AUTOMATION AND WORKERS:

MAKING THE CANADIAN INCOME TAX SYSTEM FAIR AGAIN

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Abstract

This paper proposes a universal tax on income derived from human efforts (earned income) in the age of automation. The proposed tax will remove the existing tax biases towards individuals who work as independent contractors or through the use of private corporations. It is necessary because automation changes how people work and enables an increasing proportion of the workforce to become freelancers or entrepreneurs. Such change in the workforce will weaken the traditional policy justifications for taxing employees more heavily than other workers, and potentially undermine the income tax as a source of revenue and means of achieving fairness and equity in Canadian society. Conceptually, the proposed universal tax would be similar to the dual income tax system in the Nordic countries. Politically, it would help restore the income tax as a fair and democratic tax. Technically, the proposed tax could be implemented through expanding the withholding tax regime that currently applies to employees and non-resident service providers.

1 INTRODUCTION

Automation is not new. Its impacts on how people work and live are unprecedented and increasingly pervasive; its implications for the income tax system are profound. Existing literature shows that automation affects workers through: creating, augmenting or substituting jobs; eradicating jobs permanently; and turning employees into freelancers or gig workers.[1] As a result, while many people continue to work as employees, an increasing proportion of the workforce are shedding the traditional employee designation and becoming freelancers or "surplus workers". The fiscal and tax implications of automation are profound because workers are taxpayers. The current income tax system is employment-centric and designed for a society where the vast majority of people work as employees. In the age of automation, the declining number of traditional employees (hence the tax base) inhibits the income tax system's capability to generate revenues as well as pursue tax equity between people who work as employees and those who work as freelancers and entrepreneurs. Moreover, if more Canadians' work is replaced by robots, they will change from "tax-payers" to "tax-takers"[2] in the sense of drawing on social support programs funded by tax revenues. That will put pressure on government spending programs at a time in which tax revenues could be diminishing.

Proposals have been made to address the tax challenges of automation, including the implementation of a robot tax[3] or a negative tax such as a universal basic income (UBI) program. For the reasons summarized below, we do not believe either proposal addresses the fundamental existential threat posed by automation. We propose to reform the income tax by treating income from work the same, regardless of the status of the worker as an employee or self-employed or whether the worker uses a private corporation to carry out the work.

The idea of robot tax was purportedly suggested by Bill Gates in 2017[4] to raise revenue to train workers whose jobs were eliminated by robots. It was suggested that the tax could be imposed on the owners of robots that replace workers or the robots themselves by deeming robots as "artificially intelligent persons" in a manner similar to taxing corporations as legal persons. [5] Turning the idea of robot tax into reality faces huge challenges including defining what a "robot" is and determining whether or not robots are directly replacing workers in reality. Criticism of the robot tax includes: it would stifle innovation and reduce productivity; it could dampen a booming new industry and Canadian competitiveness in said industry; it would not generate additional tax revenue as it would reduce economic productivity and the profits associated with such an increase; and it would increase the complexity of the tax system.[6]

To address the challenge of increasing "surplus workers" or those whose jobs could be lost due to automation, a universal basic income (UBI) program has been proposed.[7] A guaranteed minimum income is currently available to seniors under the Old Age Security and Guaranteed Income regime as well as to children under the Canada Child Benefit program. The UBI could be an extension of such schemes to working-age Canadians who are between jobs or permanently displaced by automation. However, introducing a UBI would face complex technical design and policy challenges as well as political pressures that are outside the scope of this paper.[8]

In this paper, we propose a universal tax on all workers (broadly defined) by treating all income derived from human efforts the same, regardless of the form of legal arrangements and means of carrying out the work. It is the "ability to pay" of taxpayers that determines the tax base, not the legal or technical means through which income is earned. We think automation helps exposes the fundamental defects in the existing tax system and presents opportunities for reform. With the aid of technology, we argue that such universal tax is feasible and can make the tax system fair again.

Our paper builds on and seeks to contribute to, recent literature on tax reforms in Canada.[9] Tax reform ideas include: Canada needs to review the tax system because of the changing circumstances, especially the economic settings (such as globalization, changes in the labour market and rising income inequality) and evolution of tax theories and principles since the Carter Commission report; Canada should consider switching to a dual income tax system like the one practised in the Nordic countries;[10] and Canada should consider reforming the corporate tax system, including the taxation of private corporations.[11] Our proposal is inspired by the design of dual income tax and essentially treats all personal income as income from either human efforts or capital. It is also inspired by the literature that unpacks income from capital or capital gains as true return on capital and disguised labour income or sweat capital.[12] We contribute to the literature by demonstrating the urgency of tax reform in the age of rapid automation. We offer insights on the technical design of a universal tax on earned income, and explain why such tax can restore the income tax system to its original purpose – a democratic tax on Canadians based on their ability to share the burden of financing the collective spending choices made by Canadians through a democratic process.

In order to provide the necessary context for our discussions, we first provide an overview of the phenomenon of automation, its transformative nature and its implications for the job market, as well as the possible implications for the tax system. We then discuss the ways in which the changes brought about by automation could exacerbate the differential treatment of income earned from human efforts in different settings under the Income Tax Act (ITA)[13]and why it is unacceptable from policy perspectives. We acknowledge that data on the exact extent of impact of automation is not yet available but assume that the extent is significant. In the last part of the paper, we discuss the proposed universal tax on earned income, how it could be implemented and why it is a good balance between policy objectives concerning fairness, revenue generation and administrative simplicity.

2 AUTOMATION AND WORKERS

2.1 Robotic automation

The term "automation" refers to the technology by which a process or procedure is performed without human assistance.[14] Previous automation was "mechanical" through the use of control systems for operating equipment or machinery.[15] Since the turn of the 21st Century, automation has become "robotic", linked to digitization, robots, the Internet of Things, and artificial intelligence (AI). Robotic automation differs from mechanical automation in that it can eradicate the need for human intervention altogether. A European Union Report states the following:

> [T]hanks to the impressive technological advances of the last decade, not only are today's robots able to perform activities which used to be typically and exclusively human, but the development of autonomous and cognitive features – e.g., the ability to learn from experience and take independent decisions – has made them more and more similar to agents that interact with their environment and are able to alter it significantly.[16]
>
> [U]ltimately there is a possibility that in the long-term, AI could surpass human intellectual capacity".[17]

The pace of the technological changes propelling robotic automation is much faster than that of mechanical automation.[18] Some commentators suggest that the digital revolution is transformative as it not only digitizes production, but also performs intelligence-based tasks, which previously could only be handled by the human mind.[19]

2.2 Impact on workers

There has been much debate about the impact of digital or robotic automation on jobs.[20] While the exact level of impact is debatable and future job loss is hard to predict, there seems to be consensus that the impact is significant in respect of the number of jobs at risk of being lost and through creating drastic changes to how jobs are able to be done.

In terms of the number of jobs at risk of being lost, automation creates new jobs and eradicates existing ones. New jobs tend to be in the information technology sector due to the increased use of robots, digitalization of businesses, and the rise of digital businesses (e.g., the FAANGS -- Facebook, Apple, Amazon, Netflix, Google, and Spotify). Examples include increased demand for software engineers, increasingly robotics-intensive manufacturing sectors and, of course, more demand for people who make, maintain and repair robots.[21] Automation may also create new "lower-skilled jobs in other sectors due to spillover effects".[22] For example, Amazon created jobs associated with warehousing and delivery of tangible goods ordered online. Evidence of job eradication can be seen in the area of digital commerce. The rise of digital commerce has led to the elimination of the need for intermediaries in many sectors of the economy. Notable examples are the closing of traditional retail stores, bookstores, investment brokers, and travel agencies. Automation has already eliminated the jobs of toll collectors, telephone operators, bank tellers, and many others. [23] More profoundly, automation now has the potential of eradicating jobs that used to require human decision-making. For example, driver-less cars are expected to make human drivers redundant.

The economy-wide impact on jobs is currently unclear. For example, one European study[24] found that the overall labour demand increased by 11.6 million jobs due to computerization between 1999 and 2010 in the 27 EU member countries. The study also showed that the routine-reducing technological change's job-creation effect overcompensated the job-destructing effect.[25] It is believed that there are "strong complementarities between automation and labour that increase productivity, raise earnings and augment demand for labour."[26] In Canada, 38-42 per cent of the labour force may be at high risk of being affected by automation. [27] Examples include: the impending adoption of self-driving trucks threatening the current 280,000 truck drivers in Canada, more than 1.5% of the total jobs in the country;[28] McDonald's replacement of workers with automated kiosks threatened many of the 90,000 McDonald's jobs in Canada;[29] and the advent of online banking caused the loss or shift of banking jobs in Canada.[30]

While the number of jobs affected by automation may be uncertain, the ways in which automation affects how people do their work are evident. One of the most significant aspects of the changes brought about through automation is the augmentation of work done digitally and the creation of a gig economy. This will continue to drastically change the way work is done and how businesses operate, effects of which are already being seen as tax jurisdictions around the world struggle to handle problems related to digitalization. The change is anticipated to erode the number of people employed in the traditional sense of employment, and foster the rise of self-employed or incorporated workers.

2.3 The rise of "gigged workers"

With improvements to technology, opportunities to work more independently or "become your own boss" have expanded rapidly. It has become increasingly easy for taxi drivers to operate as self-employed drivers using the platform provided by a ride sharing app as opposed to working as 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 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.[31]

From creative entrepreneurs to those paid by the task, freelancing is on the rise worldwide. Freelancers were predicted to makeup the majority of the U.S. workforce within a decade, with nearly 50% of millennial workers already freelancing.[32] The growth of freelancing in the U.S. workforce is accelerating and has outpaced overall U.S. workforce growth by three times since 2014. The same trend is seen in the European Union.[33] People become freelancers because of the loss of employment due to automation or opportunities presented by automation (such as flexibility, connectivity with clients worldwide and skill-training on line).

