Automation and Workers: Re-Imagining the Income Tax for the Digital Age

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PRÉCIS
À l’ère de l’automatisation, de plus en plus de travailleurs perdent leur emploi ou deviennent des travailleurs à la demande, et on s’attend à ce que la part du revenu national provenant du revenu du travail diminue encore. Ces changements menacent la viabilité du régime canadien de l’impôt sur le revenu qui, depuis 102 ans, a été une source majeure de recettes publiques et un instrument clé de redistribution du revenu collectif. Les auteurs plaident en faveur de la réinvention de l’impôt sur le revenu pour l’adapter à l’ère numérique. Ils proposent que tous les travailleurs soient imposés également, quels que soient les arrangements de droit privé ou les moyens techniques utilisés pour effectuer le travail. Ils appellent à une reconceptualisation de la source de revenus en tant que capital humain, capital ou entreprise. Ils proposent des moyens de modifier la Loi de l’impôt sur le revenu afin d’assurer que le revenu du travail ne soit pas intégré dans le capital ou déguisé en revenu provenant d’une entreprise exploitée activement justifiant des subventions fiscales. Pour assurer la mise en œuvre de cet impôt réinventé, les auteurs proposent d’élargir le champ d’application de la retenue à la source en tirant parti des progrès technologiques.

ABSTRACT
In the age of automation, more and more workers lose jobs or become gig workers, and the share of labour income in national income is expected to decline further. These developments threaten the sustainability of Canada’s 102-year-old income tax as a major source of government revenue and a key instrument for redistributing social income. The authors make the case for re-imagining the income tax to suit the digital age. They propose that all workers should be taxed the same, regardless of the

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private-law arrangements or technical means used to carry out the work. They call for a reconceptualization of the source of income as human capital, capital, or business. They suggest ways of amending the Income Tax Act to ensure that income from work is not embedded in capital or disguised as active business income that warrants tax subsidies. To ensure the implementation of such re-imagined tax, the authors suggest broadening the scope of withholding tax by taking advantage of technological advances.

**KEYWORDS:** AUTOMATION ▪ GIG WORKERS ▪ TAX EQUITY ▪ LABOUR ▪ CAPITAL ▪ DEMOCRACY

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INTRODUCTION

The Canadian income tax was 102 years old in 2019. As a major source of revenue and an instrument of redistributing social income, it has traditionally relied on employment income as a base. The income tax was designed for the industrial era, when most Canadians worked as employees. The onset of automation, which features digitalization, robots, and artificial intelligence (AI), poses significant challenges to the income tax system. Automation enables or forces more and more Canadians to become gig workers, freelancers, or independent contractors as opposed to traditional employees. Many Canadians may lose their jobs permanently. These forces have the potential to alter the traditional tax base and threaten the income tax system.

Recognition of this threat has been growing. To address it, various proposals have been made. Some scholars recommend reforming the income tax by requiring that “all income—regardless of source—bear a similar tax burden” or by imposing a universal wage tax. Other commentators, including Bill Gates, have proposed implementing a tax on robots to raise revenue for use in training workers whose

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1 The current Act evolved from the Income War Tax Act (IWTA) enacted in 1917. See Income War Tax Act, SC 1917, c. 28.
2 For example, Jay A. Soled and Kathleen DeLaney Thomas, “Automation and the Income Tax” (2019) 10:1 Columbia Journal of Tax Law 1-48; and Joachim Englisch, “Digitalisation and the Future of National Tax Systems: Taxing Robots?” (2018) (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3244670).
3 Soled and Thomas, supra note 2, at 1.
4 Edward J. McCaffery, “The Death of the Income Tax (or, the Rise of America’s Universal Wage Tax),” Indiana Law Journal (forthcoming).
5 Matthew Rimmer, “The Wild West of Robot Law” (2017) 38:3 Australasian Science (www.australasianscience.com.au/article/issue-mayjune-2017/wild-west-robot-law.html); and M. Mustafá Erdoğan and Coşkun Karaca, “The Fourth Industrial Revolution and a Possible Robot Tax,” in Irem Berksoy, Kutlu Dane, and Milenko Popovic, eds., Institutions & Economic Policies: Effects on Social Justice, Employment, Environmental Protection & Growth (London, UK: IJOPEC, 2017), 103-22, at 112.
6 For example, Ryan Abbott and Bret Bogenschneider, “Should Robots Pay Taxes? Tax Policy in the Age of Automation” (2018) 12:1 Harvard Law & Policy Review 145-75; Sami Ahmed, “Cryptocurrency & Robots: How To Tax and Pay Tax on Them” (2018) 69:3 South Carolina Law Review 697-740; Orly Mazur, “Taxing the Robots” (2019) 46:2 Pepperdine Law Review 279-329; Xavier Oberson, “Taxing Robots? From the Emergence of an Electronic Ability To Pay to a Tax on Robots or the Use of Robots” (2017) 9:2 World Tax Journal 247-6; and Erdoğan and Karaca, supra note 5. During the 2019 federal election campaign, the Green Party’s Elizabeth May proposed a robot tax; to prepare for future of automation, see Cherlyn Chan, “Green Party’s Elizabeth May Proposes ‘Robot Tax’ To Prepare for Future of Automation,” Vancouver Sun, revised September 30, 2019 (https://vancouversun.com/news/local-news/green-partys-elizabeth-may-proposes-robot-tax-to-prepare-for-future-of-automation).
jobs are eliminated by automation. These “tax on robot” proposals include systems in which the taxation of robots’ owners or users functions as an equalization of labour taxation. Alternatively, the taxpayer could be the robot itself—an “artificially intelligent person”—such that the robot tax is similar to a tax on legal “persons” (as with, for example, corporations).

In this paper, we draw on the work of previous scholars in outlining the challenges posed by automation. We examine how automation exposes the fundamental defects in the Canadian Income Tax Act. We then make a case for reform. Although the design of progressive tax rates and the taxation of capital are outside the scope of this paper, we argue that the true source of individual income is work (or human capital/efforts) and that the current approach to taxing workers—that is, taxing them differently according to their different settings—is outdated. In this paper, we propose that all workers should be taxed the same, regardless of the legal or technical means by which they perform their work. We also propose that the withholding tax mechanism should be extended to all payments made to workers.

Our paper builds on and seeks to contribute to recent literature on tax reform in Canada. Some recent ideas about tax reform include the following:

7 However, there are significant criticisms of the robot tax, including the following: (1) that it would stifle innovation, reduce productivity, and dampen a booming new industry and Canadian competitiveness in that industry; and (2) that it would not generate much additional tax revenue. A narrowly defined concept will not achieve the social and fiscal purpose of “equalizing” robots and workers in terms of production of goods and services. A broadly defined concept will include any process or device that displaces workers. A recent EU report defined robots on the basis of autonomy, self-learning, and adaptation. Most automation exists in forms that cannot be directly linked to job losses; it takes the form not of physical robots but of software robots, which means that an all-encompassing rule cannot address which of these systems are creating problems in the job market. If the tax base cannot be defined with reasonable certainty, the tax would be highly problematic. See Erdoğan and Karaca, supra note 5; Filipe Maia Alexandre, “The Legal Status of Artificially Intelligent Robots: Personhood, Taxation and Control” (Degree Master of Laws, Tilburg University, 2017); Abbott and Bogenschneider, supra note 6, at 149; and Ahmed, supra note 6, at 731-32.

8 See Abbott and Bogenschneider, supra note 6; Oberson, supra note 6; and William Meisel, The Software Society: Cultural and Economic Impact (Bloomington, IN: Trafford, 2013), at 220.

9 Taxing robots as taxpayers would make sense if robots assume “legal personality” status in private law, a change that is being considered in the European Parliament Resolution of 16 February 2017 with Recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), [2018] OJ C 252 (herein referred to as “the European Parliament resolution.” The logic is similar to the logic of taxing corporations (legal persons, in private law). An income tax would be imposed on an imputed salary from robots’ activities (for example, the salary that would have been paid to the workers replaced by the robots). See Englisch, supra note 2, at 6; and Xavier Oberson, Taxing Robots: Helping the Economy To Adapt to the Use of Artificial Intelligence (Cheltenham, UK: Edward Elgar, 2019).

