide an alternative to Canadians otherwise unable to tap into their own savings, home equity or commercial lending.

123 Nevena Dragicevic (2015) "Anchor Institutions." Mowat Centre https://mowatcentre.ca/wp-content/uploads/publications/109_anchor_institutions.pdf; PWGSC Canada (2016) "Overview of the Department." <http://www.tpsgc-pwgsc.gc.ca/apropos-about/cdi-mbb/1/survol-overview-eng.html>.

Regulating Independent Workers: A Particular Challenge

The picture of independent workers in Canada is diverse. From self-employed doctors and architects to temporary employees working through agencies to independent contractors, their needs and motivations for engaging in independent work are highly variable. A recent survey by the McKinsey Global Institute of independent workers in the US and Europe found that 30 per cent were undertaking independent work out of necessity, while for 70 per cent it was a preferred choice (with 30 per cent of this group earning their primary income from independent work, and 40 per cent earning supplemental income).¹²⁴

This poses a policy conundrum for governments, as the independent worker (including most notably in the gig economy the 'independent contractor') cannot be painted with a single broad brush stroke. Therefore, providing additional protections that may benefit vulnerable workers within this group may in fact only layer unnecessary and unwanted burdens on affluent, 'by choice' workers.

One possible solution to this issue is to re-conceptualize how employment and labour legislation is designed in Canada. Rather than categorizations of workers, the nature of the work itself may be more relevant – for example, temporary, short-term assignments for relatively low pay are likely to capture house cleaners, delivery drivers and nannies while the 'independent contractor' label which is used today would include both highly paid graphic designers and much lower-paid Uber drivers. Shifting towards a 'true picture' approach to understanding and addressing labour and employment issues may untangle some thorny knots, and may make it clearer where market gaps exist that require government action (e.g., if temporary, short-term workers aren't receiving adequate EI coverage, then the government could step in to cover those gaps).

Proxies for the nature of work could include pay, willingness to engage in the work and stability of the role. Tackling this key issue in the right way is challenging but critical to ensuring that overly broad or narrow policy responses aren't designed that unnecessarily lump too many types of workers together, or worse still leave vulnerable workers without sufficient protections.



A recent survey by the *McKinsey Global Institute* of independent workers in the US and Europe found that:

30%
of workers undertake
independent work
out of **necessity**

70%
of workers undertake
independent work
as a **preferred choice**



¹²⁴ James Manyika et al. (2016) "Independent Workers: Choice, necessity, and the gig economy." McKinsey Global Institute. <http://www.mckinsey.com/global-themes/employment-and-growth/Independent-work-Choice-necessity-and-the-gig-economy>.

TRANSFORMATIONAL CHANGES

If Canadian policymakers want to be bold and completely rethink existing approaches to the labour market and economy, there are some lessons to be learned from international jurisdictions which have radically different approaches as well as innovative, yet untested approaches. These include:

» **Adopt a ‘flexicurity’ approach to labour market policy modelled on the Danish system.**

Denmark’s flexicurity model promotes fluid exit and entry from the labour market by providing flexible rules around hiring and firing employees (25 per cent of Danes in the private sector switch jobs every year), up to 90 per cent income replacement for unemployed workers and high levels of investment in training and skills supports.¹²⁵ The gap between Denmark’s investments in active labour market programs (1.91 per cent of GDP in 2014) and Canada’s (0.22 per cent) is stark, and Canada ranks 27th out of 31 OECD countries for which data is available by this measure.¹²⁶ In an increasingly globalized world with technological disruptions always looming, this model provides a less bureaucratic, more nimble and supportive state response than Canada’s existing EI and training systems.

While this model would turn much of Canada’s approach to employment protections on its head, the benefits of longer-term, higher levels of income replacement for unemployed workers and more fluidity between sectors requiring new labour and those shedding positions is appealing. Strong support from unions is a key underpinning of Denmark’s system and would be a critical starting point for consideration of a new approach in Canada.

This model would also require a reassessment of government-sponsored skills training across the spectrum in Canada, from EI to social assistance recipients. Moving towards a system that is agnostic as to a person’s employment or benefits status but tightly focused on delivering the individualized, outcomes-focused training that people re-skilling or up-skilling require will become more of an imperative as the labour market becomes more turbulent.

