

The Future of Work is Happening Now! What Can We Do About It?

Seeking recommendations for action

It's time to change the narrative.

“What's going to happen?” is interesting.

But “here's what we are doing about it” is better.

The economy and the world of work are going through disruptive transformation before our eyes. Automation, artificial intelligence, global supply chains, web-based work, global movement of people and population ageing are changing the global, national and local economies. We have seen it coming for years. Yet many of our programs and policies are still based on an obsolete industrial model.

Whether it's rapid technological change, the layoffs at GM in Oshawa or the downturn in the natural resource sector in Alberta and Saskatchewan, the depletion of jobs in rural Canada, the deep sense of uncertainty among people in many sectors and regions ... the rapidly evolving economy and the changing nature of work is an important challenge facing Canadians and, indeed, much of the world.

Increasing inequality, precarious employment and job-replacing technology are more and more evident. But we also see exciting new tools, smart products and new forms of technology-enabled management. Scientific breakthroughs. Great opportunity for those with the right skills at the right time. Good jobs and bad jobs and a disappearing middle.

There is not much disagreement about the changes that are underway. A lot of time and money has been spent tracking trends and reading the economic tea leaves. Except for nuances, policy, political, social, labour and business predictions are consistent about what we can expect and what we really can't predict.

We begin this project by summarizing, in point form, converging predictions of several prominent studies. We are not trying to cover every issue in complete detail but rather to identify the major issues and common themes.

Then we look at some general measures that have been recommended to mitigate the negative effects of disruptive change and to take advantage of the opportunities as the new digital economy takes shape.

Then we go the next step and identify some policies and programs that could be considered.

Our focus is on solutions and recommendations for action – action by employers, unions, governments, education and training systems and individuals.

We invite your comments on these ideas as well as your own proposals. We want to consider their economic and social implications, local impacts, governance issues and political feasibility. We invite anyone interested in progressive policy to engage with us on this mission.

Along the way, we will publish articles on the Pearson Centre website (thepearsoncentre.ca), produce podcasts and benefit from discussions. And we will compile a catalogue of measures for all governments and all Canadians to consider.

What changes are either here or on their way?

We consulted the work of several organizations including:

The OECD
The World Bank
The World Economic Forum
The ILO
The Bank of England
The Business Council of Canada
The Centre for Policy Alternatives
Policy Horizons Canada (Government of Canada)
The Hans Bockler Foundation (Germany)
The European Union
Social Europe
The European Trade Union Institute
Brookings Institution
The American Enterprise Institute

The findings from their various studies and reports are expressed diversely, but they cluster around the following:

- We are in a period of disruptive change. This is not just continuing evolution. A new industrial revolution is underway as information and communications technology matures and is integrated into global commerce and society. A major consequence is a reorganization and transformation of work.
- Internet-based commerce is expanding rapidly, through new kinds of enterprises such as social media, through taking over market share of existing industry such as retail shopping, through taking control of management and marketing of existing

services such as transportation and through providing virtual workplaces to engage workers anywhere in the world.

- Some jobs or parts of jobs are being automated; others are being assisted and restructured by artificial intelligence; still others will be soon displaced by robots, combining automation and AI.
- New work opportunities are being developed, and good ones. Many require skills that challenge the education system. Young people now compete globally for work that serves the enterprises of the new age. The successful ones will enter a growing affluent class that will be globally interconnected. They will live and work where they like the quality of life.
- As we experience growth in both high end and low end jobs, those in the middle pay ranges are being eliminated or their wages stagnating. In many cases, work is being fragmented, as the tasks required need not fit into what we think of as a job. Economic inequality is increasing between the bottom sixty percent of workers on the wage scale, and those at the top, although the increase in Canada has not been as marked as in the USA. People who have little hope for advancement and little economic security may feel abandoned and may lose confidence in government and the society they live in.
- People in low wage jobs are still in a competitive environment as long as there are others looking for work. For workers in various pay ranges, the borders between the formal and informal economies are amorphous. Many work opportunities are in those border zones. (The current subsidies attached to low wage work are often intended to keep people in the formal economy, but the subsidies are small).
- Some workers will have new technological tools to assist them in expanding their fields of competence. Sophisticated and intelligent apps will enable more complete and responsive services. But workers will need to prepare themselves for a changing work environment and constant new work and skill demands.
- Some workers will lose their jobs and will see their skills and occupations become obsolete. We don't know if we will have more or fewer jobs overall, but those who lose their jobs will probably not be those who get the new ones. There will be many victims of the disruption and we do not have policies (including Employment Insurance) that will fix that situation. Conservative forecasts¹ such as the OECD, suggest that 12-15% of current jobs (roughly 2 - 2.8 million) could soon be automated, with another 25-30% (over 4 million) being substantially restructured and requiring new skills.
- Workers of all ages and skill levels will find long-term full time jobs more rare and will have to turn to their own creativity to make a living. Indeed, some workers prefer this format and the flexibility it provides. The World Bank² estimates that in 2015, virtual platforms used 112 million workers. Policy Horizons Canada³ points out that