10 RSC 1985, c. 1 (5th Supp.), as amended (herein referred to as the “ITA”).

11 Robin Boadway, “Policy Forum: Piecemeal Tax Reform Ideas for Canada—Lessons from Principles and Practice” (2014) 62:4 Canadian Tax Journal 1029-59; Richard M. Bird and
1. Canada needs to review the tax system because of changing circumstances, especially the economic settings related to globalization, changes in the labour market, rising income inequality, and the evolution of tax theories and principles since the Carter commission report;\(^{12}\)

2. Canada should consider switching to a dual income tax system like those in Nordic countries;\(^{13}\) and

3. Canada should consider reforming the corporate tax system, including the taxation of private corporations.\(^{14}\)

The proposal that we set out in this paper is inspired by the design of the dual income tax, which essentially treats all personal income as income from labour or capital, and by insights regarding how labour income is embedded in capital or business for tax purposes.\(^{15}\) We seek to contribute to the literature on tax reform by demonstrating the urgency of such reform in the age of rapid automation and by presenting reform ideas that can protect the sustainability of the income tax.

This paper is organized as follows: in the following section, we present evidence on the phenomenon of automation, its transformative nature, and its impact on workers and the tax system. Next, we provide an overview of the current income tax treatment of workers and the historical justifications for imposing a heavier tax burden on employees than on self-employed and incorporated workers. We proceed

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\(^{12}\) Canada, *Report of the Royal Commission on Taxation* (Ottawa: Queen's Printer, 1966-67) (herein referred to as “the Carter commission”).

\(^{13}\) Bird and Wilson, supra note 11; and Milligan, ibid.

\(^{14}\) Boadway, supra note 11; and Bird and Wilson, ibid.

\(^{15}\) Victor Fleischer, “T axing Alpha: Labor Is the New Capital Gain,” April 7, 2019 (https://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1151&context=law_econ); Lily Kahng, “Who Owns Human Capital?” (2017) 94:3 *Washington University Law Review* 607-48, discussing how business owners increasingly are able to “propertize” labour into intellectual capital—to capture the returns on their workers’ labour by embedding it in intellectual property; Jonathan Rhys Kesselman, “Toward a Broader Base for Personal Taxation: Reconciling Equity and Efficiency,” in Jinyan Li, J. Scott Wilkie, and Larry Chapman, eds., *Income Tax at 100 Years: Essays and Reflections on the Income War Tax Act* (Toronto: Canadian Tax Foundation, 2017), 3:1-40; and Edward D. Kleinbard, “Capital Taxation in An Age of Inequality” (2017) 90:3 *Southern California Law Review* 593-682.
to make the case for re-imagining the income tax. Following that, we present ideas on how to redesign the income tax base to ensure the universal treatment of workers. We conclude with a note on the urgency of the issue and on why policy makers should act sooner rather than later.

**AUTOMATION AND WORKERS**

**Automation**

The term “automation” refers to the technology by which a process or procedure is performed without human assistance. Previous automation was “mechanical”: control systems were used for operating equipment or machinery. In the 21st century, automation has become “robotic,” using digitalization, robots, the Internet of things, and AI. The technology propelling robotic automation is changing much faster than the technology propelling mechanical automation. Some commentators suggest that the digital revolution is transformative insofar as it not only digitizes production but also performs intelligence-based tasks that, previously, could be handled only by the human mind. Ultimately, as the European Parliament has said, “there is a possibility that in the long-term, AI could surpass human intellectual capacity.”

**“Surplus” Workers**

There has been much debate about the impact of digital automation on jobs. The precise extent of this impact is uncertain, and future job loss is hard to predict, but there seems to be consensus that the impact will be significant enough that some jobs will be eliminated entirely, and some workers may become surplus. Automation eradicates existing jobs and creates new ones. New jobs tend to be either (1) higher-skilled jobs in the information technology (IT) sector, which has seen the increased

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16 The term “automation” is defined in the Merriam-Webster dictionary as “the technique of making an apparatus, a process, or a system operate automatically; the state of being operated automatically; and automatically controlled operation of an apparatus, process, or system by mechanical or electronic devices that take the place of human labor.” For further definition, see Mikell P. Groover, *Fundamentals of Modern Manufacturing: Materials, Processes, and Systems*, 6th ed. (New York: Wiley, 2015).

17 Richard G. Lipsey, *Economic Growth, Technological Change, and Canadian Economic Policy*, C.D. Howe Institute Benefactors Lecture, 1996 (Vancouver: C.D. Howe Institute, November 1996).

18 See Mark J. Barrenchea, *The Golden Age of Innovation* (Waterloo, ON: Open Text, 2017), at 8.

19 Ibid.

20 See European Parliament resolution, supra note 9, at paragraph p.

21 Shawn DuBravac, *Digital Destiny: How the New Age of Data Will Transform the Way We Work, Live, and Communicate* (New Jersey: Regnery, 2015); Centre for the New Economy and Society, *The Future of Jobs Report 2018* (Geneva: World Economic Forum, 2018); and Steven Globerman, ed., *Technology, Automation and Employment: Will This Time Be Different? Collected Essays* (Vancouver: Fraser Institute, 2019).
use of robots, the digitalization of businesses, and the rise of digital businesses;\textsuperscript{22} or (2) “lower-skilled jobs in other sectors due to spillover effects,”\textsuperscript{23} such as jobs associated with the warehousing and delivery of tangible goods ordered online. Job eradication is already evident in areas of digital commerce where the function of traditional intermediaries has been eliminated. Examples are the closing of traditional retail stores, including bookstores; of investment brokerage firms; and of travel agencies. Automation has already eliminated jobs that require minimal human intervention, such as those of toll collectors, telephone operators, and bank tellers.\textsuperscript{24} More profoundly, automation now has the potential to eradicate jobs that previously required human decision making, such as driving and health-care services.

The economy-wide net impact of digital automation on jobs is currently unclear. In the short term, there may be a net increase in jobs;\textsuperscript{25} some even predict the rise of “strong complementarities between automation and labor that increase productivity, raise earnings, and augment demand for labor.”\textsuperscript{26} In Canada, 38 percent to 42 percent of the labour force may be at high risk of being affected by automation.\textsuperscript{27} Even if there is increased productivity and greater demand for labour, those who lose their jobs to automation may not have the transferrable skills necessary to find other jobs, and may become surplus workers.

\begin{itemize}
\item \textsuperscript{22} Examples include the increased demand for software engineers, the increasingly robotics-intensive manufacturing sectors, and, of course, the increased demand for people who make, maintain, and repair robots. See \textit{The Future of Jobs Report 2018}, supra note 21.
\item \textsuperscript{23} International Federation of Robotics, “The Impact of Robots on Productivity, Employment and Jobs” (Frankfurt: IFR, 2017) (https://ifr.org/img/office/IFR_The_Impact_of_Robots_on_Employment.pdf), at 6.
\item \textsuperscript{24} One example of permanent job loss is the demise of Kodak and the rise of Instagram. Kodak used to employ more than 140,000 people and was worth $28 billion. Kodak even invented the first digital camera, but decided not to adopt it. It went bankrupt when digital photography became the norm. Instagram became the “new face of digital photography.” When Instagram was sold to Facebook for $1 billion in 2012, it employed only 13 people and its value came from the millions of users who contribute to the network without being paid for it. See Arwa Mahdawi, “What Jobs Will Still Be Around in 20 Years? Read This To Prepare Your Future,” \textit{The Guardian}, June 26, 2017 (www.theguardian.com/us-news/2017/jun/26/jobs-future-automation-robots-skills-creative-health); and Jaron Lanier, \textit{Who Owns the Future?} (New York: Simon & Schuster, 2013), at 2.
\item \textsuperscript{25} A European study found that, because of computerization, the overall labour demand increased by 11.6 million jobs between 1999 and 2010 in the 27 EU member countries. See Terry Gregory, Anna Salomons, and Ulrich Zierahn, \textit{Racing with or Against the Machine? Evidence from Europe}, ZEW Centre for European Economic Research Discussion Paper no. 16-053, (Mannheim, Germany: ZEW, 2016) (http://ftp.zew.de/pub/zew-docs/dp/dp16053.pdf).
\item \textsuperscript{26} David H. Autor, “Why Are There Still So Many Jobs? The History and Future of Workplace Automation” (2015) 29:3 \textit{Journal of Economic Perspectives} 3-30, at 5.
\item \textsuperscript{27} For a prediction that 38 percent of jobs in Canada are at high risk of being automated, see Melanie Arntz, Terry Gregory, and Ulrich Zierahn, \textit{The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis}, OECD Social, Employment and Migration Working Papers no. 189 (Paris: OECD, 2016) (https://doi.org/10.1787/5jlz9h56dvq7-en).
\end{itemize}
The Rise of Gig Workers