» **Introduce ‘portable benefits’ for gig economy workers**

that are not tied to specific employment relationships, but transferable between gigs and require contributions from companies.¹²⁷ Maintaining and strengthening existing approaches to traditional employees but bolstering the protections and insurance options available to independent, gig workers would be a first step to ensure that gig workers can benefit from flexibility but not be unduly harmed by the absence of a standard employment relationship.

» **Introduce work-sharing schemes such as**

Germany’s Kurzarbeit, which give companies more flexibility to reduce workers’ hours during cyclical downturns. Where sectors and firms face the prospect of large-scale layoffs as a result of technological changes, there may be longer-term benefits to workers if they are asked to scale back hours rather than laying off employees. This approach should also be considered in conjunction with government-

125 Ministry of Foreign Affairs Denmark. “Flexicurity.” <http://denmark.dk/en/society/welfare/flexicurity>; Torben Andersen et al. (2011) “The Danish flexicurity model in the Great Recession.” Vox EU. <http://voxeu.org/article/flexicurity-danish-labour-market-model-great-recession>.

126 OECD. “Public expenditure and participant stocks on Labour Market Policy.” <https://stats.oecd.org/Index.aspx?DataSetCode=LMPEXP>.

127 David Rolf et al. (2016) “Portable benefits in the 21st century.” The Aspen Institute. https://assets.aspeninstitute.org/content/uploads/files/content/upload/Portable_Benefits_final2.pdf.

sponsored skills training being made available to workers who are still employed. A more gradual ramp out of employment would give workers time to upgrade skills while still employed and/or to seek new employment.

Canada's EI system includes workforce reduction and work-sharing provisions where employees who leave their jobs to preserve the jobs of co-workers or employees who voluntarily reduce their hours are eligible for benefits.¹²⁸ These provisions are relatively rigid in their application and typically put the onus on employees to make decisions around their employment and hours.

- » **Consider the introduction of a guaranteed annual income (GAI) for particular segments of the population.** The notion of a GAI is being contemplated by governments from Finland to Ontario, and discussed by advocacy groups and policymakers.¹²⁹ However, the costs of a truly universal GAI would be prohibitive: roughly \$500 billion if every Canadian received \$15,000 a year, or nearly double all federal government expenditures. A means-tested annual income for the working poor and those currently on social assistance would reduce costs, though if funding were offset by reductions from other programs or foregoing investments in childcare and affordable housing it is uncertain whether a GAI would be of net benefit to recipients.

A GAI should not be a substitute for more broadly based government investments in foundational supports. Providing \$15,000 a year

to people to meet basic needs such as housing, food, pharmacare, retirement savings and childcare is theoretically elegant but in practice unlikely to work, absent greater access and affordability generally for all of those needs. A GAI would become a more realistic alternative in a job-free future, where capital resides in the hands of the few, who are taxed to provide for the needs of the many.

- » **Canadian corporations must take the lead in anticipating future labour market shifts and re-training their own workers.** Calibrating government interventions to incentivize more intensive private-sector training is one step in this regard, but private sector companies also need to start investing in their own futures. AT&T in the United States recognized that technology could soon make one third of its workforce redundant and that many of its workers don't have the requisite skills to perform in a new, more complex operating environment. As a result, it introduced a transformational training program that provides up to \$8,000 towards tuition for employees, with a focus on practical online learning. Approximately half of the company's workforce has taken training through the initiative.¹³⁰

Canada's private sector will have a critical leadership role in facing the challenges of upgrading the skills of workers. They are best positioned to anticipate future trends in their own sectors and to understand how to train their own workers. Governments can support and supplement these efforts where they fall short, but for Canada to succeed in the future, the private sector must come to the table with significant investment and efforts.

128 Employment and Social Development Canada (2015) "Work force reduction program due to downsizing." http://www.esdc.gc.ca/en/ei/employers_workforce_reduction.page; Caley Ramsay (2016). "Feds double length of time employees can benefit from work-sharing programs." *Global News*, April 27 2016. <http://global-news.ca/news/2665589/feds-double-length-of-time-employees-can-benefit-from-work-sharing-program>.

129 Evelyn Forget et al. (2016) "Pilot Lessons: How to design a basic income for Ontario." <https://mowatcentre.ca/pilot-lessons>.