Since technology just keeps getting better, the trend is likely to continue, even though the pace and degree of change is uncertain. "Everyone sees this; we just disagree on how exactly the change is going to march forward once it hits us."[34] Some predict that the ensuing technological disruption will happen at ten times the speed and three hundred times the scale of the industrial revolution.[35] As is the nature of technological change, the speed and scale will likely increase in the future exponentially. This creates a sense of urgency for reviewing the tax policy implications of automation.

3 UNFAIR TAXATION OF WORKERS EXACERBATED BY AUTOMATION

3.1 Current taxation of workers in different settings

The term "workers" is not used in the ITA in determining the taxation of the earnings from work. In this paper, "workers" refer to individuals who work, and "work" means "to exert oneself physically or mentally especially in sustained effort for a purpose or under compulsion or necessity."[36]

For income tax purposes, a worker's income may be taxed as: (a) the worker's employment income; (b) the worker's business income; (c) active business income of a private corporation owned by the worker; (d) personal services business income of a private corporation owned by the worker; (e) specified investment business income of a private corporation owned by the worker; (f) foreign accrual property income of a foreign corporation owned by the worker; or (g) active business income of a foreign corporation owned by the worker. These different tax treatments are based on the characterization of the legal relationship between the worker and his/her client and the characterization of income earned through a corporation.

As discussed in more detail below, the highest burden of taxation generally falls on workers who are employees and the lowest burden falls on incorporated workers. Incorporated workers enjoy not only the benefit of indefinite deferral of personal income tax, but also the benefit of income splitting and converting earned income into capital income or capital gains, which are more favorably taxed than employment income.

3.1.1 Employees

Employment income is the most important element in the tax base for individuals and is taxed at progressive rates (the top rate is currently 33% on taxable income exceeding $200,000).[37] In addition, employment income is the base for determining "quasi taxes", such as contributions to the Canada Pension Plan (and Quebec Pension Plan in Quebec) and Employment Insurance schemes.[38]

Employees are generally taxed on a gross basis as the ITA limits deductions to specific circumstances.[39] Their taxes are deducted by the employer and remitted to the government whenever income is received. Employees have no opportunities to split their income with family members. On the other hand, employees may be able to take advantage of tax subsidies for retirement savings, such as registered retirement savings plan (RRSP) and registered pension plan sponsored by the employer (sections 60(i), 146(5), 147.2).

3.1.2 Self-employed

Self-employed workers earn business income and can deduct all expenses incurred for the purpose of earning income, including travel expenses, home office expenses, car expenses and mobile phone charges (section 9). The "net income" exceeding $200,000 per year is taxable at the top rate of 33%. Their income is not subject to source withholding. They enjoy the same tax subsidies available to employees under the RRSPs and CPP.

Subject to some limitations under the reasonable standard under provisions such as section 67, a self-employed person can "share" his/her income with family members through "employing" them in the business.

3.1.3 Incorporated workers

A worker can incorporate a company under Canadian law or foreign law and provide services through the company. For ITA purposes, the company is a separate taxpayer from its shareholder-worker and its income is taxed at a flat rate.[40] The tax rate varies, depending on the character of income:

- Income from a "personal service business"[41] is taxed at an effective rate of 33%.[42] Deductibility of expenses is limited under s.18(1)(p). As such, an incorporated worker is taxed like an employee.
- Income from any other type of services (professional services, included) qualifies as "active business income", eligible for a lower corporate tax rate – 9% (the "small business deduction" under section 125). Compared to the top personal tax rate of 33%, the benefit of tax deferral is obvious. The deferral of personal tax ends only if the shareholder/work receives dividends or salary from the company. The effect of such tax deferral is an interest-free loan from the government to the worker.[43] In addition, the worker's family members can own shares of the company and receive dividends. Shareholders can sell their shares to realize capital gains and benefit from the lifetime capital gains exemption (currently about $800,000).
- Income for a "specified investment business" is not eligible for the small business deduction and is subject to an additional refundable tax at the rate of 10 2/3%[44] so that the total federal rate is 38 2/3%. An individual who manages his/her own investment portfolio directly or indirectly through a corporation is taxed more or less the same.

Even though the ITA seeks to reduce the tax advantages of incorporation in respect of personal services business income and specified investment income,[45] workers can use private corporations to minimize taxes,[46] but only if they are not employees. The Canadian income tax system is, in fact, a dual system: employment is taxed distinctly from and more heavily than other types of income (see Table A below).[47]

Table A: Combined Federal and Provincial Rate in 2017 on $220,000 from Rendering Services

Type of taxpayers	Employees	Self-employed	Private Corporations (incorporated workers)	
			General	Qualifying for SBD
Top rate	51.6%	36%	26.7%	14.4%

Notes:	Almost no deduction for expenses Tax withheld by employer Payroll taxes	Deduction of expenses Self-assessment	Deduction of expenses Self-assessment	Deduction of expenses Self-assessment Tax credit for income up to a threshold Income splitting with family members Converting income into capital gains
Source: Canada, Tax Planning Using Private Corporations (2017) (Consultation Paper), at 12 and 34.				

3.2 Weakening justifications

The current system of taxing workers violates the basic principle of equity and fairness based on the ability to pay principle. Workers with the same amount of income pay different amounts of tax depending on legal arrangements through which work is carried out (*e.g.*, contract for services versus contract of services, incorporated services or unincorporated services).

3.2.1 Administrative simplicity

The inequity could be justified on several grounds. One is administrative simplicity, which justifies limiting deductions for employees and the use of a withholding tax. It would be impractical to expect millions of workers to keep adequate records of their expenses. It is more effective to collect taxes through withholding tax and providing incentives to employees to file tax returns to receive tax refunds rather than use a complete self-assessment system. However, extending such a withholding tax regime to the self-employed would be difficult and was previously deemed unnecessary during the earlier years of the Canadian income tax system as the number of self-employed workers was presumably much smaller than the number of employees. The self-employed are expected to keep adequate record and/or rely on accountants to ensure tax compliance.

The original rationale for using withholding tax has been subsequently extended to the self-employed and incorporated workers who are non-residents of Canada. It is arguably time to further extend it to resident workers.

3.2.2 Corporation as a proxy of business activities

Corporations are “at the heart of our complex and uncertain economy.”[48] Historically, the corporate form might be used as a proxy for corporate business activities that were important to the Canadian economy because it facilitated raising capital and encouraged risk-taking. Taxing corporate income at a lower rate would encourage Canadians to invest in corporations through deferring personal income tax until dividends are received or shares are sold.[49] A corporate tax functions as a “withholding tax” on shareholders.[50] That is particularly true in the case of large companies.

The rationale for taxing corporate income at a rate close to the lowest bracket rate for personal income is valid if a corporation carries on activities beneficial to the Canadian economy. In the case of workers who do not require much financial capital or for which the limited liability protection (corporate veil) is limited, the corporate form is not a good proxy for societal benefits. If a corporation is used to merely carry on activities that the shareholder/worker would otherwise carry on, there is no policy reason for taxing such workers favorably to employee workers or self-employed workers. The ITA reflects this by effectively taxing personal services business income at the top personal tax rate.

In the age of automation, services are increasingly rendered via the Internet and enhanced by using robots. Other than generating the tax deferral benefit for the workers/shareholders, there is likely little value that a corporate veil can contribute to the income-earning activities. As such, the historical rationale for taxing corporate income at lower rate is weakened.

3.2.3 Tax subsidies to private corporations on ground of societal benefits

Preferential taxation of income derived through using private corporations was justified on grounds of societal benefits and market failure. In the 1971 Budget that introduced the tax reform bill which 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. The Canadian economy depends upon the creative business activity of small, growing business. (Hansard, June 18, 1971, p.6897).

Market failure also warranted the government intervention in financial markets with respect to small businesses by providing “free capital” in the form of lower tax rate. Small businesses were thought to have less access to capital markets than large firms as investments in small firms are riskier.[51] It has been maintained that small businesses are important to economic growth and job creation,[52] but the effectiveness of the tax subsidy has been questionable.[53]

However, the technical design of the small business deduction regime is such that individuals can earn income from any activity (other than personal services business and specified investment business) through a corporation and pay tax at 9%. The current regime currently requires no link to generating positive externalities or market failure. From 1979 to 1985, the ITA denied the tax subsidy to “non-qualifying businesses”, such as certain professional practices, certain personal services businesses, and the business of providing certain management and other similar services.[54] These rules, except the one pertaining to personal services, were abolished in response to the “mounting criticisms of the complexities in the rules”.[55]

In the age of automation, the earlier complexities may be lessened. More importantly, more and more workers can use the corporate form in a manner that does not create jobs for arm’s length persons or invest in innovation. There is no policy justification for using the corporate form as a proxy for measuring societal benefits. In other words, automation would expose the weakness of applying these the existing rationales and eligibility criteria to incorporated workers. Overall, the tax bias for incorporated workers will worsen with deeper automation.

3.3 Existential threats to the income tax system

The worsening of tax biases in the age of automation could potentially threaten the income tax system as the primary instrument of generating revenues, redistributing social income, and promoting economic growth. It is true that the income tax system has adapted to changes in the past 100 years and it "rests on an amazingly resilient and internally consistent framework of norms that have withstood the scrutiny of a number of tax reviews".[56] However, automation may be different from previous changes as it challenges the resiliency of the system by undermining its orientation around employment. Automation has the potential of blurring the distinction between employment, business and capital, aiding more people to incorporate their services, and weakening the tax base to a point that the income tax loses its capacity to raise revenue and redistribute income.