¹ OECD and others including Bank of England

² The World Bank, 2018

³ horizons.gc.ca

the number is growing by 33% annually and predicts that this will lead to a convergence of earnings worldwide, possibly depressing wages in higher income countries like Canada.

- The concept of “employment” is fading. “Normal work” no longer means long term attachment to an employer who provides, (with government tax incentives) job security, health insurance and retirement security. Many businesses are removed by several layers of contracting from the people who work for them.
- In parallel, the role of entrepreneurship and self-employment is widening. Many workers will start up their own companies or choose self-employment in areas of their interest and expertise. Increasingly, such workers may have more than one contract or part-time job at a time in the « gig economy ». All workers will need to be sensitive to their own market, to see opportunity, ensure they are competitive and be able to take risks. Our education and social support systems provide little assistance for this work style.
- People are living longer, and are increasingly working beyond retirement age either because they want to remain engaged in the workplace or because they cannot afford to retire. They will also need substantially more resources in retirement, especially in health and social care. This is fuelling a current growth industry.
- Educational requirements are increasing for many occupations, such that many adults enter into substantive work or employment at older ages. What might be considered the “normal working age range” is being both set back and extended.
- Skill requirements of new jobs are often related to technology that is evolving quickly. Skills will need constant updating, suggesting that education and training will need to be acquired either in shorter, more intense processes, or in ongoing professional and skills development. Life-long learning is talked about but not practiced enough. *...Across the country we’re seeing Canadians and Canadian companies embrace the next generation of technology like never before. Unfortunately the way we go about educating and employing the next generation of Canadians isn’t keeping pace. It’s our quiet crisis and it’s about to get a lot louder if we don’t take the future of work more seriously...*⁴ Dave McKay, CEO, Royal Bank of Canada
- Education has become a substantial industry, as well as being a critical public service. Well-reputed programs and institutions have customers from around the world, including an exploding affluent class in rapidly growing economies.
- Robotization and automation will have different impacts in different economic regions, and will likely increase those differences. *... In a single dramatic vote, the victory of Donald Trump highlighted the emergence of a stark and widening divide between two Americas: one based in large, digitally-oriented metropolitan areas; the other found in lower-tech smaller cities, towns and rural areas. In doing so the vote displayed -with its stark red-blue map - the underrated power of technology to*

⁴ Dave McKay, CEO, Royal Bank of Canada, Business Council of Canada, accessed Feb. 13, 2019

reshape the geography of nations. ⁵ The Brookings studies showed that the first phase of the information technology revolution - personal computers and industrial robotics - had distinct geographic patterns and pushed many people in routine manufacturing and mid level knowledge jobs (such as clerical work) into low level service jobs. They further suggest that the next phase of automation will hit hardest and fastest the people in low-level service jobs.

Where there is not consensus or what is not known

The speed of change is not known. Driverless vehicles, for example, will be ready to put on the roads very soon and automobile manufacturers are gearing up for production. But driver vehicles will not conveniently disappear and they will require continuing maintenance and service. And other developments may occur during the period of competition between the two. Service jobs in retail, food service, accommodation and security are particularly vulnerable.

The ratio of exciting career opportunities versus new precarious work is not known. In the past, economic revolutions have created more opportunity than they destroyed. But the victims were not the beneficiaries and the numbers of people impacted by this disruption will be far greater. We do not know how they will adapt or react. But we do know that people who feel threatened by change can overturn governments.

We do not know the speed at which the world will adopt green technology and become independent of fossil fuels. The low cost of transport based on current technology and petroleum pricing is a major factor in global supply chains of products, much as cheap information technology is a major factor in global supply chains of services. But the transition will not be immediate and technological improvements in the meantime may make those fuels more sustainable.