130 Quentin Hardy (2016). "Gearing up for the cloud, AT&T tells its workers: Adapt, or else." *New York Times*, February 13 2016. <http://www.nytimes.com/2016/02/14/technology/gearing-up-for-the-cloud-att-tells-its-workers-adapt-or-else.html>.

» **Canada should continue to engage in international efforts to minimize tax evasion behaviour by corporations** and build on recent efforts to share information and halt common tax avoidance measures.¹³¹ Funding any or all of the recommendations outlined above will come with a cost. Universal programs, in particular, are expensive, and governments have shown an unwillingness to raise personal taxes to fund social programs in recent years. Corporate taxes offer an alternative source of revenue, but are elusive to capture in a globalized marketplace where companies can effectively shelter their profits through complex off-shore arrangements and accounting practices.

The OECD estimates that losses to governments from these profit shifting techniques are between 4 per cent and 10 per cent of global corporate tax revenue, or USD \$100 billion to \$240 billion.¹³² Canada should also redouble efforts to crack down on individual-level tax avoidance behaviours, including both high-net worth individuals and gray economy activities.

» **Canada's federal and provincial governments will need to have an honest appraisal of their fiscal situations** and determine how to fund major investments in social supports. Absent cost-saving measures through transformational program redesign, which tends to be elusive in practice, this leaves the option of boosting revenues through growth, along with the spectre of tax increases. However, Canada and many other G-20 nations will be faced with constrained prospects given demographic trends that will mean limited benefits from

employment growth. Canada could see GDP growth halved over the next 50 years as compared to the previous 50 years (1.5 per cent compared to 3.1 per cent), and per capita GDP growth fall to 0.8 per cent from 1.9 per cent.¹³³

Canada's historic productivity woes also exacerbate the challenges ahead, and could mean Canadians facing higher tax rates to fund programs without concurrent boosts in income. The broad constituency of people who may be affected by technological disruption, however, means that governments may have a much more sympathetic audience (if only because of rational self-interest) for any tax increase proposals.

» **The federal government should take the lead on developing and implementing a National Skills Strategy** in conjunction with provinces, post-secondary institutions, the private sector, unions and other relevant stakeholders. Stakeholders have long called for a national strategy to align efforts on training, education, apprenticeships and entrepreneurship.¹³⁴ While we cannot with certainty know which skills and competencies will be most highly valued in the labour market of 2025, not even attempting to assess and remediate the areas where Canada could improve is difficult to justify.

131 OECD (2016) "OECD Secretary General Angel Gurría welcomes European Commission corporate tax avoidance proposals." <http://www.oecd.org/ctp/oecd-secretary-general-angel-gurria-welcomes-european-commission-corporate-tax-avoidance-proposals.htm>.

132 OECD (2015) "OECD/G20 base erosion and profit shifting project." Information Brief, 2015 Final Reports. <https://www.oecd.org/ctp/beps-reports-2015-information-brief.pdf>.

133 James Manyika et al. (2015) "Global Growth: can productivity save the day in an aging world?" McKinsey Global Institute. <http://www.mckinsey.com/global-themes/employment-and-growth/can-long-term-global-growth-be-saved>.

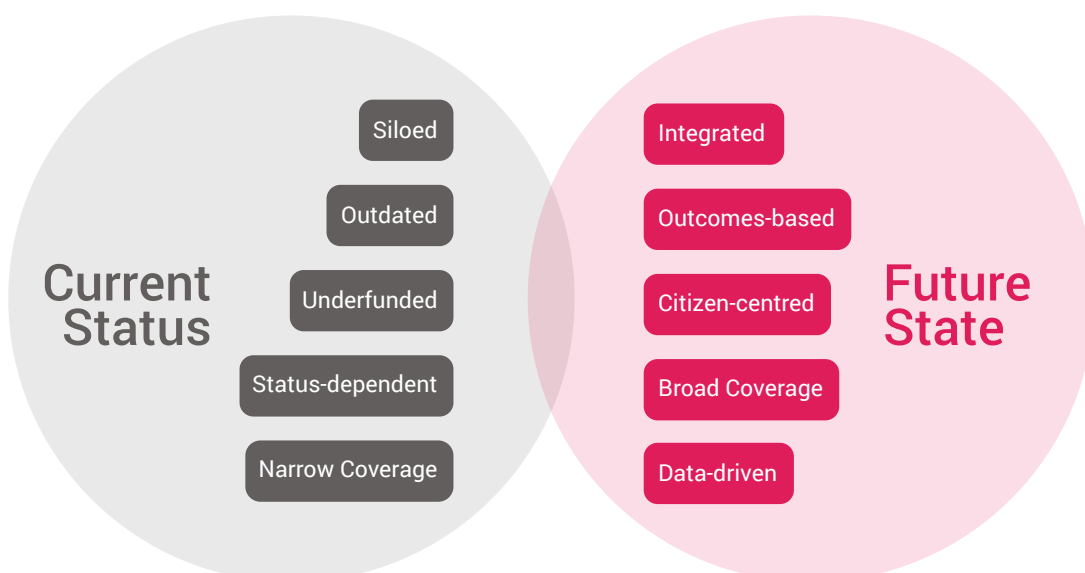
134 See for example, Ken Coats (2015) "Career ready: Towards a national strategy for the mobilization of Canadian potential." Canadian Council of Chief Executives. <http://www.ceocouncil.ca/wp-content/uploads/2015/03/Career-Ready-Ken-Coates-final-March-251.pdf>.