Although the number of jobs affected by automation may be uncertain, automation’s effects on how people do their work are already evident. Two of the most significant of these effects are the increase in work done digitally and the creation of a gig economy. Automation will continue to drastically change the way work is done and how businesses operate. The change is expected to erode the number of people traditionally employed and to foster the rise of self-employed workers, freelancers, and gig workers. It has become increasingly easy for taxi drivers to operate as self-employed drivers who use the platform provided by a ride-sharing app as opposed to working as the employees of a taxi company. Individuals providing intellectual capital in sectors such as communications, media, design, art, technology, financial services, and professional services are now more commonly becoming freelancers. This trend has dramatically reshaped the Canadian workforce, with one study showing that freelancers, independent contractors, and on-demand workers will make up 45 percent of the workforce by 2020.28 The majority of millennial workers are already freelancing.29

Implications for the Income Tax

The decline of traditional employment through the rise of “surplus workers,” along with the displacement of traditional employees by freelancers and gig workers, has profound implications for the Canadian income tax system. As detailed below, the income tax system is oriented around traditional employment, and it depends on employment income as its major tax base. In an era of rapid technological advances, this tax base is at risk of rapid erosion, which would make the tax more inequitable and inefficient. This threat may undermine the income tax as the primary instrument for generating revenues, redistributing social income, and promoting economic growth. It is true that the income tax system has adapted to major changes in the past 100 years and that it “rests on an amazingly resilient and internally consistent framework of norms that have withstood the scrutiny of a number of tax reviews.”30 However, the changes wrought by automation may be more significant than previous changes because they undermine the system’s fundamental orientation around employment. Automation has the potential to blur the distinction

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28 Josh McConnell, “Intuit Says 45% of Canadians Will Be Self-Employed by 2020, Releases New App To Help with Finances,” Financial Post, January 23, 2017 (https://business.financialpost.com/technology/personal-tech/intuit-says-45-of-canadians-will-be-self-employed-by-2020-releases -new-app-to-help-with-finances).

29 “Freelancing in America: 2017,” Upwork (https://www.upwork.com/i/freelancing-in-america/ 2017). The same trend is seen in North America and the European Union. See Anthony Hussenot, “The Future of Work Could Lie in Freelancing,” World Economic Forum, August 21, 2017 (www.weforum.org/agenda/2017/08/why-the-future-of-work-could-lie-in-freelancing).

30 Jinyan Li and J. Scott Wilkie, “Celebrating the Centennial of the Income War Tax Act, 1917,” Income Tax at 100 Years, supra note 15, 1:1-18, at 1:17.
between employment, business, and capital, enabling more people to incorporate their services and eroding the tax base to a point where the income tax loses its capacity to raise revenue and redistribute income.

**THE CURRENT TAXATION OF WORKERS**

**Overview of the Income Tax**

**Born To Be Fair**

“The income tax is widely regarded as the fairest tax,” as Neil Brooks has said. It was created to be so. When the Income War Tax Act (IWTA) was introduced in 1917 in the midst of a conscription crisis, the debate on the draft legislation focused primarily on the progressive nature of the tax and how to make the new tax system work. The 1917 IWTA defined “income” as the aggregate amount of income from all sources, including wages and salary, profit, and other amounts, but not capital gains (which became taxable in 1972). Tax rates for personal income were progressive while the corporate tax rate was flat, correlating with the basic personal income tax rate (4 percent in 1917). The IWTA adopted anti-avoidance measures to protect the integrity of the system while respecting private law and taxpayers’ right to use legal constructs to arrange their affairs, including the right to earn income through corporations. For example, subsection 3(4) of the IWTA taxed shareholders on the undistributed income of a corporation unless the minister found that the accumulation of income was not for the purpose of evading tax.

Fairness—in the sense of sharing the cost of government in accordance with one’s ability to pay—has been “a hallmark of the Canadian income tax system” since its inception. Fairness and equity were objectives of subsequent tax reforms, the most notable of which was the 1971 reform. The seminal report by the Carter commission provided the conceptual framework and principles for the reform. One of the reform’s key principles is the ability to pay. A recent movement toward

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31 Richard Bird, Neil Brooks, Larry F. Chapman, Robert Couzin, Kevin Dancey, and Jack Mintz, “Looking Back to Look Ahead: Critical Themes, Milestones, and Future Directions,” in *Income Tax at 100 Years*, supra note 15, 25:1-36, at 25:5.

32 For the historical context of this legislation, see Shirley Tillotson, *Give and Take: The Citizen-Taxpayer and the Rise of Canadian Democracy* (Vancouver: UBC Press, 2017); and Colin Campbell and Robert Raizenne, “The 1917 Income War Tax Act: Origins and Enactment,” in *Income Tax at 100 Years*, supra note 15, 2:1-96. The IWTA was “a reaction to the political crisis over conscription; the financial sacrifice imposed on the wealthy was meant to be commensurate with the personal sacrifice of the soldier.” Li and Wilkie, supra note 30, at 1:4.

33 See Campbell and Raizenne, supra note 32.

34 Li and Wilkie, supra note 30, at 1:4.

35 For further discussion of the 1972 tax reform, see Richard M. Bird, “The Tax Kaleidoscope: Perspectives on Tax Reform in Canada” (1970) 18:5 *Canadian Tax Journal* 444-73; and Neil Brooks, “Canadian Tax Journal: The Second Decade—1963-1972” (2002) 50:2 *Canadian Tax Journal* 630-48.
the preferential taxation of savings and capital gains has reduced the scope of the comprehensive tax base advocated by the Carter commission, but the income tax still represents a “collective judgment by Canadians that people’s contributions to the cost of government should be based on their ability to pay.”

**Becoming Democratic**

The income tax was transformed from a tax on the wealthy into a “mass,” or “democratic,” tax in the 1940s. The transformation, as Colin Campbell has noted, “was driven by the need for the Canadian government to raise unprecedented amounts [of money] to finance the unlimited war effort to which Canada committed in 1940.” It was achieved through the introduction of the pay-as-you-go (PAYG) withholding system. Through the withholding system, many taxpayers were “revealed” to the tax system. For example, the number of tax returns filed by individuals jumped from 31,130 in 1918 to 300,000 in 1940, to nearly 900,000 in 1941, to about 1.8 million in 1942, and to 2.25 million in 1945. In terms of tax revenue, personal income tax generated $45 million in 1939-40, $296 million in 1941, and $768 million by 1945. Between 1939 and 1945, personal income tax revenue increased by approximately 1,700 percent, and it went from being a secondary source of federal revenue that was derived entirely from a high-income minority to being “ democratized”—that is, nearly “universal and well on the way to becoming the principal single source of government revenue.”

Fairness is sometimes considered the “glue of a democratic society.” A fair tax is thus indispensable in a democracy. Since becoming disassociated from wars in 1948, the income tax, as has been noted elsewhere, has “played a foundational role...”

