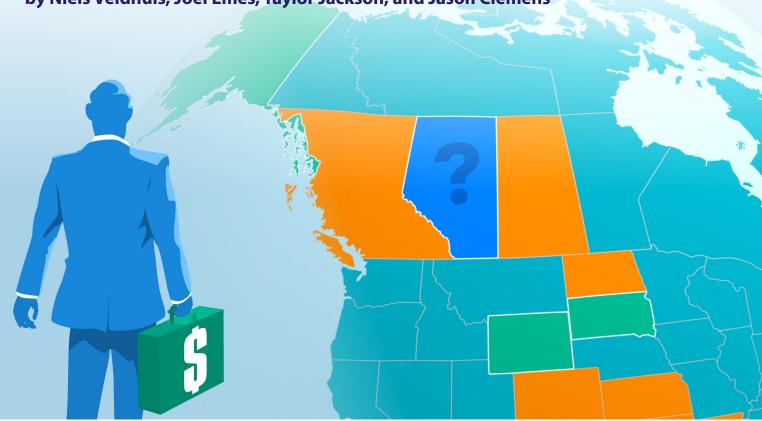
# FRASER BULLETIN



December 2018

# **Reforming Capital Gains Taxes in Alberta**

by Niels Veldhuis, Joel Emes, Taylor Jackson, and Jason Clemens



### **S**UMMARY

- Capital gains taxes impose comparatively large costs on the economy by discouraging needed activities such as entrepreneurship, investment, and savings.
- A number of industrialized countries such as Switzerland, New Zealand, the Netherlands, and Belgium impose no capital gains taxes.
- While the capital gains tax is a federal tax, there is a method by which to exempt capital gains income from provincial income taxes.
- Critically, nine US states exempt capital gains from state-level income taxes: Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming. It's worthwhile to note that several of these states-Alaska, South Dakota, Texas, and Wyoming-are major energy-producing states.
- Eliminating capital gains taxes from provincial income tax in Alberta would send a powerful signal to would-be entrepreneurs, investors, and business owners that the province is regaining its former competitiveness.

#### Introduction

This second bulletin in the series on competitiveness-enhancing tax reform ideas for Alberta focuses on eliminating the province's personal capital gains tax. Capital gains tax reform offers the province a unique opportunity to create a distinct advantage as the only Canadian province and one of a handful of US states that do not tax capital gains.1 Such a reform would send a powerful signal to potential entrepreneurs, investors, and businesses.

A capital gain occurs when property is sold for more than its original nominal purchase price. The property can be physical property, such as a piece of land or a personal possession, or it can be an income-producing financial asset, such as a stock or bond. Normal income taxes are levied on a portion of the capital gain upon its sale. In Canada, half the value of the nominal appreciation in an asset is included as regular income and personal income taxes apply. The effective calculation is such that half of a person's top personal income tax rate (combined federal and provincial) is applied to the value of the nominal capital gain.

This bulletin presents some key economic research on capital gains taxes and some comparative information about current capital gains tax rates. It then explains how Alberta could eliminate the provincial portion of the tax even though it is a federal tax.

### Reviewing the existing research on capital gains taxes<sup>2</sup>

Like all taxes, capital gains taxes impose economic costs by distorting behaviour. Because of this distorting effect, there is a general consensus amongst economists that governments should impose the least distortionary types of taxes possible so as to minimize the economic losses from taxes. Capital-based taxes tend to impose the highest costs because they discourage beneficial activities such as saving, investing, risk-taking, and entrepreneurship. Consumption taxes, such as sales taxes, tend to be the least costly.3

An important study published by the federal department of finance examined the economic costs of different taxes in Canada. It compared the gains and losses to society from changes in different taxes based on how those different taxes would change behaviour related to work effort, investment, and savings. It found that a \$1 decrease in personal income taxes on capital-such as capital gains, dividends, and interest income-increased society's well-being by \$1.30. At the other end of the spectrum, a \$1 decrease in consumption taxes produced a benefit of only \$0.13 (Baylor and Beauséjour, 2004). The enormous difference in results is explained by the way in which the different taxes influence beneficial behaviours such as savings, investing, and work effort. Simply put, society is much better off when capital-based taxes, such

<sup>&</sup>lt;sup>1</sup> Note that the reform proposed in this bulletin focuses exclusively on personal taxes. Capital gains within the corporate or business sector is an important additional potential reform but it is much more complex and is beyond the scope of this essay.