3.3.1 Erosion of the tax base

The trend of having more surplus workers and gigged workers will likely threaten the tax base.[57] Recent data shows that employment income accounted for 78.3% of family income for all economic families in 2005 and 74.7% of Canadians aged 15 years and over earned income through employment in 2010,[58] and that ratio dropped to 72.0% in 2015.[59] Automation is expected to accelerate the downward trend as more workers become freelancers/gig workers and take advantage of the corporate form.

The increase in the proportion of the workforce as non-employee workers is likely to be accompanied by an increase in deductions in computing income and in claiming small business deductions as well as leakage in the tax system. Leakage in the tax system could be the result of the reduced scope of the withholding tax regime, and from more opportunities for using private corporations to split income and defer tax. Leakage is being identified as a problem in many tax systems around the world, with the Australian Treasury recently releasing a consultation paper which identifies leakage occurring where some taxpayers are "not paying the right amount of tax either due to a lack of awareness of associated tax obligations, or because they are deliberately under reporting their activities in the sharing economy". One of the primary reasons for this is because newly independent workers are no longer being covered by the PAYG withholding system.[60] These changes in the tax treatment only exasperated by issues of leakage should be deemed unacceptable when considering the fact that when a worker changes her employee status into one of an independent contractor or incorporated worker, the type of work she undertakes may undergo no discernible change and societal benefits of the work may remain the same.

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deductions as well as leakage in the tax system. Leakage in the tax system could be the result of the reduced scope of the withholding tax regime, and from more opportunities for using private corporations to split income and defer tax. These changes in the tax treatment could be contrasted to the fact that when a worker changes her employee status into one of an independent contractor or incorporated worker, the type of work she undertakes may undergo no discernible change and societal benefits of the work may remain the same.

3.3.2 Erosion of tax equity: horizontally and vertically

Differential taxation of workers in different settings violates horizontal equity. Workers earning the same amount of economic income end up with different tax liabilities. As discussed above, such unfairness can no longer be justified on the grounds of positive externalities associated with business enterprising or administrative simplicity.

Automation will put more pressures on the system "to produce revenue to finance shared public consumption … that reflects the notions of distributive justice and social welfare that infuse Canadian society".[61] Technological change is estimated to have caused at least half of the decline in the labour share in advanced economies in the last four decades.[62] 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). It coincides with the increasing income inequality in the age of automation.[63] Those without the requisite skills have been left worse off. For the first time in recent history, wages and jobs have both decreased despite increased productivity, due in part to technological pressure. In the past 40 years, there has been a growing divide in income between skilled and unskilled labour, with holders of college or graduate degrees earnings increasing while earnings of those without has stagnated or decreased.[64] Addressing income inequality will therefore be one of the most important policy goals.

And yet, the declining tax base subject to progressive taxation and 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.[65] Increasing use of private corporations would further undermine the fairness and equity of the tax system.

4 RESTORING THE INCOME TAX AS A FAIR AND DEMOCRATIC TAX

4.1 Born to be fair

"The income tax is widely regarded as the fairest tax."[66] It was created to be so.[67] When the Income War Tax Act was introduced in 1917, the debate on the draft legislation was focused primarily on the progressive nature of the tax and how to make the new tax system work.[68] 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 per cent in 1917). It adopted anti-avoidance measures to protect the integrity of the system while respecting private law and taxpayers' use of legal constructs to arrange their affairs, including earning 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.[69]

Since its inception, fairness – in the sense of sharing the cost of government in accordance with one's ability to pay is a "hallmark of the Canadian income tax system".[70] Fairness and equity were objectives of subsequent tax reforms, the most notable of which is the 1971 reform. The seminal report by the Carter Commission[71] provided the conceptual framework and principles for the reform. One of the key principles is the ability to pay.[72] Recent movement towards preferential taxation of savings and capital gains has reduced the scope of the comprehensive tax base advocated by the Carter Report, 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."[73]

4.2 Grew up democratically

The income tax was transformed from a tax on the wealthy into a "mass tax" or "democratic" tax in the 1940s. The transformation "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".[74] It was achieved through the introduction of the pay-as-you-go withholding system.[75] Through the withholding system, many taxpayers became "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, nearly 900,000 in 1941, about 1.8 million in 1942 and 2.25 million in 1945.[76] In terms of tax revenue, personal income tax generated $45 million in 1939-40 and $296 million in 1941 and $768 million by 1945.[77] Between 1939 and 1945, personal direct tax revenue increased by approximately 1,700 percent, and went from being a secondary source of federal revenue derived entirely from a high-income minority, to being "democratized," becoming nearly universal and well on the way to becoming the principle single source of government revenue."[78]

Fairness is sometimes considered the "glue of a democratic society".[79] A fair tax is thus indispensable in a democracy. Since becoming disassociated with wars in 1948, the income tax has "played a foundational role 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."[80]

5 A UNIVERSAL TAX ON EARNED INCOME

5.1 Purpose and scope of the proposal

We propose to remove the differential treatment of income derived by workers in different settings by taxing all forms of earned income equally. The purpose of such universal tax is to make the income tax a fair and democratic again. From the perspective of democratic politics, placing a greater tax burden on Canadians who work as employees will likely be politically unacceptable. Canadians' views of the tax system and their support for tax reforms have been largely contingent on perceptions of equity and fairness.[81]

In terms of technical design, the proposal will remove the tax advantages currently available to incorporated workers and extend source withholding to payments to the self-employed and incorporated workers. The universal tax base will continue to be net income, allowing income-earning expenses to be deductible.

In this paper, we do not engage in the debate about the level of progressive taxation or the degree of redistribution of income. We presume that income from capital and capital gains will continue to be treated separately from earned income.

5.2 "Earned income"

5.2.1 General notion

For reasons canvassed in the previous part, the income tax base should ideally be broadened to capture all forms of income derived by human efforts.[82] Taxing income from a broadly defined category of labour or work makes more sense in the age of automation.

We propose to use a broadly-defined notion of "earned income" to define the tax base. The starting point can be the current use of "earned income" in section 63 (child care expense deduction) and section 146(1) (contributions to RRSPs). For example, subsection 63(3) defines earned income to be the total of: (a) income from employment or office, including amounts covered by sections 5, 6, 7 and 56(1)(n) (n.1), (o) or (r); (b) all incomes or amounts from all businesses carried on either alone or as a partner actively engaged in the business; (c) all amounts received under the CPP.

The proposed universal tax will expand the scope of this notion to include all personal income other than income from capital or capital gains, earned directly or indirectly through private corporations. It will encompass all forms of income earned by workers as employees, freelancers, or incorporated workers.

5.2.2 Earned income through corporations

Incorporated workers should be taxed like unincorporated workers. Technically, this can be achieved through deeming corporate income to be earned income unless the income is from a re-designed "active business". The deeming rule can be based on the existing specified personal services business regime or an imputing regime modelled on the dual income tax systems in the Nordic countries.[83]

The existing personal service business is narrowly defined to include only incorporated employees and the corporation is the taxpayer. Under the proposed universal tax, the income of a closely-held Canadian controlled private corporation would be deemed to be earned income of the shareholder/worker. The corporation would be treated as a conduit for tax purposes.[84] The applicable tax rates would depend on the amount of income, which is different from the current regime of taxing personal service business income at the top rate.

Alternatively, a corporation's income can be imputed to the shareholder/worker through: (a) imputing a minimum level of wage to the shareholder/worker and assigning the residual as a return from capital;[85] or (b) imputing 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.[86] The assumed rate of return can be based on the interest rate on government debt plus some risk premium.[87] In other words, there is an imputed "normal" rate of return to invested capital (e.g. dividend) and the excess is treated as earned income.

Tax arbitrage will occur as long as earned income is taxed more heavily than capital. There is no one-size-fits-all solution. However, the idea that return to human efforts should be taxed as earned income is too important to be sacrificed. Irrespective of legal arrangements to re-characterize, re-locate or re-direct income from human efforts or labour, such income should be taxed as earned income. This is not to downplay the "pernicious problems for tax authorities"[88] in applying the anti-arbitrage rules and the political resistance from small business owners and their supporters. One solution is to reduce the gap between tax on earned income and capital income.[89]

Assuming the small business deduction continues to exist, we propose to redefine "active business" to capture business activities that generate positive societal benefits by reference to substantive tests that can be measured, such as by the number of full-time jobs created by each shareholder/worker for arm's length parties, the assets/earnings ratios, etc. In essence, a closely-held private corporation will earn either earned income for the shareholder/worker or active business income eligible for the small business deduction. The preferential taxation of active business income would be justified on grounds of societal benefits.

5.2.3 Earned income disguised as Capital

The proposed universal tax on earned income must address the issue of earned income being disguised as or embedded in capital. In principle we are sympathetic to the arguments for treating income from capital and capital gains separately from earned income, such as higher level of mobility of capital, encouraging investment and risk-taking, and pragmatic concerns. We will not discuss whether earned income and capital income should be subject to the same level of progressive taxation.