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36 Brooks remarks, supra note 31, at 25:6.
37 Colin Campbell, “J.L. Ilsley and the Transformation of the Canadian Tax System: 1939-1943” (2013) 61:3 Canadian Tax Journal 633-70, at 635.
38 The IWTA was amended in 1939 with the introduction of a “national defence tax” collected through the withholding of tax by the payer: all incomes over $600 (approximately 50 percent of the average industrial wage) at a rate of either 2 percent or 3 percent and interest and dividends; Campbell, supra note 38. For further discussion of the 1939 IWTA, see Herbert A.W. Plaxton, The Law Relating to Income Tax of the Dominion of Canada (Toronto: Carswell, 1939).
39 Livio Di Matteo, “Major Changes to the Federal Personal Income Tax: 1917-2017,” in William Watson and Jason Clemens, eds., Zero to 50 in 100 Years: The History and Development of Canada’s Personal Income Tax (Vancouver: Fraser Institute, 2017), at 11-16 (www.fraserinstitute.org/sites/default/files/history-and-development-of-canadas-personal-income-tax.pdf).
40 Ibid.
41 Campbell, supra note 37, at 667-68. In 1938, only 2.3 percent of the population filed personal income taxes, but it increased to 24 percent in 1955 and 52 percent in 1975. See Di Matteo, supra note 39, at 12.
42 Richard M. Bird and Scott Wilkie, “Tax Policy Objectives,” in Heather Kerr, Ken McKenzie, and Jack Mintz, eds., Tax Policy in Canada (Toronto: Canadian Tax Foundation, 2012), 2:1-39, at 2:3.
in the development of modern Canadian society by generating the necessary revenue to finance Canada’s public goods and services and by functioning as a main tool for achieving distributive fairness, sustainable economic development, and democratic politics.”

The Largest Source of Government Revenues

Income taxes paid by individuals (personal income tax, or PIT) is the single largest source of revenue for the federal government. The amount of PIT rose from $116 million (in 2016 real dollars) in 1918 to about $153.6 billion in 2018. As a share of federal revenues, the PIT grew from 2.6 percent in 1918 to about 51 percent in 2017. As a share of the gross domestic product (GDP), the PIT rose from 0.2 percent in 1918 to about 7.2 percent in 2017. The amount of PIT “increased from $14 per person in 1918 (adjusted for inflation and in 2016 real dollars) to roughly $4,120 in 2017, an almost 300-fold increase.” In 2018, PIT accounted for over 71 percent of total income tax revenues.

Employment-Oriented

Since becoming a mass tax during the Second World War, the income tax has relied on the mass employment of Canadians to generate tax revenue. Employment is the main source of income for Canadians: about 70 percent of Canadians aged 15 years and over earned income through employment in 2010, and those earnings represented 74.7 percent of the total income received by private households. In 2017, 21,030,000 Canadians earned employment income, 8.9 percent of whom earned more than $100,000.

43 Li and Wilkie, supra note 30, at 1:4.
44 Bev Dahlby, “The High Cost of Raising Revenue Through the Personal Income Tax,” in Zero to 50 in 100 Years, supra note 39, 39 - 43, at 39.
45 Di Matteo, supra note 39, at 14 - 15; and Canada, Department of Finance, “Annual Financial Report of the Government of Canada Fiscal Year 2017 - 2018” (https://www.fin.gc.ca/afr-rfa/2018/index-eng.asp).
46 See Di Matteo, supra note 39; and Livio Di Matteo, The Federal Fiscal History: Canada, 1867 - 2017 (Vancouver: Fraser Institute, February 2017) (www.fraserinstitute.org/sites/default/files/federal-fiscal-history-canada-1867-2017.pdf).
47 Di Matteo, supra note 39, at 14.
48 “Annual Financial Report of the Government of Canada Fiscal Year 2017 - 2018,” supra note 45.
49 See Statistics Canada, “Income Composition in Canada” (www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-014-x/99-014-x2011001-eng.cfm#archived). In the Northwest Territories, employment income accounted for 87.8 percent of total income, the highest in the country, while in Prince Edward Island, employment income was 68.6 percent of total income, the lowest in the country.
50 Statistics Canada, “Distribution of Employment Income of Individuals by Sex and Work Activity, Canada, Provinces and Selected Census Metropolitan Areas” (https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110024001).
Employment and office are listed as two sources of income under section 3 of the ITA. Out of concerns for equity, fairness, and simplicity of compliance, the scope of employment income is broadly defined under sections 5 to 7, and tax is imposed on more or less a gross basis, with deductions restricted by section 8. Employers are required to deduct and remit tax from employment income and report the information to the Canada Revenue Agency (CRA). Employees may get a tax refund upon filing a tax return.

The ITA is biased toward capital and business income. Even though the “ability to pay” principle calls for the aggregation of income from all sources and a comprehensive tax base was recommended by the Carter commission, the PIT falls primarily on individuals earning employment income. Compared with business income and capital gains, employment income bears the highest tax burden because of the limited deductions allowed in the computation of table income and the limited opportunities for shifting income to lower-taxed family members or for transforming income’s character into tax-preferred capital gains. In 2016, for example, the top rate for individuals with taxable income exceeding $300,000 was 33 percent on salary, 16.5 percent on capital gains, 26.3 percent on non-eligible dividends, and 24.8 percent on eligible dividends. In addition to income tax, employment income also bears the burden of contributions to the Canada Pension Plan (CPP) and employment insurance (EI) programs.

Differential Taxation of Workers

Classification of Workers

The term “workers” is not used in the ITA, and in this paper we give it a generic meaning, applying it to any individuals who exert themselves physically or mentally, especially in a sustained effort, for the purpose of earning income. Canadian workers typically fall into one of the following categories:

- employee workers, who provide their labour to others (known as employers) in return for remuneration in the form of wages or salaries;
- self-employed workers, who provide their labour to themselves during the course of rendering services to third parties as their clients;

51 ITA section 153.
52 Canada, Department of Finance, “Tax Planning Using Private Corporations,” table 12 (www.fin.gc.ca/activity/consult/tppc-pfsp-eng.asp).
53 Some self-employed individuals are also liable to contribute to the CPP. For an employee with average earnings ($40,983), the combined rate of income tax and social security contributions was 22.8 percent of gross wage earnings; 15 percent if income tax plus 7 percent of social security contributions; see Organisation for Economic Co-operation and Development, Taxing Wages 2018, at 22 (https://dx.doi.org/10.1787/tax_wages-2018-en).
54 Merriam-Webster Online, www.merriam-webster.com/dictionary/work.
entrepreneur workers, who provide labour to themselves through the operation of a business that combines physical (stock-in-trade or equipment) and financial capital with human capital; or
incorporated workers, who provide their labour to a corporation that they themselves own.

To enable workers to work, some financial or physical capital is needed—to cover, for example, the expense of physical tools, working space, or information and communication technology. For the four types of workers listed above, however, the origin of the income is simply human effort or human capital. In the case of entrepreneur workers, the factor of capital may be relevant in varying degrees depending on the nature of the business, but such capital must still be deployed through human effort in order to make profit.

For income tax purposes, the distinction between an employee worker and a self-employed worker is largely a legal matter. Subsection 248(1) of the ITA defines “employment” to mean “the position of an individual in the service of some other person” and “employee” to mean a person holding such a position. There is a body of case law on the meaning of “employment,” and on the distinction between “contract of service” (employment relationship) and “contract for service” (independent contract, or self-employed). Relevant factors include the contractual terms, the level of control, the opportunity for profit and risk of loss, the ownership of tools, whether the worker performs the services as a person in business on his own account, and the common intention of the parties. The importance of contracts in this classification is reflected in the common reference to the self-employed as “independent contractors” and the employed as “servants.” By default, a worker who is not an employee is self-employed, earning income from a “business.”

Self-employed workers and entrepreneur workers have the option of using a private corporation to carry out their work and thus becoming incorporated workers. The effect of the corporate form is to legally separate the worker from her income for tax purposes and to transform income from work to income from capital (for example, dividends or capital gains).

Under the ITA, workers are treated differently depending on the characterization of their work despite the fact that all of the income they generate is derived from human effort. As shown in the accompanying table, employee workers are taxed more heavily than other workers. The differences lie in the scope of deductions, the timing of taxation, the tax character of the income, and the method of tax payment.