TRANSFORMING SYSTEMS EFFECTIVELY AND EFFICIENTLY

The scope and nature of these reforms is daunting and cuts across all levels of government. The heaviest responsibility lies at the federal level, with the provinces and municipalities each responsible for their own and cross-cutting issues such as social assistance and job training programs. But, how can our governments tackle such a long, expensive list of reforms all at once? In all likelihood, they can't. But, they can and should move ahead with the following advice in mind:

- » **Deploy pilot programs to assess what works** and how to best mobilize efforts based on proven success (with a clear understanding of what success looks like), rather than rolling out unproven approaches on a wide scale.
- » **Work collaboratively across levels of government and harmonize approaches** on issues such as skills training towards system-level outcomes that are agnostic towards jurisdictional battles over budgets and control but tightly focused on client results.
- » **Collect more robust and granular data on jobs and employment** (e.g., looking at gig workers and those who are lightly attached to the labour market) than the current Labour Force Survey in order to target interventions more precisely.
- » **Carefully consider which universal programs would serve as the best basis for success** for Canadians, and focus efforts in those areas to maximize impact (e.g., whether an initial focus on housing would mitigate other health and economic challenges).
- » **Introduce a technology lens on all major government program, policy and infrastructure decisions** to determine how emerging technologies might affect downstream consequences and what, if anything, can be done to immunize decisions from technological obsolescence.

FIGURE 11
Transforming Canada's Social Architecture





The opportunity
and the
imperative to
reassess and
transform
Canada's social
architecture is
looming and
much more
politically
relevant than
ever before.

5 CONCLUSION

The shifts in Canada's labour market in recent years can only be expected to continue and pick up pace. More people will be faced with the threat of job losses and precarious employment. Technology is one major factor behind these shifts, but not the only one. It may also accelerate ongoing trends in income inequality and precarious work, and deepen their punitive impacts absent strong policy interventions.

Canadian governments have always paid close attention to people's economic security. When people can't meet their basic needs through gainful employment, they will naturally express their dissatisfaction at the ballot box. Political and stakeholder realities have traditionally meant that those left with smaller pieces of the economic pie haven't always had the clout to compel change.

Technological disruption will potentially impact the careers and livelihoods of Canadians in both traditionally blue-collar and white-collar jobs. For political parties and governments this means the insecurities felt through the era of globalization will bleed up the income ladder to affect more Canadians. The opportunity and the imperative to reassess and transform Canada's social architecture is looming and much more politically relevant than ever before.

Moving ahead with fundamental changes to the core planks of our social architecture has been a pressing concern for many Canadians for decades. That these gaps will soon potentially be felt by many other Canadians makes reform an even more critical issue. A 2 per cent jump in the unemployment rate was considered a national crisis in 2009, yet 3 to 5 per cent leaps are relatively easy to imagine in the near future.

Canadians see the benefits of technology every day, as they use their smartphones and computers to purchase goods and services from around the world, do their jobs more efficiently and connect with friends and relatives. Yet, for all its benefits, technology has also subtly started to reshape our labour markets and economy in significant ways. Governments must quickly and efficiently move forward with a broad sweep of policy responses that anticipate and prepare for these changes and ensure that Canadians are well-placed to be net beneficiaries of ongoing and future technological transformations and disruptions.

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