The ITA has always treated capital differently from income. "Income tax is a tax on income"[90] and capital is not income.[91] Income from capital (or savings) is taxed favourably through a number of tax shelters, such as retirement (RRSPs), children's education (RESP) or savings in general (TFSA).[92] Capital gains from the sale of a principal residence are tax-free and capital gains from the sale of qualified small business corporation shares and farming/fishing property are tax-free up to a limit (currently $800,000). Further, Canadians can invest their savings outside Canada in ways that can defer or avoid Canadian tax on investment income.[93] As a result, it is suggested that few Canadians pay tax on their marginal investment dollar.[94] The income tax system has treated capital gains differently from income.[95] Prior to 1972, capital gains were not income. Since 1972, capital gains have been partially taxable (currently 50%).[96] In addition, certain types of capital gains are eligible for further tax preferences. Examples are gains from the sale of a "principal residence",[97] gains from the sale of qualifying small business corporation shares or farming/fishing property up to a defined lifetime limitation ($848,252 in 2018),[98] and gains from donating shares to charities.[99]

The preferential treatment of income from capital and capital gains have been justified on social and economic policy grounds, such as encouraging private savings[100] and home ownership.[101] The lifetime capital gains exemption was intended to encourage entrepreneurship by enabling owners of small businesses to retire with additional money as they, presumably, could not take advantage of RRSPs or RPPs, which were tied to employment income.[102] Capital gains are partially taxed for several reasons, including the concern for inflation as no adjustment is made for inflation in computing capital gains. The main reason is perhaps economic costs on the economy.[103]

Without challenging the policy justifications for the tax bias for income from capital and capital gains, we argue that such preferential tax treatment should not be extended to earned income disguised as income from capital or capital gains. Under the current ITA, earned income could be converted into "dividend" or capital gains through using a private corporation. For example, a doctor who performs her professional services through a private corporation that pays tax at 9% on income from the services and subsequently is able to distribute its after-tax profit to the doctor in the form of dividends. If the after-tax profit is retained and the value of the shares increases accordingly, there will be tax-exempt capital gains (up to the lifetime exemption limit) when the shares are disposed of. Had the doctor worked as a self-employed or employee, the income from services would not be taxed as income from capital or capital gains.

The deeming rule or the imputation method discussed above can be used to restore the true character of dividend or capital gains as human efforts on the part of the shareholder/worker as well as to ensure that capital that represents after-tax funds.

5.3 Broader use of withholding tax

The introduction of the PAYG withholding mechanism helped transform the income tax into a mass tax in the 1940s. To restore the fair treatment of all workers in the age of automation, our proposal calls for an expansion of the withholding mechanism to service fees paid to workers directly or indirectly through private corporations. The current tax system relies on withholding tax as a collection measure in the case of employment income (ITA s.153) and business income derived from services rendered by non-residents in Canada (ITA s.212(5.3) and Regulation

105).[104] As in the case of the existing withholding tax on employment income, the withholding tax is provisional and reconciled with the tax payable when an annual return is filed.

The PAYG withholding mechanism has been indispensable because it ensures the "visibility" of the income payment and "encourages" the recipients of income to account for their tax by filing a tax return. Some costs of compliance are incurred by the employers and payers of services, but the overall cost of collection was much lower than otherwise.[105] Employees were reportedly "content" with the source withholding as it relieved them from coming up with cash to pay tax in the spring, and some employees looked forward to receiving the "tax refund". To this day, income reported from employers (i.e. third parties) is found to be the easiest, least expensive, and most easily enforceable form of income tax collection.[106]

To expand the PAYG withholding to all forms of earned income paid to workers directly or indirectly, ITA section 153 or Regulation 105 could be amended. The expanded mechanism would make the taxpayer account for their income tax liability. Through transparency in tax information, equal taxation of all workers can be achieved. To simplify compliance, the rate of withholding tax can be set at a flat rate of gross payments that approximate an effective tax rate for the majority of workers.

5.4 Policy assessment

5.4.1 Fairness

The proposed universal taxation of earned income is, in effect, a tax on all workers, regardless of the legal arrangements used to regulate the relationship between the worker and recipient of the services of the worker. It leaves the debate about the taxation of capital and wealth to another project. As such, the proposal does not seek to reform the tax base to reflect Carter Commission's comprehensive tax base. And yet, the proposal is arguably better than the current system in terms of equity, neutrality and revenue by removing the tax biases for non-employee workers.

At present, income tax falls primarily on individuals earning employment income. For example, in 2017, personal income tax revenue accounted for 79% of total income tax revenues[107] and employment income and retirement income (that is, deferred employment income) accounted for about 80% of total assessed income from all sources.[108] The recent trends suggest that employees' tax burden rose while their share of national income declined. Since the 1980s, Canadian labour's aggregate share of income, i.e. the ratio of total labour compensation to GDP, has declined considerably,[109] while the share of personal income tax of total government revenues increased.[110] These trends may threaten the reliability of income tax as a main source of government revenue and erode political acceptance of the income tax as a fair tax.

Employment income has been a reliable tax base. Labour is less mobile and the labour market less elastic, compared to capital.[111] As a "tax on ourselves"[112] 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 may view "continuing and steady improvement in their standard of living, accommodated and assisted by governments, as something approaching a national birthright."[113] Lower-income groups and middle-income groups may support higher taxes on higher-income earners. Upper-income groups pay a disproportionate share of the tax burden, far more than most receive in public services or benefits.[114] The political process has thus far resulted in a twining of "taxing the rich" and "taxing labour" in the income tax system.[115]

In the age of automation, the line between employees, freelancers and entrepreneurs becomes more blurred as income-earning activity increasingly involves the combination of human effort, human capital and technology. The rise of the proportion of freelancers and the increasing use of private corporations supports the belief that this shift is taking place. The traditional distinction between employees and the self-employed turns on common law tests, which are influenced by the characterization determined under the contracts between the service provider and her/his client, or the characterization for purposes of labour law, tort law or other areas of the law.[116] This approach is questionable in general as it takes the accessory feature of tax law too far without due respect for the special attributes and functions of income tax. Applying this approach to services rendered online or through robots would be more problematic for tax purposes.

Moreover, using private corporations to carry out work can "meld the two inputs [labour and capital] in their operation".[117] The value of the business and the shares of the corporation may be created primarily by the efforts of the owner-manager. Kesselman suggests the following: [118]

> 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.

Individuals can use private corporations to convert not only the proprietor's labour income into business or capital income but also split this income with family members who do not participate in the business. With the advance of technologies and the ability to render services remotely, individuals can use foreign corporations (or trusts) to provide services to foreign clients through such corporations (or trusts) and avoid Canadian tax altogether.[119] In a knowledge economy, converting earned income into capital would increase. This has been notable in the technology sector where founders of a start-up company capitalize his/her creative/entrepreneurial efforts into capital when the company goes public. It was noted that:[120]

> The founders of Silicon Valley start-ups, for example, typically invest little cash themselves. Instead, in lieu of high wages, they instead take most of their pay in the form of common stock. If a company succeeds, the value of its common stock increases, sometimes generating very high returns for the founders and early employees.

Converting human efforts into capital is not limited to the technology sector. Any small business proprietor with a bright idea may expand to create a much larger enterprise, using bank loans and retained earnings, then by taking the firm public. According to Kesselman, “virtually any large fortune accumulated by individuals will involve these personal attributes”.[121] For example, a securities or venture capital investor has the skills, temperament, and knowledge (possibly insider knowledge) to achieve supernormal returns.

Under the proposed universal tax on earned income, distinction between employees and the self-employed would not attract significant different tax consequences, and, more importantly, income earned through private corporations and earned income disguised in capital would be taxed like employment income. Inequities between employees and other workers would be reduced. The tax system would be less distortive by removing the tax incentives for hiring independent contractors or incorporating personal or professional services. The same tax policy should apply to all workers – employed and self-employed and incorporated self-employed – as they will become increasingly more inter-changeable: “When a steelworks closes, …[f]ormer unskilled employees become self-employed taxi drivers, window cleaners and small garage employees. Draughtsmen, precision engineering fitters and computer specialists become self-employed in their own trades.”[122]

5.4.2 Simplicity

A simpler tax system would be arguably more effective in the age of automation as the traditional, largely legal, lines of distinguishing income are blurred and rendered less meaningful to the income-earning activity per se. The proposed universal tax on earned income presents opportunities for simplification. It is similar to the dual income tax. “[T]here are decades of experience with the dual income tax in countries not all that unlike Canada in many important respects.”[123] The potential simplicity results from reducing the need for line-drawing between the employed and self-employed and between services rendered personally or through a owner-employee corporation or through a partnership. The fiscal impact of using legal fictions or contracts to provide services is thus minimized. However, the need for anti-avoidance rules to prevent income splitting or converting earned income into capital income remains, but such rules are expected to be simpler than the current rules.[124]

Another area of simplification would be the taxation of private corporations. The current regimes for incentivizing active business activities at the corporate level and integrating the corporate tax and personal tax in other cases are very complex. The 2018 amendments to prevent private corporations from being used to defer tax on passive income or split income add more complexity.[125] Such complex rules would be unnecessary under the imputation method or look-through method in determining the earned income. There may even be a chance to simplify the small business deduction while improving its effectiveness. By linking the tax subsidy to private corporations that generate positive externalities, a smaller number of private corporations would qualify.

Requiring earned income be subject to withholding tax is feasible. With the aid of technology and artificial intelligence, the payer of service fees is likely in a position to know who the worker is, what the amount is, and when the fee is paid or payable. Contracting, rendering of services and payment of service fees are increasingly being done online, and as such, a record of each transaction or a digital trail exists. It is conceivable that the tax compliance function will soon be performed by robots.[126] As early as 1969, Mr. Smith, then Deputy Commissioner of Internal Revenue Services, said that "automation provides new tools for improving and, to some extent, simplifying tax administration."[127]

5.5 A sense of urgency

Wayne Gretzky was quoted for saying that "I skate to where the puck is going to be, not where it has been." [128] This way of thinking is quite apt for dealing with the disruptions to the tax system brought about by automation.

The speed of change transforming how people work is occurring much faster due to digital automation than it did previously from mechanical automation alone. If close to 50 percent of the workforce will soon leave traditional employment jobs, it will threaten the sustainability of the income tax as an instrument of generating revenue in a fair and equitable manner. It is time for Canada to take notice of this shift and its implications for the tax system.