55 Wiebe Door Services Ltd. v. MNR, [1986] 3 FC 553; 671122 Ontario Ltd. v. Sagaz Industries Canada Inc., 2001 SCC 59; Wolf v. Canada, 2002 FCA 96; and Royal Winnipeg Ballet v. Canada (Minister of National Revenue), 2006 FCA 87. For an overview, see Jinyan Li, Joanne Magee, and J. Scott Wilkie, Principles of Canadian Income Tax Law, 9th ed. (Toronto: Thomson Reuters, 2017), at 130-5; and Tamara Larre, “The Role of Intention in Distinguishing Employees from Independent Contractors” (2014) 62:4 Canadian Tax Journal 927-70.
## Deduction of Expenses

Employees are generally taxed on a gross basis; the ITA limits deductions to specific circumstances. In contrast, self-employed workers, entrepreneurs, and corporations can deduct all reasonable expenses incurred for the purpose of earning income, including travel expenses, home office expenses, car expenses, and mobile phone charges. The difference in the scope of deductions is often a major motivation for workers to opt for classification as independent contractors.

### Differential Taxation of Workers

|                           | Employees | Self-employed (entrepreneurs) | Incorporated workers |
|---------------------------|-----------|--------------------------------|----------------------|
| Top rate (combined federal and provincial) | 51.6% | 36% | 26.7% | 14.4% |
| Deduction of expenses | Very limited | No specific limitation | No specific limitation (except “incorporated employees”) | No specific limitation |
| Sanctioned tax-deferral | RRSPs and RPPs | RRSPs and RPPs | • Lower corporate tax rate than PIT rate | • No mandatory distribution of dividends |
| Sanctioned tax shifting | Spousal RRSPs | Spousal RRSPs | • No imputation of dividends | • Using the corporate form to “sprinkle” shareholding to family members |
| Method of tax payment | Withholding of tax by employer | Self-assessment | Self-assessment |

Source: Canada, Department of Finance, “Tax Planning Using Private Corporations” (www.fin.gc.ca/activty/consult/tppc-pfsp-eng.asp).

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56 ITA section 8. Examples are union dues and travel expenses incurred by employees who are remunerated on the basis of sales or who are required to travel away from the office.

57 ITA section 9.
Corporations are presumed to be business entities. The deductions claimed by a corporation reduce corporate income for tax purposes, which ultimately benefits the shareholder/worker. The ITA seeks to limit corporate tax deductions in respect of a “personal service business”—essentially a business in which the shareholder/worker of the corporation would otherwise be an officer or employee of that entity (that is, an “incorporated employee”). The deductions are limited to those available to employees.

**Timing of Taxation**

The amount of PIT is determined and paid annually. Accordingly, employees, the self-employed, and entrepreneurs pay tax annually at the progressive rates, which range from 15 to 33 percent at the federal level. Apart from the registered retirement savings plan (RRSP) and registered pension plan (RPP) programs permitted by the ITA, these workers have limited opportunities to defer the PIT. Incorporated workers, on the other hand, can defer the PIT until income is received from the corporation in the form of employment income or dividends. In other words, the timing of the taxation of the income earned by an incorporated worker can be delayed indefinitely. Tax deferred is tax saved.

**Income Shifting and Character Transformation**

Employees, the self-employed, and entrepreneurs can shift a limited amount of income to their spouses or common-law partners through contribution to spousal RRSPs. Retired workers can split some pension income. No opportunities exist for these workers to transfer the character of their income from employment or business income to capital gains or dividends.

In contrast, incorporated workers, by taking advantage of corporate law principles and the separate taxation of corporations, can split their income with family members and transform the character of the income from employment or business income to income from capital or capital gains. Through the issuing of shares to family members, the income earned by the corporation through the efforts of the

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58 ITA subsection 125(7) defines “personal services business” to mean a business of providing services where an individual who performs services on behalf of the corporation (incorporated employee) or any person related to the incorporated employee is a specified shareholder (owning at least 10 percent of the issued shares of any class) of the corporation and the incorporated employee would reasonably be regarded as an officer or employee of the person or partnership to whom or to which the services were provided for the existence of the corporation. There are two exceptions: where the corporation employs more than five full-time employees throughout the year; or where the corporation provides services to an associated corporation.

59 ITA paragraph 18(1)(p).

60 ITA paragraph 60(i), subsection 146(5), and section 147.2.

61 For an overview, see Li, Magee, and Wilkie, supra note 55, at 349-53.

62 ITA paragraphs 60(c) and 56(1)(a.2).
incorporated worker can be distributed to family members by way of dividends. Furthermore, each shareholder may be entitled to the lifetime capital gains exemption. Such shifting is limited by some anti-avoidance rules, such as the recently enhanced “tax on split income” (TOSI) rules, but these rules do not eliminate opportunities for tax shifting through the use of private corporations.

The income earned by workers typically has the character of earned income from employment or business. This character changes when the income is earned by a corporation and then distributed to the incorporated worker. If the incorporated worker sells the shares of the corporation to realize the value of the corporation, the gains from the sale are taxed as capital gains, only half of which are taxable in general, and up to $800,000 can be exempt from tax entirely under the lifetime capital gains exemption regime.

Overall, the income tax system is biased against employee workers and allows workers to rely on contracts or the corporate form to avoid being taxed as employees.

### Justifications for Differential Taxation of Workers

Historically, the differential treatment of workers has several justifications, including administrative simplicity, the linkage between income tax and social security programs, deference to legal and accounting principles, and the encouragement of business activities for social benefits. Although the underlying rationale remains largely relevant, some of the historical justifications for the differential treatment of workers are outdated today, in the age of automation. Most importantly, it is questionable whether these justifications outweigh the concerns for equity and tax base erosion.

#### Administrative Simplicity and Expediency

Administrative simplicity justifies the reliance on PAYG withholding in the case of employment income and the near gross-basis taxation of employees. The withholding regime was originally believed to prevent taxpayers from being left short of...
funds when their taxes became due and to make it virtually impossible for employees to evade or avoid tax on their employment income.\(^{67}\) It was thought impractical to expect millions of workers to keep adequate records of their expenses and compute net income from employment.\(^{68}\) The ITA allows some limited deductions for employees whose jobs generally involve incurring expenses that are not reimbursed by the employer—for example, employees who are engaged in sales, who must travel, or who do their jobs away from the employer’s premises.\(^{69}\) In other cases, the employee is presumed to bear no or negligible expenses. The absence of a trusted third party in the case of non-employee workers makes it difficult to extend the PAYG withholding mechanism beyond traditional employees.

**Linkage with Social Security and Political Expediency**

The income tax is an example of Canadians “taxing ourselves.”\(^{70}\) It is linked to the social benefits enjoyed by most Canadians. For example, two of the most important social security programs, CPP and EI, are linked to employment income. Contributions to these programs are withheld by the employer, as with the income tax. Tax-assisted private retirement saving programs, such as the RPP and RRSP, are also linked to employment income. More broadly, the ITA is used to deliver subsidies to Canadians to promote social goals (such as poverty reduction) and economic goals (such as encouraging entrepreneurship and economic growth).\(^{71}\)

The linkage between paying tax and social benefits may help make the relatively heavy taxation of workers more politically acceptable, since these workers are the main beneficiaries of social benefits.\(^{72}\) In addition, compared with capital owners and business owners, employees tend to be less responsive to higher tax rates because they need to put the proverbial “bread on the table.”\(^{73}\) Labour is less mobile and the labour market less elastic, compared with capital.\(^{74}\)

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67 Perry, supra note 66, at 368.

68 To simplify tax compliance, a standard deduction of $500 was allowed for all employees under former paragraph 8(1)(a). It was repealed in 1988.

69 For example, ITA paragraphs 8(1)(f) and (h).

70 Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen’s Guide to the Debate over Taxes*, 5th ed. (Cambridge, MA: MIT Press, 2017).