Recommendations for success are general in nature

As technological breakthroughs rapidly shift the frontier between the work tasks performed by humans and those performed by machines and algorithms, global labour markets are undergoing major transformations. These transformations, if managed wisely, could lead to a new age of good work, good jobs and improved quality of life for all, but, if managed poorly, pose the risk of widening skills gaps, greater inequality and broader polarization⁶. World Economic Forum

Examples:

Many reports suggest that education and training must be better tuned, more adaptable and more available. Training for new occupations is needed and new industries are often better placed to do the training than institutions, so cooperative and hybrid models are promoted. Although most reports suggest that all workers should have

⁵ Brookings Brief, Feb 2019, brookings.edu

⁶ Future of Jobs Report 2018, World Economic Forum

access to skills upgrading, the emphasis seems to be on better preparing youth for the new technology. Not much attention is given to the kinds of work that those with obsolete skills should prepare for, or how long their re-skilling will take.

Education needs to not only prepare people with new and emerging skills, but also provide all people with a better understanding of the technological economic world. It is becoming increasingly clear that all people will need to learn entrepreneurial skills (a recommendation emerging from a Pearson Centre roundtable in Newfoundland), learn to develop their own career opportunities and the potential for transitioning from one career to another. Learning about living in different societies and cultures will also contribute to occupational and life success.

Canadian students should be given more opportunities and encouragement to study and work abroad, to learn languages and make contacts the world over. Likewise, we can better utilize the skills that immigrants and international students bring to Canada and enhance an export orientation of goods and services produced in Canada.

All workers should be covered in an equitable way by collective security and the state needs to ensure that security and adaptation assistance is available, when needed, and tailored to the individual circumstance. Policies with narrow entry gates and predefined process solutions will be inadequate to respond to a new panoply of personal situations.

Because many workers may not need to work from a specific geographic base, they may choose where to live, consume and pay taxes according to the systems of different countries. Local quality of life as well as government benefits and policies will be considered as a package and need to be coherent and competitive.

Since many employers are happy to move people from country to country, international trade agreements have important sub-agreements detailing the conditions and limits on temporary entry for employment and also have a limited application to labour standards. This, as well as borderless online work, will underscore a need for international collaboration to prevent what Policy Horizons Canada suggests could be another race to the bottom in relation to wages and labour standards:

*... the participation of Canadians (small and medium enterprises and individuals) in global digital value chains has the potential to open new business opportunities and unleash a new level of entrepreneurial dynamism in Canada. Other aspects will be more challenging. For instance, what happens when a job is no longer the best social policy, a ticket to stability and well-being? Change could be incremental but also rapid, surprising and disruptive, potentially increasing vulnerability for many.*⁷

Adding the mobility of skilled human capital to the global mobility of business capital, and tax havens for businesses and wealthy individuals, the problem of collecting taxes is growing. National governments face a double whammy. Fragmented and precarious work requires new forms of protection for workers and the population wants inequality to be reduced, but collecting revenues to pay for them is getting tougher. Taxing wealth

⁷ Policy Horizons Canada, Canada and the Changing Nature of Work, horizons.gc.ca

has been suggested in some quarters, but is not an easy goal as noted above. The OECD has suggested that member nations may need over time to move more toward the taxation of consumption.

More income redistribution may be necessary to offset unequal market incomes, in essence to increase the living standards of the lower income half of the population. There is, at present, no consensus on whether to do this through mandating better wages, through financial work subsidies, through a guaranteed minimum income or through another method.

We may also need to find ways to support activities that are not remunerated work, if automation proceeds at a faster pace than anticipated. This could be increased leisure time through holidays, vacations, training leave, community service, etc., or simply a non-conditional income transfer.

Some examples of potential progressive policy initiatives

The following proposals come from a variety of sources. Some have been subjected to analysis and scrutiny; others not so much. We believe they deserve consideration and constructive criticism. We hope they will also encourage you to submit your own proposals.

Education:

The training and education requirements of jobs of today and tomorrow continue to evolve and change, increasing the requirement for skills in coding and programming, STEM, international languages, cultural competency and new soft skills.

- Expanding technological education, both as specializations and as components of other courses and programs. Len Rosen, Policy Chair for the Toronto St Paul's Liberal Electoral District Association, has advocated an approach similar to Finland, where artificial intelligence has become the focus of courses available to the general public: *...Imagine if our governments in cooperation with universities and business were to develop curriculum on AI, robotics, climate change, cybersecurity, social media, genetics, genomics, and regenerative medicine, just to name a few of the most important streams of innovation coming from the 21st century. We could help the Canadian public to facilitate their own future by becoming literate in these areas and go on to find the work that will be very much in demand in the 21st century*⁸.
- Integrating institution-based learning and specialized training provided by businesses to constitute accredited and portable learning portfolios, benefiting from experience of the German system.