Based on past experiences, successful tax reforms take time. So, now is a good time to start the process. There is no reason to believe that the income tax system is incapable of remaining a key policy instrument of raising revenue and achieving redistribution of social income, even in the automation age. Fortunately, there have been recent debates in Canada about reforming the tax system. Our proposed universal tax on earned income adds to the existing tax reform ideas. It seeks to treat all workers equally, irrespective of the legal arrangements (e.g., through a private corporation) or legal constructs (contract of services or contract for services) used to earn the income. It 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.

Notes

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[1] See infra notes 14-34.

[2] M. C. Michelmore, Tax and Spend: The Welfare State, Tax Politics, and the Limits of American Liberalism (University of Pennsylvania Press, 2012); and Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen's Guide to the Great Debate over Tax Reform* (Cambridge, Mass: MIT Press, 1998).

[3] See 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; Lionel Robert Jr, "The Growing Problem of Humanizing Robots" (2017) 3:1 *International Robotics & Automation Journal (forthcoming)* (https://deepblue.lib.umich.edu/handle/2027.42/138018); 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* 247-61; Richard Waters, "Robot tax: Do androids dream of personal deductions?" *Financial Times*, February 24, 2017 (https://www.ft.com/content/597fff44-fa78-11e6-9516-2d969e0d3b65); M.M. Erdoğdu and C. Karaca "The Fourth Industrial Revolution and a Possible Robot Tax" in K. Dane Berksoy and M. Popovic, eds, *Institutions & Economic Policies: Effects on Social Justice, Employment, Environmental Protection & Growth* (London: IJOPEC Publication, 2017), 103-122; and Emanuel Gasteiger and Klaus Prettner, "A note on automation, stagnation, and the implications of a robot tax" (Working Paper: Free University of Berlin, School of Business & Economics, 2017).

[4] Matthew Rimmer, "The Wild West of Robot Law" (2017) 38:3 *Australasian Science* at 4; Erdoğdu and Karaca, supra note 3 at 112.

[5] Should robots be taxpayers of the robot tax? The answer is "why not" if robots assume "legal personality" status in private law, which is being considered in the European Union. The logic is similar to taxing corporations (legal persons in private law). An income tax would be imposed on an imputed salary from robots' activities (e.g., the salary that would have been paid to workers replaced by the robots). Alternatively, owners or users of robots will be taxpayers and the tax would be imposed on the cost of robots or the cost of labour replaced by robots. See Oberson, supra note 3.

[6] 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 define concept will scoop in any process or device that displace workers. A recent EU report defined robots based on autonomy, self-learning and adaptation. Automation most commonly exists in forms that cannot be directly linked to job losses. They are not physical robots, but rather 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 Erdoğdu and Karaca, supra note 3; Jon Walker, "Robot Tax – A Summary of Arguments 'For' and 'Against,''' *TechEmergence*, October 24, 2017 (https://www.techemergence.com/robot-tax-summary-arguments/); Filipe Maia Alexandre, "The Legal Status of Artificially Intelligent Robots: Personhood, Taxation and Control," June 1, 2017 (https://ssrn.com/abstract=2985466); Abbott and Bogenschneider, supra note 2 at 149; Thomas Straubhaar, "On the Economics of a Universal Basic Income" (2017) 52:2 *Intereconomics* 74-80 at 75; Ahmed, supra note 2 at 731-32.

[7] See, for example, Martin Ford, "As Artificial Intelligence and Robotics advance, A Basic Income May Be the only Viable Solution" in Amy Downes and Stewart Lansley, eds. *It's Basic Income: The Global Debate* (The Policy Press, 2018), ch.1; Colin A. McLean, "The Employment-Impact of Automation in Canada" School of Public Policy Faculty of Arts and Social Sciences at 68; Stanislav Ivanov, "Robonomics – Principles, Benefits, Challenges, Solutions" (2017) 10 Yearbook of Varna University of Management 283-293; and Andy Stern, *Raising the Floor: How a Universal Basic Income Can Renew Our Economy and Rebuild the American Dream* (New York, Public Affairs, 2016).

[8] Literature seems to suggest that at the moment, UBI is an unrealistic solution to address deepening automation and rising income inequality. The main concern with the UBI is its practicality and feasibility in terms of financing. For example, if annual UBI is $10,000 for individuals aged 20 and over (which is much below the current $53,000 median income in Canada), the program would cost the federal government roughly $280 billion per year. A portion of this $280 billion may be recovered from cost savings in other programs (such as Employment Insurance), but the financing burden may be fiscally prohibitive, especially in a fiscal environment where demand on government spending is rising and tax revenues may decline, owing to social and economic changes. See McLean, supra note 7; Alexandre, supra note 6, at 36-39.

[9] Robin Boadway, "Piecemeal Tax Reform Ideas for Canada - Lessons from Principles and Practice" (2014) 62:4 *Canadian Tax Journal* 1029; Alan Macnaughton and Kevin Milligan, "Policy Forum: Editors' Introduction—Should Canada Have a Tax Commission?" (2018) 66:2 *Canadian Tax Journal* 349-50; Shirley Tillotson, "Policy Forum: Then and Now— A Historical Perspective on the Politics of Comprehensive Tax Reform" (2018) 66:2 *Canadian Tax Journal* 363-74; Fred O'Riordan, "Policy Forum: Why Canada Needs a Comprehensive Tax Review" (2018) 66:2 Canadian Tax Journal 351-62; and Jennifer Robson, "Policy Forum: Building a Tax Review Body That Is Fit for Purpose—Reconciling the Tradeoffs Between Independence and Impact" (2018) 66:2 *Canadian Tax Journal* 375-86; Kevin Milligan, "Tax Policy for a New Era: Promoting Economic Growth and Fairness" *CD Howe Institute*, November 25, 2014 (www.cdhowe.org/public-policy-research/tax-policy-new-era-promoting-economic-growth-and-fairness); and Richard M. Bird and Thomas A. Wilson, "The Corporate Income Tax in Canada: Does Its Past Foretell Its Future?" (2016) 9:38 *The School of Public Policy Research Papers* (www.policyschool.ca/wp-content/uploads/2016/12/Corporate-Income-Tax-Bird-Wilson.pdf)

[10] Milligan, ibid; and Bird and Wilson, ibid.

[11] Boadway, supra note 9; and Bird and Wilson, ibid.

[12] Jonathan Rhys Kesselman, "Personal income tax. 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) (hereinafter as "Income Tax at 100 Years"); Edward Kleinbard, "Capital Taxation in An Age of Inequality" (2017) 90 *Southern California Law Review* 593-682; and Edward J. McCaffery, "The Death of the Income Tax (or, the Rise of America's Universal Wage Tax)" (2018) *USC Law Legal Studies Paper* No. 18-26.

[13] R.S.C. 1985, c. 1 (5th Supp.) as amended (hereinafter the "Act").

[14] The term "automation" is defined in the Merrriam-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, see Mikell P. Groover, *Fundamentals of Modern Manufacturing: Materials, Processes, and System*, 6th ed. (New York: Wiley, 2015).

[15] Automation has been achieved through "mechanization" -- ("mechanical automation"). See Richard G. Lipsey "Economic Growth, Technological Change, and Canadian Economic Policy" *CD Howe Institute*, November 6, 1996 (www.cdhowe.org/sites/default/files/attachments/other-research/pdf/lipsey.pdf).

[16] European Parliament, *Civil Law Rules On Robotics* (February 16, 2017) (http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2017-0051+0+DOC+XML+V0//EN) at para z.

[17] Ibid., at para p.

[18] See Mark J. Barrenchea, *The Golden Age of Innovation* (Open Text Corporation, 2017), at 8. the First Industrial Revolution lasted 90 years (1750-1840 and was powered by water and steam to mechanize production. The Second Industrial Revolution lasted 129 years (1840-1969) and was driven by electronic power to create mass production and predicated inventions such as the car, the plane, the television, and telecommunications. The Third Industrial Revolution lasted 31 years (1969-2000) and was enabled by Information Technology to automate production and include inventions such as the integrated circuit, the personal computer, smartphones and the Internet. The Fourth Industrial Revolution began in 2000 and is continuing today.

[19] Barrenchea, ibid.: "This revolution is of a scope, scale, velocity, and complexity unlike anything else we have faced. Its effects will impact all of humankind, all industries, all countries, every facet of every glorious element of our society – revolutionizing business models, reshaping the world, and even redefining our very existence."

[20] Shawn DuBravac, *Digital Destiny: How the New Age of Data will Transform the way we work, live, and communicate* (Regnery Publishing, 2015); and "The Future of Jobs Report 2018" *Centre for the New Economy and Society – WEF*, 2018, (http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf).

[21] PwC, "The New Hire: How a New Generation of Robots is Transforming Manufacturing" September 2014 (www.nist.gov/sites/default/files/documents/mep/data/TheNewHire.pdf); PwC, "Upskilling manufacturing: How technology is disrupting America's industrial labor force" June 2016 (www.themanufacturinginstitute.org/~/media/E9F0B41DEC4F40B6AE4D74CBC794D26D/155680_2016_Manufacturing_Labor_Force_Paper_final_(2).pdf)

[22] International Federation of Robotics, "The Impact of Robots on Employment" April 2017 (https://ifr.org/img/office/IFR_The_Impact_of_Robots_on_Employment.pdf) at 6 (hereinafter "IFR Report").

[23] The economy-wide impact of automation on jobs is debatable. On the one hand, some maintain that digital automation leads to net job loss where jobs are lost permanently. Often used examples are 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" *The Guardian*, June 26, 2017; and Jaron Lanier, *Who Owns the Future?* (New York: Simon & Schuster, 2013), at 2.