71 For a list of these tax expenditures, see Canada, Department of Finance, *Report on Federal Tax Expenditures—Concepts, Estimates and Evaluations 2019* (Ottawa: Department of Finance, 2019).

72 Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen’s Guide to the Debate over Taxes*, 5th ed. (Cambridge, MA: MIT Press, 2017); and Geoffrey Hale, *The Politics of Taxation* (Toronto: University of Toronto Press, 2001).

73 Soled and Thomas, supra note 2, at 14.

74 The supply of labour is less elastic than the supply of capital. Low- and middle-income taxpayers need to work to support themselves and their families, and increased taxation will likely not cause them to work less and opt for more leisure. In other words, their supply of labour is less responsive to taxation, and the substitution effect is low. Higher-income taxpayers
As a “tax on ourselves,” the income tax seems to have been accepted by Canadians as a fair tax. There have been no serious attempts to eliminate it. As citizens, taxpayers are also voters, many of whom, as Geoffrey Hale has said, may view “continuing and steady improvement in their standard of living, accommodated and assisted by governments, as something approaching a national birthright.”75 Lower-income and middle-income groups may support higher taxes on higher-income earners. Upper-income groups’ share of the tax burden is very disproportionate to what most of them receive in public services or benefits.76 The political process has thus far resulted in an entwining of “taxing the rich” and “taxing labour” in the income tax system.77

Deference to General Law

The differential taxation of workers may also be justified on the grounds of legal reality. As part of the Canadian legal system, the ITA recognizes the effects of non-tax law, such as contracts and corporate personality, and it treats independent contractors and incorporated workers differently from employees. The ITA removes the undesirable fiscal effects of general law in limited circumstances through so-called

may work even more when taxes go up so that they can maintain the same level of after-tax income and maintain the same standard of living. See Miles S. Kimball and Matthew D. Shapiro, Labor Supply: Are the Income and Substitutions Effects Both Large or Both Small? NBER Working Papers no. 14208 (Cambridge, MA: National Bureau of Economic Research, July 2008) (www.nber.org/papers/w14208.pdf). In general, however, the empirical literature shows that the responsiveness of high-income earners to tax is much greater than that of low-income earners, but the response is not to work less, but rather to find other ways to maximize their after-tax earnings by shifting income across jurisdictions, time, or form to avoid some taxation. See Kevin Milligan and Michael Smart, “Taxation and Top Incomes in Canada” (2015) 48:2 Canadian Journal of Economics 655-81 (https://doi.org/10.1111/caje.12139); Mike Brewer, Emmanuel Saez, and Andrew Shephard, “Means-Testing and Tax Rates on Earnings,” in Stuart Adam, Timothy Besley, Richard Blundell, Stephen Bond, Robert Chote, Malcolm Gammie, Paul Johnson, Gareth Myles, and James Poterba, eds., Dimensions of Tax Design: The Mirrlees Review (Oxford: Oxford University Press, 2010), 90-173; Costas Meghir and David Phillips, “Labour Supply and Taxes,” ibid., 202-74; and Thomas Piketty, Emmanuel Saez, and Stefanie Stantcheva, “Optimal Taxation of Top Labor Incomes: A Tale of Three Elasticities” (2014) 6:1 American Economic Journal: Economic Policy 230-71.

75 Hale, supra note 71, at 43.
76 Ibid., at 265. See also Charles Lammam, Hugh MacIntyre, and Milagros Palacios, “Measuring the Distribution of Taxes in Canada: Do the Rich Pay Their ‘Fair Share’?” Fraser Institute.org, November 30, 2017 (www.fraserinstitute.org/studies/measuring-the-distribution-of-taxes-in-canada): the top 1 percent of tax filers paid 14.7 percent of total taxes, while their collective share of total income earned is 10.7 percent.
77 For further discussion of this phenomenon in the United States, see Dennis J. Ventry Jr., “Equity Versus Efficiency and the U.S. Tax System in Historical Perspective,” in Joseph J. Thorndike and Dennis J. Ventry Jr., eds., Tax Justice: The Ongoing Debate (New York: Rowman & Littlefield, 2002), 25-71. See also Joel B. Slemrod, Does Atlas Shrug? The Economic Consequences of Taxing the Rich (Cambridge, MA: Harvard University Press, 2002).
anti-avoidance rules (for example, the TOSI rules). Case law generally adheres to a form-over-substance approach to interpreting the ITA and sanctions taxpayers’ right to minimize tax through tax planning.\textsuperscript{78}

**Tax Subsidies on the Ground of Societal Benefits**

The ITA is used by the government to promote certain activities or behaviours on the grounds of broader societal benefits. One example is the taxation of active business income earned through a private corporation on a deferred basis—known as the “small business deduction” under section 125 of the ITA. Incorporated workers can take advantage of the small business deduction, which results in a tax rate of 9 percent on active business income to $500,000, deferring 24 percent of \textit{PIT} indefinitely.\textsuperscript{79} The small business deduction was intended to promote entrepreneurship, because, as the minister has said, the growth of the Canadian economy and the creation of jobs for Canadians are important: “The Canadian economy depends upon the creative business activity of small, growing businesses.”\textsuperscript{80} Despite this aim for the deduction, empirical evidence is lacking on the effect of this tax subsidy on the growth of small businesses or the positive societal benefits of incorporated workers.

The lifetime capital gains exemption was also intended to encourage entrepreneurship by enabling owners of small businesses to retire with additional money, since these owners could not, presumably, take advantage of RRSPs or RPPs, which were tied to employment income.\textsuperscript{81}

\textsuperscript{78} For an overview of statutory interpretation, see Li, Magee, and Wilkie, supra note 55, at 484-527; and David G. Duff, Benjamin Alarie, Geoffrey Loomer, and Lisa Philipps, \textit{Canadian Income Tax Law}, 6th ed. (Toronto: LexisNexis Canada, 2018), chapter 2.

\textsuperscript{79} This tax deferral is not available if the corporate income is derived from a “personal service business” or “specified investment business”; both terms are defined in ITA subsection 125(7).

\textsuperscript{80} See Canada, Department of Finance, 1971 Budget, Budget Speech, June 18, 1971, at 13. In the 1971 budget introducing the tax reform bill that included the small business deduction, the minister of finance stated: “This government supports the view that entrepreneurial initiative should be encouraged through the tax system.” See ibid.

\textsuperscript{81} Jack M. Mintz and Thomas A. Wilson, \textit{Capitalizing on Cuts to Capital Gains Taxes}, C.D. Howe Institute Commentary no. 137 (Toronto: C.D. Howe Institute, February 2000), at 20. According to the 1985 federal budget that proposed this measure, its purpose is to “encourage risk-taking and investment in small and large businesses and to assist farmers by providing a cumulative tax exemption for capital gains up to a lifetime limit of $500,000.” See Canada, Department of Finance, 1985 Budget, Budget Papers, May 23, 1985, at 3. The measure was intended to (1) support “equity investment and broaden participation by individuals in equity markets,” (2) “improve the balance sheets and financial health of Canadian companies,” (3) “provide a tax environment that is more conducive to high technology companies raising capital,” and (4) “encourage individual Canadians to start new businesses and . . . help small businesses grow.” See ibid.
THE CASE FOR REFORM

The historical justifications for the tax bias in favour of non-employee workers, especially incorporated workers, are less and less relevant in the age of automation. Such bias is expected to result in the erosion of the tax base as more workers are able to opt out of the “box” of employment. It may also lead to an increase in tax discrimination against employee workers when more of these workers are able to adopt non-traditional or flexible ways of working that are not substantially different from the methods used by self-employed workers. Such inequity cannot be justified by administrative expediency: the same technology that enables freelance work can also facilitate more efficient tax administration. A re-imagining of the income tax is needed to ensure the sustainability of the tax base and the fair and democratic nature of the income tax.