⁸ From email communication with author

- Expanding lifelong learning through individual learning tax credit accounts, such as France's *compte personnel de formation*, or the Skillsfuture credit in Singapore. The federal government has announced a start in this direction in the 2019 budget.
- Providing guidance assistance for lifelong learning and career building.
- Providing courses in entrepreneurship and self-employment for access throughout the educational system.

Labour Standards and Social Insurance:

- There is a need to ensure that all workers have access to protection and security, which means that the definition of "employment" needs to be broadened and that contributions are collected from both the worker and the business in all cases, including contract services, virtual work platforms, self-employment and temporary employment.
- There is an argument for integrating all postsecondary learning support and all worker benefits into lifetime individual social security accounts. Contributions and credits of many kinds (including, for example, income support, available subsidies or leave credits for various purposes) could come from several sources. Individual learning and development plans could be supported based on assessment of their feasibility, rather than using fragmented, predefined programs. Cooperative placements could also be supported through this account.
- Canada is becoming increasingly dependent on immigrants and temporary foreign workers to provide needed skills to our ageing workforce. We need to ensure that their skills are appropriately and efficiently accredited, and that they are protected from exploitation.

Income and Wages:

- More generous and more rational redistribution of income and wealth to reduce inequality and support the bottom half of the income spectrum.
- Better enforcement of taxation of global businesses and wealthy people. In recent years, the issue of tax havens and tax evasion has been taken up by a number of international organizations. The OECD and G20 have initiated a project known as BEPS.

The OECD/G20 BEPS Project delivers solutions for governments to close the gaps in existing international rules that allow corporate profits to "disappear" or be artificially shifted to low or no tax environments, where companies have little or no economic activity. Revenue losses from BEPS are conservatively estimated at USD 100-240 billion annually, or the equivalent of 4-10% of global corporate income tax revenues⁹.

Canada has been participating in this initiative and has introduced Bill C 82 to implement the multilateral convention to coordinate the actions of more than 100 tax

⁹ OECD, The BEPS Project, 2017

jurisdictions. More work will be required if OECD and G20 countries truly wish to shut down tax havens and tax evasion. These countries have the economic power to achieve it, but political courage and full transparency will be required.

There have also been proposals in Canada and the USA to increase taxes on the income and/or the wealth of the richest people, such as the top one percent, including in the USA, an « exit tax » on anyone who renounces citizenship to avoid the taxes.

- Higher minimum wages, especially in cities with dynamic economies.
- A Basic Income Guarantee, either by a universal cash transfer or through negative income tax. Retired Senator Art Eggleton is an advocate for a basic income program and was lead author of a report¹⁰ addressing issues of design and cost.
- An expanded working tax credit to bring full time work income to a “living wage” in the economic region.
- New workplaces will present both opportunities and challenges to people with disabilities. The Every Canadian Counts Coalition is advocating for a national program of disability insurance, plus investment in adaptive technology and policies promoting access to opportunity,

Supporting new job creation:

- A job/training guarantee supported by public works jobs in infrastructure, ecology, emergency, health, education and affordable housing. This could include support for technological development in these areas. More public investment in ecological services, growth of green jobs, environmental management.
- More investment in public health for service to an ageing society, as an equalizing force in society and as an expanding industry that incorporates public and private investment and new technology.
- There are new and growing sectors that need more employees with new skills, some of which may have transferable skills from other sectors. These sectors include the green economy, science, the online community, gaming and graphics, cannabis.
- Product Life cycle regulation and Share and Repair incentives (Sweden tax relief for repairs of bicycles, shoes, electrical appliances, washing machines, etc.) These examples are inspired by ecological concerns, but also support local employment. They also recommend communal co-working spaces for digital workers, supporting both social cohesion and potential for collective action. (This might be a good initiative for organized labour.)

¹⁰ The Poverty, Inequality and Job Challenge: The Case for Basic Income in Canada, <https://bit.ly/2puytdj>

- Solutions need to be put in place to facilitate the advancement of Indigenous Peoples, on-reserve, off-reserve and in cities.
- We know that barriers exist in the workplace for people based on gender, race, ethnicity, ability and sexual orientation. While much has been done in this area, much more needs to be done in various sectors and workplaces. Some of the solutions also lie with changing attitudes through the school systems and general attitudes.
- Increased access to affordable child care and elder care programs.
- Expanding the CPP to become a multipurpose social security fund.

Send us your comments and your own proposals

Contact

Terrance Hunsley, Senior Fellow, The Pearson Centre

thunsley@thepearsoncentre.ca