[24] Ulrich Zierahn, Terry Gregory, and Melanie Arntz, *Racing with or against the Machine?Evidence from Europe.* Discussion Paper No. 16-053, ZEW Centre for European Economic Research (July 2016) (http://ftp.zew.de/pub/zew-docs/dp/dp16053.pdf) (accessed on Jan 24, 2019). See also Tyler Cowen, "Will You Lose Your Job to a Robot?" August 6, 2014, *Marginal Revolution* (https://marginalrevolution.com/marginalrevolution/2014/08/will-you-lose-your-job-to-a-robot.html).

[25] Zierahn, Gregory and Arntz, supra note 24.

[26] David Autor, "Why are there still so many jobs? The history and future of workplace automation" (2015) 29:3 *The Journal of Economic Perspectives* 3-30 at 5.

[27] The OECD used a task-based methodology that looked at how automation will affect specific tasks within jobs rather than the occupation generally. Using this methodology, they found that 38% of jobs in Canada are at high risk of being automated. In the following year, the C.D. Howe Institute released a similar study predicting that 35% of occupations are highly susceptible to automation; see Matthias Oschinski and Rosalie Wyonch, "Future Shock? The Impact of Automation on Canada's Labour Market" *CD Howe Institute*, March 2017, (https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/Update_Commentary%20472%20web.pdf). See also Harrington, Moir and Allinson, "The Intelligence Revolution: Future-proofing Canada's workforce" (2017) *Deloitte* (https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/human-capital/ca-EN-HC-The-Intelligence-Revolution-FINAL-AODA.pdf); Lamb and Lo, "Automation Across the Nation: Understanding the potential impacts of technological trends across Canada" *Brookfield Institute*, June 2017, (https://brookfieldinstitute.ca/wp-content/uploads/RP_BrookfieldInstitute_Automation-Across-the-Nation.pdf) and Paul Boothe, "What the fourth industrial revolution means for your job," *Maclean's*, December 15, 2017 (http://www.macleans.ca/economy/economicanalysis/what-the-fourth-industrial-revolution-means-for-your-job/).

[28] Canadian Trucking Alliance, "CTA Study: Truck Driver Shortage Accelerating" 14 June 2016 (http://cantruck.ca/truck-driver-shortage-accelerating-according-to-new-cta-study/)

[29] Ed Rensi, "McDonald's Says Goodbye Cashiers, Hello Kiosks", *Forbes*, July 11, 2018, https://www.forbes.com/sites/edrensi/2018/07/11/mcdonalds-says-goodbye-cashiers-hello-kiosks/#797b9cbc6f14.

[30] Ian Bickis, "Manulife cutting 700 jobs," *Investment Executive*, June 21, 2018 (https://www.investmentexecutive.com/news/industry-news/manulife-cutting-700-jobs/). For similar job loss in Australia, see Jamie Smyth, "NAB to axe 4,000 jobs in shift towards automation," *Financial* Times, November 1, 2017 (https://www.ft.com/content/e7251ab8-bf6d-11e7-b8a3-38a6e068f464).

[31] 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).

[32] Upwork and Freelancers Union, "Freelancing in America: 2017" (https://www.upwork.com/i/freelancing-in-america/2017/).

[33] Anthony Hussenot, "The future of work could lie in freelancing," *World Economic Forum*, 21 August 2017 (https://www.weforum.org/agenda/2017/08/why-the-future-of-work-could-lie-in-freelancing).

[34] DuBravac, supra note 20, at 288.

[35] Richard Dobbs, James Manyika and Jonathan Woetzel, "The Four Global Forces Breaking All the Trends", *McKinsey Global Institute*, April 2015 (https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-four-global-forces-breaking-all-the-trends).

[36] Merriam-Webster Dictionary (https://www.merriam-webster.com/dictionary/work).

[37] Canada, Department of Finance, *Consultation Paper, Tax Planning Using Private Corporations*, July 18, 2017, at 56.

[38] Some self-employment individuals are also liable to contribute to the CPP. For an employee with an average earnings ($40,983), the combined rate of income tax and was 22.8% of gross wage earnings: 15% if income tax plus 7% of social security contributions; see OECD, *Taxing Wages 2018* (https://read.oecd-ilibrary.org/taxation/taxing-wages-2018_tax_wages-2018-en#page22) at 22. For employers, there are provincial levies based on payroll, such as Workers' Compensation and funding provincial health care.

[39] 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.

[40] Boadway, supra note 9; Robin Boadway, "The Canadian Corporate Income Tax at 100 Years of Age: Time for a Change?" in *Income Tax at 100 Years*, supra note 12; and Scott Wilkie, "Three spirits of Canadian corporate income tax: the relic, the remnant, the reflection" in *Income Tax at 100 Years*, supra note 12. See also Canada, *Report of the Technical Committee on Business Taxation* (Ottawa: Department of Finance, April 1998).

[41] This term is defined under s.125(7) to capture workers who would otherwise be employees of the "client".

[42] An additional tax of 5% under s.123.4 and in-eligibility for the general rate reduction under s.123.5. So, the applicable rate is general rate of 28% plus 5%.

[43] The ITA contains anti-splitting rules in sections 56(2), s.74.2 or s.120.4, but these rules allow much room for splitting. See, for example, *Neuman v. The Queen*, [1998] 1 SCR 770. See also Canada, Department of Finance, supra note 37.

[44] The additional tax is added to the non-eligible RDTOH account and refunded under s.129(1) when non-eligible dividends are paid by the corporation to the shareholder.

[45] One can even say that "much of the development of the corporate tax system from its inception, has involved systematically disregarding the fiscal significance of corporations as taxpayers (even though they are points of taxation) while respecting their legal existence and separateness from their owners for other purposes."Wilkie, supra note 45, at 8:2. Examples are "personal service business" (s. 125(7)), "specified investment business" (s.125(7)), investment income earned by Canadian private corporations (ss. 129 and 186) and controlled foreign affiliates (s. 91).

[46] Prior to the introduction of the 1917 IWTA, corporations had been rising as a main form of business entities in Canada and taxed on their profits in British Columbia, Prince Edward Island and Ontario. See Colin Campbell and Robert Raizenne, "The 1917 Income War Tax Act: Origins and Enactment" in *Income Tax at 100 Years*, supra note 12, at 2:37.

[47] Milligan, supra note 9.

[48] Bird and Wilson, supra note 9.

[49] As a relatively small open economy, Canadian corporations need to compete for foreign investment or for foreign market share, and Canadian corporate tax rate is, to some extent, influenced by corporate tax rates in other countries, especially that of the United States. Canada, Department of Finance, *Report of the Technical Committee on Business Taxation*, December 1997; Bird and Wilson, ibid.; Wilkie in *Income Tax at 100 Years*, supra note 45, at 8:23 and Boadway in *Income Tax at 100 Years*, supra note 45.

[50] Taxing corporations separately from their shareholders recognizes the reality that corporations are business organizations and financial accounting units. Corporate tax functions as an advance withholding tax on shareholders (resident and non-resident) as it is easier to collect tax from corporations and than the shareholders. Canada, Department of Finance, *Why Tax Corporations?* Technical Committee on Business Taxation Working Paper no. 96-2, December 1996; Bird and Wilson, supra note 9; Boadway, supra note 9; and Wilkie in *Income Tax at 100 Years*, supra note 45.

[51] See Kimberly Brooks, ed., *The Quest for Tax Reform Continues: The Royal Commission on Taxation Fifty Years Later* (Toronto: Carswell, 2013) and Boadway, ibid., at 9:14-15; Arnold, McNair and Young, *Taxation of Corporations and Shareholders: Cases and Materials* (Carswell, 1986) at 46-9.

[52] Small businesses account for 97.9 percent of all firms in Canada and proportionally play a large role in net job creation. Figure 2.2-1 shows that the contribution to net employment change between 2005 and 2015 (1.2 million jobs) was 87.7 percent attributable to small businesses. Medium-sized and large businesses, which account for 1.8 percent and 0.3 percent of all firms, respectively, created just 7.7 percent and 4.6 percent of net new jobs over the same period. Canada, Innovation, Science and Economic Development Canada, *Key Small Business Statistics*, June 2016 at 2.2 (https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03018.html#point2-2).

[53] The technical design of the small business deduction (i.e. ITA s.125) does not explicitly link the subsidy to job creation with the exception of the five full-time employee test in defining "specified investment business" and "personal services business". There is scarce, if any, empirical evidence on the impact of the tax subsidy on jobs created for non-owners. The Government of Canada reported that in 2015, "SMEs [small and medium-size enterprises] employed 90.3 percent (10.5 million) of the private sector workforce, highlighting the important role SMEs play in employing Canadians." Canada, ibid. This is consistent with previous research evidence that small and medium firms created most of the net job growth in the private sector in the 1975-80 and 1975-82 period, and that the greatest relative growth occurred in the smallest category (1-4 employees) and in young firms: Richard A. Wietfeldt, "A Study of Job Creation in Canada, 1975-1982" (1984) 1:4 *Journal of Small Business - Canada*, 8-15. However, there is no data on the jobs held by the owners/shareholders and their family members or jobs created due to the tax subsidy. And yet, the view that small businesses create the most jobs remains appealing to policymakers and small business advocates. Using data from the Census Bureau's Business Dynamics Statistics

and Longitudinal Business Database, some researchers found that once they control for firm age, there is no systematic relationship between firm size and growth (and job creation), and start-ups and young businesses play a critical role in job creation. John Haltiwanger , Ron S. Jarmin and J Miranda, "Who Creates Jobs? Small versus Large versus Young" (2013) 95:2 *Review of Economics and Statistics* 347-361.

[54] Former s.125(6)(f) of ITA (applicable to taxation years ending before 1985 and commencing after December 31, 1979).

[55] Canada Tax Service – McCarthy Tetrault Analysis, 125, Small Business Deduction (TaxnetPro).