Sustainability of the Tax Base

The rise in surplus workers and gig workers and the decline in traditional employment will likely threaten the tax base. The increased proportion of non-employee workers in the workforce is likely to be accompanied by an increase in (1) the deductions claimed in computing income, (2) the small business deductions claimed, and (3) the leakage in the tax system. These effects should be weighed against the fact that when a worker changes her employee status to that of an independent contractor or incorporated worker, the type of work she undertakes may undergo no discernible change and the societal benefits of the work may remain the same. Further, it is estimated that technological change has caused at least half of the decline in the labour share in advanced economies in the last four decades and that the share of labour income in national income is expected to decline further in the age of automation.82

Leakage in the tax system could also be the result of (1) the reduced scope of PAYG withholding and (2) more opportunities for underreporting without detection. In other words, if more workers work online but do not report their income for tax purposes (that is, they operate in the underground economy), they will enlarge the existing tax gap related to the underground economy. This tax gap was estimated to be $8.7 billion in 2014, accounting for 0.4 percent of gross domestic product (GDP) or 6.4 percent of PIT revenues.83 The CRA noted that “self-employment income is a completely non-assured income base, due to a near complete lack of third-party

82 Mathew Lawrence, Carys Roberts, and Loren King, Managing Automation: Employment, Inequality and Ethics in the Digital Age, Institute for Public Policy Research Commission on Economic Justice: Discussion Paper (London, UK; IPPR, December 2017), at 25-26. For further discussion of this topic, see Thomas Piketty, Capital in the Twenty-First Century (Cambridge, MA: Belknap Press, 2014).
83 Canada Revenue Agency, Tax Assured and Tax Gap for the Federal Personal Income Tax System (Ottawa: CRA, 2017), at 4.
reporting and a more complex reporting process”; and that “self-employed individuals may contribute disproportionately to tax loss resulting from UE [underground economy] activity.”

Further, as the CRA has said, “while this does not mean that all self-employment income is reported inaccurately, it is at higher risk of reporting non-compliance, be it unintentional or intentional.”

Preserving the Income Tax as a Fair and Democratic Tax

The differential taxation of workers who are in similar settings violates horizontal equity. Currently, workers earning the same amount of economic income could end up with different tax liabilities depending on their type of employment. More significantly, the current system weakens the progressive nature of the income tax. A significant risk attributed to automation is the “paradox of plenty,” whereby technological advancement makes society as a whole economically richer, but this enrichment is biased in favour of capital ownership (financial capital and human capital). This risk coincides with the increasing income inequality that is evident in the age of automation. Those without the requisite skills to adapt in this age have been left worse off. For the first time in recent history, both wages and jobs have decreased despite increased productivity, and this is partly because of technological pressure. The past 40 years have seen a widening income gap between skilled and unskilled labour; the earnings of holders of college or graduate degrees have increased while the earnings of those without degrees have stagnated or decreased.

Addressing income inequality will therefore be one of the most important policy goals in this country.

And yet the decline of a tax base subject to progressive taxation and to the biases in favour of skilled workers could weaken the redistributive role of the income tax system. It has been shown that private corporations are used by higher-income individuals and that the main source of income in skill-intensive industries is the labour of the corporations’ owners. The increased use of private corporations

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84 Ibid., at 4-5.
85 Ibid.
86 David Rotman, “Technology and Inequality,” MIT Technology Review, October 21, 2014 (www.technologyreview.com/s/531726/technology-and-inequality).
87 Daron Acemoglu and David Autor, “Skills, Tasks and Technologies: Implications for Employment and Earnings,” in David Card and Orley Ashenfelter, eds., Handbook of Labor Economics, vol. 4b (Amsterdam: North Holland, 2011), 1043-1171.
88 Michael Wolfson, Mike Veall, Neil Brooks, and Brian Murphy, “Piercing the Veil: Private Corporations and the Income of the Affluent” (2016) 64:1 Canadian Tax Journal 1-30.
89 See also Matthew Smith, Danny Yagan, Owen Zidar, and Eric Zwick, “Capitalists in the Twenty-First Century” (2019) 134:4 Quarterly Journal of Economics 1675-1745, finding that a primary source of top income in the United States is private “passthrough” business profit, and three-quarters of such income is derived from human capital of the owners of closely held mid-market firms in skill-intensive industries.
would further undermine the fairness and equity of the tax system. More importantly, increasing numbers of workers are able to use the corporate form in a manner that does not create jobs for arm’s-length persons or encourage investment in innovation. No policy justification exists for using the corporate form as a proxy for measuring societal benefits.

Moreover, the use of private corporations to carry out work can “meld the two inputs [labour and capital] in their operation.”90 The value of the business and of the shares of the corporation may be created primarily by the efforts of the owner-manager. Rhys Kesselman suggests the following:

Almost all supernormal returns conventionally attributed to capital in fact reflect the individual’s characteristics and thus are more properly viewed as the product of labour-type inputs. Supernormal returns in business and investment reflect not only good luck or pure rents but also the contribution of individual efforts, experience, ingenuity, perseverance, vision, social skills, connections, and special knowledge—all of which are aspects of labour rather than of capital per se.91

According to Kesselman, “virtually any large fortune accumulated by individuals will involve these personal attributes.”92 With the advance of technologies and the ability to render services remotely, more individuals can make use of private corporations.93 If the line between labour and capital is not carefully delineated, the traditional political justification for the progressive income tax—the entwining of “taxing labour” and “taxing the rich”—would be weakened.

Administrative Feasibility

As early as 1969, then Deputy Commissioner William H. Smith of the Internal Revenue Service said that “automation provides new tools for improving and, to some extent, simplifying tax administration.”94 Arguably, technological advances that facilitate the rise of non-traditional work can also facilitate the collection of income tax from non-employee workers through information reporting or source withholding.95 Today, in the age of e-commerce, most, if not all, payments and

90 Kesselman, Income Tax at 100 Years, supra note 15, 3:6.
91 Ibid., at 3:6-7.
92 Ibid., at 3:7.
93 This issue has been considered by a UK consultation paper and is subject to new anti-avoidance measures. United Kingdom, HM Revenue & Customs, “Tax Avoidance Involving Profit Fragmentation—Consultation Document” (www.gov.uk/government/consultations/tax-avoidance-involving-profit-fragmentation).
94 William H. Smith, Deputy Commissioner of Internal Revenue, “Automation in Tax Administration” (1969) 34:4 Law and Contemporary Problems 751-68.
95 For further general discussion, see Garima Pande and Rahul Patni, Tax Technology and Transformation: Tax Functions “Go Digital” (Kolkata, India: EY, 2017) (https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/digital/ey-tax-technology-transformation.pdf).
transactions made by individuals leave a digital trail. A third party (for example, a bank, credit card company, or even a vendor) who is not a traditional employer could be tasked to provide financial information or withhold tax. Technology and AI make it more feasible than ever to require third parties to withhold tax. It is even conceivable that the tax compliance function will soon be performed by robots.96

**RE-IMAGINING THE INCOME TAX**

**Taxing All Workers the Same**

We propose that the income tax should be reformed to treat all workers the same, regardless of the choice of legal arrangements or the technical means of work. It can be conceived as a “universal tax on earned income.” This proposal requires a clearer conceptualization of source of income as a result of “human capital” (human efforts, labour, or work), “capital,” or “business” (which combines labour and capital). The characterization of source would be based on economic origin as opposed to legal arrangements. Some current income from capital would be treated as earned income. Our proposal would also require a rethinking of two existing practices: (1) permitting tax deferral in cases where societal benefits are absent or minimal and (2) extending the PAYG withholding regime to payments to workers who are in non-traditional employment settings.

Some of the key technical design features of this extended regime are set out below.

Our proposal has, we argue, the potential to improve tax equity while achieving the simplification that would result from reducing the need to draw lines between different types of workers. Our proposal would also simplify the taxation of income earned through private corporations. The current regimes for giving incentive to active business activities at the corporate level and integrating the corporate tax and personal tax are very complex. The 2018 amendments designed to prevent private corporations from being used to defer tax on passive income or split income add complexity to the system.97 Our proposal would make such complex rules unnecessary or at least reduce the need for such complex anti-avoidance rules. Anti-avoidance

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96 Organisation for Economic Co-operation and Development, *Tax Administration 2019: Comparative Information on OECD and Other Advanced and Emerging Economies* (Paris: OECD, 2019) (https://doi.org/10.1787/74d162b6-en). This study shows how the availability of new technologies is providing new opportunities for tax administrations to better manage compliance, protect their tax base, and reduce administrative burdens. See also “Spotlight: Robotic Process Automation (RPA)—What Tax Needs To Know Now,” PwC Tax Function of the Future Series, May 2017 (www.pwc.com/gx/en/tax/publications/assets/pwc-tax-function-of-the-future-focus-on-today-robotics-process-automation.pdf).