[56] Jinyan Li and Scott Wilkie "Celebrating the Centennial of the Income War Tax Act, 1917" in *Income Tax at 100 Years*, supra note 12, at 1:17.

[57] Furthermore, the Employment Insurance system and the Canada (Quebec) Pension Plan are also based on employment income, with EI premiums making up a further 7.5% of federal government revenues in 2016-2017. The EI and CPP are tied to "earnings", which are primarily employment income. Declining jobs means decreases in tax revenue, premiums and contributions to the EI and CPP programs, respectively. Some predict a "crippling effect" on the government's revenue raising ability. Social security contributions making up around 15% of total federal and provincial government revenues. "Social Security Contributions in Canada: Revenue, Rates and Rationale" *Hill Notes: Research and Analysis from Canada's Library of Parliament* (24 March 2017), (https://hillnotes.ca/2017/03/24/social-security-contributions-in-canada-revenue-rates-and-rationale). The revenue loss would apply to provinces as well. See Sunil Johal, Jordann Thirgood and Michael Crawford Urban, *Robots, Revenues & Responses: Ontario and the Future of Work* (2018). See also Statistics Canada, *2006 Census Area Profiles* (https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/rel/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=0&PID=94535&PRID=0&PTYPE=89103&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=81&VID=0&VNAMEE=&VNAMEF=).

[58] Statistics Canada, *Income Composition in Canada* (https://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=PR&Code1=01&Data=Count&SearchText=Canada&SearchType=Begins&SearchPR=01&A1=All&B1=All&Custom=&TABID=1&).

[59] Statistics Canada, *Census Profile, 2016 Census* (https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/Page.cfm?Lang=E&Geo1=PR&Code1=35&Geo2=&Code2=&Data=Count&SearchText=Ontario&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=35#fnb29-ref).

[60] Australia, Treasury, *Tackling the black economy: A sharing economy reporting regime: A consultation paper in response to the Black Economy Taskforce Final Report* (Canberra: Treasury, January 2019).

[61] Li and Wilkie in *Income Tax at 100 Years*, supra note 56, at 1:5.

[62] Mathew Lawrence, Carys Roberts, and Loren King, "Managing Automation: Employment, Inequality and Ethics in the Digital Age" *IPPR Commission on Economic Justice*, December 2017 at 25-26. For further, see Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge, MA: Belknap Press of Harvard University Press, 2014).

[63] David Rotman, "Technology and Inequality", *MIT Technology Review*, 21 October 2014 (https://www.technologyreview.com/s/531726/technology-and-inequality/) (accessed on Jan 24, 2019)

[64] Daron Acemoglu and David Autor, *Handbook of Labor Economics*, vol. 4b (Elsevier BV, 2011) at Chapter 12.

[65] 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.

[66] Remarks by Neil Brooks in 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 12 at 25:5 (hereinafter "Brooks Remarks").

[67] The current Act evolved from the Income War Tax Act (IWTA) enacted in 1917. See SC 1917, c. 28. The text of this legislation can be found in Appendix A in *Income Tax at 100 Years*, supra note 12. For further information about the legislation, see R. Easton Burns, *The Income War Tax Act 1917: A* Digest (a reprint from a Canadian Chartered Account is available at https://wartimecanada.ca/sites/default/files/documents/IncomeWarTax.1917.pdf). 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 Campbell and Raizenne, supra note 44, at Chapter 2. 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 solider." Li and Wilkie, supra note 56, at 1:4.

[68] Campbell and Raizenne, supra note 44, at Chapter 2.

[69] For further discussion, see ibid; and Wilkie, supra note 45, 8:1-32.

[70] Li and Wilkie, supra note 56, at 1:4.

[71] Canada, *Report of the Royal Commission on Taxation* (Ottawa: Queen's Printer, 1966) (Carter Report). For further critique of the Carter Report, see Richard M. Bird, and Thomas A. Wilson, "The Legacy of the Carter Commission" in Richard M. Bird, Michael Trebilcock and Thomas Wilson, eds., *Rationality in Public Policy: Essays Policy: Essays in Honour of Douglas G. Hartle* (Toronto: Canadian Tax Foundation, 1999); Neil Brooks, ed., *The Quest for Tax Reform: The Royal Commission On Taxation Twenty Years Later* (Toronto: Carswell. 1988); and Kimberly Brooks, ed., *The Quest for Tax Reform Continues: The Royal Commission on Taxation Fifty Years Later* (Toronto: Carswell, 2013).

[72] 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; Ronald Robertson, "Capital Gains—To Tax or Not To Tax" (1965) 13:5 *Canadian Tax Journal* 355-59; J. Harvey Perry, "Anatomy of a Tax System," in *Report of Proceedings of the Twentieth Tax Conference*, 1967 Conference Report (Toronto: Canadian Tax Foundation, 1968) 7-21 and Neil Brooks, "Canadian Tax Journal: The Second Decade—1963-1972" (2002) 50:2 *Canadian Tax Journal* 630-48.

[73] Brooks Remarks, supra note 66.

[74] Colin Campbell, "J.L. Ilsley and the Transformation of the Canadian Tax System: 1939-1943" (2013) 61:3 *Canadian Tax Journal* 633-70.

[75] The IWTA was amended in 1939 by introducing a "national defence tax" collected through 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.Ibid. 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).

[76] 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* (Fraser Institute, 2017) (https://www.fraserinstitute.org/sites/default/files/history-and-development-of-canadas-personal-income-tax.pdf) at 11-16.

[77] Ibid.

[78] Campbell, supra note 74, at 667-668. In 1938, only 2.3% of the population filed personal income taxes, whereas it increased to 24 percent in 1955 and 52 percent in 1975: Matteo, supra note 76.

[79] Richard M. Bird and Scott Wilkie, "Tax Policy Objectives" in Heather Kerr, Ken McKenzie and Jack Mintz (eds.), *Tax Policy in Canada* (Canadian Tax Foundation, 2012) ch. 2, at 2:3.

[80] Li and Wilkie, in *Income Tax at 100 Years*, supra note 56, at 1:4.

[81] Geoffrey Hale, *The Politics of Taxation in Canada* (Peterborough: Broadview Press Ltd., 2002) at 127.

[82] Ideally, the tax system should be "general in application, so that it has a pervasive influence on the economic decisions and status of a broad cross-section of individual or business taxpayers." Ibid., at 82.

[83] For further discussions of the dual income tax systems, see Richard M. Bird and Eric Zolt, "Dual Income Tax for Developing Countries" (2010) 1 *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; Peter Birch Sørensen, "The Nordic Dual Income Tax: Principles, Practices, and Relevance for Canada" (2007) 55:3, *Canadian Tax Journal* 557-602; 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; and Peter Sørensen, "Dual Income Taxes: a Nordic System" in Iris Claus et al, eds, Tax Reform in Open Economies (London: Edward Elgar, 2010) at 78.

[84] Treating closely-held corporations as flow-through entities and deeming a portion of their income to be labour income. Martin Feldstein, "The Mirrlees Review" (2012) 50:3 *Journal of Economic Literature* 781–90, at 789.

[85] This is the case in Iceland. To prevent the double taxation of distributed profits at the corporate level and the shareholder level by a full imputation system or exempting dividend from shareholder tax.

[86] For example, the Norwegian approach uses the interest rate on 5-year government bonds plus a risk premium of 4%. 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 incentives to adjust their borrowings to maximize the amount of income from capital. See Peter 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.

[87] A similar approach is used in respect of foreign investment funds under s.94.1 of the Act.

[88] Milligan, supra note 9, at 22.

[89] Bird and Zolt, supra note 83, at 188: "The larger the spreads between the flat tax rate applicable to capital income, the corporate tax rates, and the progressive tax rates applicable to labor income, the greater the arbitrage opportunities."

[90] *Onndon County Council v. Attorney General* (1899) 4 T.C. 265 (Eng. Q.B.) (per Lord Macnahten of the Privy Council).

[91] The distinction between income and capital was influenced by the British tax system. See Campbell, supra note 74; Carter Report, supra note 71; Benjamin Alarie and David G. Duff, "The Legacy of UK Tax Concepts in Canadian Income Tax Law" (2008) 3 *British Tax Review* 228-252.

[92] Jonathan Rhys Kesselman, "Double Trouble: The Case Against Expanding Tax-Free Savings Account" *Ed Broadbent Institute* (February 2015); David MacDonald, "The Number Games - Are the TFSA Odds Ever in Your Favour?" *CCPA*, 2015; Milligan, supra note 9; and Kevin Milligan, "Policy Forum: The Tax-Free Savings Account—Introduction and Simulations of Potential Revenue Costs" (2012) 60:2 *Canadian Tax Journal* 355-360.

[93] The Act has anti-avoidance rules in response to shifting income outside the Canadian tax base. For an overview, see Jinyan Li and Arthur Cockfield, *International Taxation in Canada* (4th ed) (Toronto: LexisNexis 2018), chapters 12-15.

[94] Jonathan Rhys Kesselman and Peter S. Spiro, "Challenges in Shifting Canadian Taxation Toward Consumption" (2014) 62:1 *Canadian Tax Journal* 1-41.

[95] For an overview, see David Duff, "Canada" in Michael Littlewood and Craig Elliffe, *Capital Gains Taxation: A Comparative Analysis of Key Issues* (Cheltenham: EE Elgar, 2017) 141-67 and Jinyan Li, Joanne Magee and Scott Wilkie, *Principles of Canadian Income Tax Law* (9th ed) (Toronto: Thomson Reuters 2017) 286-321.

[96] ITA, s.38(a). The ratio was 66.6% in 1988 and from February 27 to October 17, 2000 and 75% between 1990 and February 27, 2000.