97 These amendments deny a CCPC’s claim to the small business deduction if its annual passive investment income exceeds $150,000; see ITA subsection 125(5.4). They also extended the TOSI rules to apply to certain income received by adult family members (formerly limited to individuals under the age of 18).
rules would still be needed to prevent income from work from being disguised or shifted, but we would not expect such rules under our proposal to be more complex than the current rules.

**Technical Design**

**Deduction for Work-Related Expenses**

The current restrictions on income tax deductions reflect the traditional presumption that employees do not bear any costs associated with their work. In the age of automation, however, workers may bear these kinds of expenses, such as the cost of mobile devices and home offices, whether they work as employees or as freelancers. Expanding the deduction under section 8 of the ITA to mimic the deductions permitted by section 9 would make sense.

**Characterization of Income from Work**

A reconceptualization of income derived from work and labour is a critical component of the proposal. This involves not only disregarding the legal form chosen by the workers but also recharacterizing what is traditionally regarded as income from business (that is, income of the self-employed) or income from property (for example, dividends) as income from work. Fortunately, there are precedents internationally and in the ITA. Internationally, the dual income tax system provides some inspiration. As Richard Bird and Thomas Wilson have said, “[T]here are decades of experience with the dual income tax in countries not all that unlike Canada in many important respects.” Under the dual income tax system, income is classified as either income from labour or income from capital. The ITA itself contains rules to tax incorporated workers as employees in certain circumstances. We can look to these examples in implementing our suggested reform.

Under our proposal, the income earned by employees, the self-employed, entrepreneurs, and incorporated workers would be characterized as income from work for tax purposes, because the economic origin of the income is labour. When capital is combined with the worker’s own labour, the predominant character of the income remains labour, unless the business qualifies as an “active business” or the worker’s

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98 For further discussion of the dual income tax systems, see Richard M. Bird and Eric M. Zolt, “Dual Income Tax for Developing Countries” (2010) 1:2 Columbia Journal of Tax Law 174-217; Robin Boadway, “Income Tax Reform for a Globalized World: The Case for a Dual Income Tax” (2005) 16:6 Journal of Asian Economics 910-27 (https://doi.org/10.1016/j.asieco.2005.10.001); Sijbren Cnossen, “Taxing Capital Income in the Nordic Countries: A Model for the European Union?” in Sijbren Cnossen, ed., Taxing Capital Income in the European Union: Issues and Options for Reform (Oxford: Oxford University Press, 2000), 180-213; and Peter Birch Sørensen, “The Nordic Dual Income Tax: Principles, Practices, and Relevance for Canada” (2007) 55:3 Canadian Tax Journal 557-602.

99 Bird and Wilson, supra note 11, at 19. The dual income tax can be readily be combined, if desired, with taxing corporations on a rent basis. See Milligan, supra note 11.
income is below an imputed rate of return on capital deployed in the business (the “imputed return” test).

The active business test can be based on whether or not the income-earning activity requires the services of a minimum number of workers. A similar test is used in defining passive income earned by private corporations (subsection 125(7) in the case of Canadian-controlled private corporations, and section 95 in the case of controlled foreign affiliates). If a worker’s income-earning activity constitutes an active business, the income could be taxed at the corporate rate and benefit from the deferred payment of PIT. This distinguishes businesses that depend on the owner’s own labour from those that depend on other workers’ labour—an important distinction, because the latter generate more positive societal benefits in terms of job creation.

The “imputed return” test is more relevant to capital-intensive income-earning activities. Income up to the imputed return on capital would be characterized as income from capital, and the remaining portion would be characterized as income from work. This is similar to the imputation approach adopted by some Nordic countries. For example, the Norwegian dual income tax system imputes a return to the corporation’s business assets by multiplying the value of the assets by an assumed rate of return on capital, and profits exceeding the imputed return are deemed to be returns from labour. The assumed rate of return can be based on the interest rate on government debt plus some risk premium. In other words, there is an imputed “normal” rate of return to invested capital (for example, a dividend), and the excess is treated as earned income. This test reveals the labour income embedded in capital.

**Purifying the Small Business Deduction**

Given its original rationale, the small business deduction would be purified under our proposal so that it applies to businesses that generate positive societal benefits, such as job creation and innovation. It would not apply to the labour income of incorporated workers as determined by the characterization rules set out above.

**Broader Use of Withholding Tax**

The PAYG withholding tax could be extended to payments to workers outside the traditional employment setting. Such an extension would be a natural evolution of

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100 For example, the Norwegian approach uses the interest rate on five-year government bonds plus a risk premium of 4 percent. If the imputed rate of return equals the interest on business debt, it will not matter whether the calculation is based on gross assets or net assets (excluding liabilities). If the rates differ, taxpayers under a net asset regime may have incentive to adjust their borrowings to maximize the amount of income from capital. See Peter Birch Sørensen, “From the Global Income Tax to the Dual Income Tax: Recent Tax Reforms in the Nordic Countries” (1994) 1:1 International Tax and Public Finance 57–79, at 73–75 (https://doi.org/10.1007/BF00874089).

101 A similar approach is used in respect of foreign investment funds; see ITA subsection 212(5.1).
the existing rules that require the withholding of tax on payments for services rendered by non-residents in Canada under regulation 105.\textsuperscript{102} One way of doing this would be to amend either section 153 or regulation 105.

**CONCLUSION**

Wayne Gretzky once said, “I skate to where the puck is going to be, not where it has been.”\textsuperscript{103} This way of thinking is quite apt for addressing the disruptions to the tax system brought about by automation. In this digital age, the transformation of how people work is occurring much faster than in the previous age of mechanical automation. If close to 50 percent of the workforce will soon be leaving traditional employment jobs, the sustainability of the income tax as an instrument of generating revenue in a fair and equitable manner will be threatened. It is time for Canada to take notice of this shift and its implications for the tax system.

As past experience shows, successful tax reforms take time. So now is a good time to start the process. The income tax system is capable of remaining a key policy instrument for raising revenue and achieving the redistribution of social income, even in the automation age. Fortunately, Canada has seen recent debates about reforming the tax system. Our proposal adds to the current ideas about such reform. It proposes to treat all workers equally, irrespective of the legal arrangements (for example, a private corporation) or legal constructs (contract of services or contract for services) used to earn the income. Our proposal would also treat skilled workers, knowledge workers, and entrepreneurial workers the same as all other workers and treat entrepreneurs differently only if their activities generate positive societal benefits. We admit that these ideas are preliminary, but it is time to start preparing the tax system to better meet the challenges of the age of automation.

\textsuperscript{102} Since the 1920s, Canada has used the withholding mechanism to collect taxes from non-residents who receive dividends, interest, rent, or royalties, and other periodical payments from Canadian sources (ITA part XIII). Unlike employment income withholding tax, the non-resident withholding taxes are “final” in the sense that the non-resident taxpayers are not required to file an annual tax return. More recently, Canada has extended the withholding tax system to fees paid to non-residents for rendering services in Canada (see ITA regulation 105), and to fees paid to non-residents for the provision in Canada of the acting services of the actor in a film or video production (see ITA subsection 212(5.1)). These withholding taxes are “provisional,” like employment income withholding. Their effect is to get the taxpayer to account to the CRA for their income and tax liability.

\textsuperscript{103} Jason Kirby, “Why Businesspeople Won’t Stop Using That Gretzky Quote,” *MacLean’s*, September 24, 2014 (www.macleans.ca/economy/business/why-business-people-wont-stop-using-that-gretzky-quote).