[97] S.40(2)(b) of the Act. For further discussion on the main types of tax preferences for savings, see Peter S. Spiro, *Tax Exemptions for Investment Income: Boon or Bane?* (Toronto: Mowat Centre, 2017) and Jonathan R. Kesselman and Finn Poschmann, "Expanding the Recognition of Personal Savings in the Canadian Tax System," (2001) 49:1 *Canadian Tax Journal* 40-101.

[98] S.110.6 of the Act.

[99] S.38(a.1) of the Act.

[100] Adam M. Lavecchia, *Tax-Free Savings Accounts: Who Uses Them and How*, University of Ottawa, Faculty of Social Sciences, Department of Economics Working Paper no. 1802E (Ottawa: University of Ottawa, January 2018). One of the most recent additions to the list of tax-sheltered savings, TFSA introduced in 2009, highlights the government's belief in the importance of inducing private savings through tax subsidies:

> Canadians need to save for many different purposes over their lifetimes. Reducing taxes on savings can help. That's why the Government has introduced a new Tax-Free Savings Account (TFSA). It's the single most important personal savings vehicle since the introduction of the Registered Retirement Savings Plan (RRSP).

Canada, Ministry of Finance, Informational Pamphlet, Tax-free Savings Account (TFSA), January 1, 2009 (https://www.budget.gc.ca/2008/pdf/pamphlet-depliant4-eng.pdf).

[101] Most Canadians' major capital asset is the family home. Home ownership "is part of the Canadian way of life": Canada, Ministry of Finance, *Proposals for Tax Reform*, 1969, at para.3.6. The principal residence exemption encourages home ownership as well as generates positive social and economic spillover effects.

[102] Jack Mintz and Thomas Wilson, Capitalizing on Cuts to Capital Gains Taxes, (2000) *C.D. Howe* at 20. According to the 1985 Federal Budget which proposed this measure, the purpose as 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." It was intended to support "equity investment and broaden participation by individuals in equity markets", "improve the balance sheets and financial health of Canadian companies", "provide a tax environment that is more conducive to high technology companies raising capital" and "encourage individual Canadians to start new businesses and will help small businesses grow" Canada, House of Commons, *Securing Economic Renewal: Budget Papers*, May 23, 1985 at 3.

[103] Jason Clemens, Charles Lammam and Matthew Lo, "The economic costs of capital gains taxes in Canada" in Charles Lammam and Jason Clemens, eds. *Capital Gains Tax Reform in Canada: Lessons from Abroad* (2014) (suggesting that: "Capital gains taxes impose costs on the economy because they reduce returns on investment and thereby distort decision making by individuals and businesses. This can have a substantial impact on the reallocation of capital, the available stock of capital, and the level of entrepreneurship.") Capital gains taxation was considered to have the lock-in effect which "can act as a barrier to capital market and business efficiency in that investors may be reluctant to sell assets to restructure investments or businesses if the sales will trigger capital gains taxes": see Mintz and Wilson, supra note 102, at 4. The lock-in effect is reduced by the Act through the "rollover" rules which allow transfers of property on a cost basis under certain conditions, such as transfers to corporations in return for

shares of the corporation (e.g., s.85 or 85.1 of the Act). However, economists argue that the lock-in effect can still impose significant economic costs if individuals hold assets longer than they should to better rebalance their portfolios or improve the management of their assets.

[104] 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 (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 expanded the withholding tax system to fees paid to non-residents for rendering services in Canada (Reg.105) and fees paid to non-residents for the provision in Canada of the acting services of the actor in a film or video production (s.212(5.1) of the Act). These withholding taxes are "provisional", like employment income withholding. The effect is to get the taxpayer to account to the CRA for their income and tax liability. In sum, the collection of income taxes depends on withholding of tax by a third party who has the necessary information and means to pay tax (on behalf of the taxpayer) at minimal cost of their own. At present, withholding tax applies to employment services of both resident and non-resident taxpayers, but only non-resident in respect of non-employment services (i.e. services of freelancing consultants as well as services rendered by or through corporations and acting services).

[105] Campbell, supra note 74. See also Jinyan Li, "Withholding Tax on Domestic Interest and Dividends" (1995) 32:3 *Canadian Tax Journal* 533.

[106] McCaffrey, supra note 12, at 23.

[107] Personal income tax raised $144.9 billions and corporate income tax raised $41.4 billions in 2017. See Canada, Library Of Parliament, "Personal Income Taxes In Canada: Revenue, Rates And Rationale" (https://hillnotes.ca/2017/03/20/personal-income-taxes-in-canada-revenue-rates-and-rationale/).

[108] Heather Kerr, Ken McKenzie and Jack Mintz, *Tax Policy in Canada*, ch.4, Personal Income Taxation, at 4:17, Table 4.6, referring to 2008 taxation year. The same ratio is assumed for recent years.

[109] Louis Morel, "A Sectoral Analysis of Labour's Share of Income in Canada", Bank of Canada, Research Department (https://economics.ca/2006/papers/0169.pdf). The decline in Canada is similar to that in OECD countries and G20 countries. An ILO and OECD Study shows that over the period from 1990 to 2009 the share of labour compensation in national income declined in 26 out of 30 advanced countries and the median (adjusted) labour share of national income across these countries fell from 66.1 per cent to 61.7 per cent. A more recent OECD calculation finds that the average adjusted labour share in G20 countries went down by about 0.3 percentage points per year between 1980 and the late 2000. See International Labour Organization and Organisation for Economic Co-operation and Development, *The Labour Share in G20 Economies* (2015).

[110] The share of personal income tax of the total government revenues was 37% ($19,837 millions/$53,181 millions) in 1980 and 50.9% in 2017 ($153,700 millions/$302,000 millions): see Livio Di Matteo, *A Federal Fiscal History: Canada, 1867-2017* (Fraser Institute, February 2017) Appendix 2.

[111] Low and middle-income taxpayers need to work to support themselves and their families and increased taxation will unlikely 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 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 of Both Small?" National Bureau of Economic Research Working Papers 14208 (http://www.econ.yale.edu/~shiller/behmacro/2004-11/kimball-shapiro.pdf). In general, however, the empirical literature shows that the responsiveness of high-income earners to tax is much larger 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. Kevin Milligan and Michael Smart, "Taxation and Top Incomes in Canada." (2015) 48:2 *Canadian Journal of Economics* 655-681. See also Mike Brewer, Emmanuel Saez, and Andrew Shephard, "Means-testing and Tax Rates on Earnings" in James Mirrlees, et al., eds., *Dimensions of Tax Design* (Oxford: Oxford University Press, 2010) 90-173 (the "*Mirrlees Report");* Costas Meghir and David Phillips, "Labour Supply and Taxes" in *Mirrlees Report*, 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.

[112] This is borrowed from the title of the book by Slemrod and Bakija, supra note 2.

[113] Hale, supra note 81, at 43.

[114] 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, November 30, 2017) (www.fraserinstitute.org/sites/default/files/measuring-the-distribution-of-taxes-in-canada.pdf) at 187: the top 1

percent of tax filers paid 14.7 percent of total taxes, while collectively their share of total income earned is 10.7 percent.

[115] 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* (2002) 25-71. See also Joel B. Slemrod, *Does Atlas Shrug? The Economic Consequences of Taxing the Rich* (Cambridge: Harvard University Press, 2000).

[116] See, for example *Wiebe Door Services Ltd v Minister of National Revenue*, 1986 CarswellNat 366; *Wolf v R*, 2002 FCA 96; *Royal Winnipeg Ballet v Minister of National Revenue*, 2006 FCA 87; and *671122 Ontario Ltd v Sagaz Industries Canada Inc*, 2001 SCC 59. See also Tamara Larre, "The Role of Intention in Distinguishing Employees from Independent Contractors" (2014) 62:4 *Canadian Tax Journal* 927-70; and Joanne Magee, "Whose Business Is It? Employees Versus Independent Contractors" (1997) 45:3 *Canadian Tax Journal* 584-603.

[117] Kesselman in *Income Tax at 100 years*, supra note 12, at 3:6.

[118] Ibid.

[119] 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, April 10, 2018.

[120] Victor Fleischer, "Taxing Alpha: Labour Is the New Capital Gains", available at https://ostromworkshop.indiana.edu/pdf/seriespapers/2015f_c/fleischerpaper.pdf and Kleinbard, supra note 12.

[121] Kesselman in *Income Tax at 100 Years*, supra note 12, at 3:7.

[122] David J. Storey, *Understanding the Small Business Sector* (London, Routledge, 1994), ch.6.

[123] Bird and Wilson, supra note 9, at 19. The dual income tax can be readily be combined, if desired, with taxing corporations on a rent basis: see Milligan, supra note 9.

[124] E.g., sections 74.1, 56, kiddie tax of the Act.

[125] These amendments deny a CCPC's claim for the small business deduction if its annual passive investment income exceeds $150,000 (ITA, s.125(5.4). They also extended the Tax on Split Income (TOSI) rules to apply to certain income received by adult family members (formerly limited to individuals under the age of 18).

[126] *"Spotlight: Robotic Process Automation (RPA) What Tax need to know now"* PWC Tax Function of the Future Series, May 2017, (https://www.pwc.com/gx/en/tax/publications/assets/pwc-tax-function-of-the-future-focus-on-today-robotics-process-automation.pdf)

[127] WH Smith, Deputy Commissioner of Internal Revenue, "Automation in Tax Administration" (1969) *Law and Contemporary Problems* 751 (https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=3267&context=lcp)

[128] Jason Kirby, "Why Businesspeople Won't Stop Using That Gretzky Quote", *MacLean's*, Sept 24, 2014 (https://www.macleans.ca/economy/business/why-business-people-wont-stop-using-that-gretzky-quote/).