<sup>&</sup>lt;sup>2</sup> For a more comprehensive review of the research on capital gains, see Veldhuis, Godin, and Clemens (2007); Clemens, Lammam, and Lo (2014); and Mitchell, Garst, Lammam, and Jackson (2018).

<sup>&</sup>lt;sup>3</sup> For a discussion of how different taxes impose different costs, see Clemens, Veldhuis, and Palacios (2007).

as capital gains taxes, are reduced compared to other taxes.

One of the reasons for the high cost of capital gains taxes is known as the "lock-in" effect.4 Capital gains are only taxed when the owner of the asset decides to sell it, thus triggering the tax if a gain (nominal) occurs in the sale price of the asset. Because the decision to sell the asset is discretionary, the decision to incur the capital gains tax is also discretionary, which creates a "lock-in" effect whereby owners favour holding assets longer than they otherwise would in the absence of the tax to avoid triggering the tax liability. While the magnitude of the lockin effect depends on numerous factors (such as the rate of return on the initial and new investments and the investor's time horizon), economic costs result because capital gains taxes discourage the reallocation of capital from lower to higher yielding uses.

Consider an investor who wishes to sell an asset and reinvest the proceeds in a new project. The profit from the sale of the asset is reduced by the capital gains tax. In order for the investor to reallocate his or her capital, the new investment must provide a rate of return high enough to recoup the funds paid in taxes and yield a reasonable rate of return.

Another important aspect of capital gains taxation is its effect on entrepreneurs and entrepreneurship more broadly. Entrepreneurs risk their own capital (and that of venture capitalists and other financiers) in the expectation of ultimately profiting from a new technology, product, or service. The trade-off is foregoing salaried income now for a payoff in the future from the heightened value of the company or

perhaps individual product. This process is key to a successful economy because it produces new technologies, products, and services, and ultimately leads to job creation and increased wealth.5

Capital gains taxes reduce the return that entrepreneurs and investors receive from the sale of an appreciated business or product. This diminishes the reward for entrepreneurial risktaking, including financing, and thus reduces the number of entrepreneurs and investors willing to undertake these risks. The ultimate result is a less robust, less prosperous economy.6

Capital gains taxes also have a significant impact on the stock of capital in Canada by increasing the cost of capital to businesses. Through the lock-in effect, capital gains taxes reduce the pool of available capital, particularly for entrepreneurs and start-ups. Economists Kevin Milligan, Jack Mintz, and Thomas Wilson estimated the sensitivity of investment to changes in the user cost of capital in Canada and found that decreasing capital gains taxes by 4.0 percentage points leads to a 1.0 to 2.0 percent increase in investment (Milligan, Mintz, and Wilson, 1999). In other words, there is a clearly established link between the availability of entrepreneurial capital and taxes. Indeed, a recent essay by noted financial economist Douglas Cumming concluded that the best method by which to promote and expand

<sup>&</sup>lt;sup>4</sup> Herbert Grubel (2000) gives an excellent overview of the "lock-in" effect.

<sup>&</sup>lt;sup>5</sup> Joseph Schumpeter (1989a, 1989b, and 1934) discusses and analyzes the role of entrepreneurship in economic growth and progress.

<sup>&</sup>lt;sup>6</sup> Mitchell, Garst, Lammam, and Jackson (2018) discuss economic prosperity broadly, and specifically address the link between capital gains taxes and entrepreneurship.

entrepreneurial finance was to reduce capital gains taxes.<sup>7</sup>

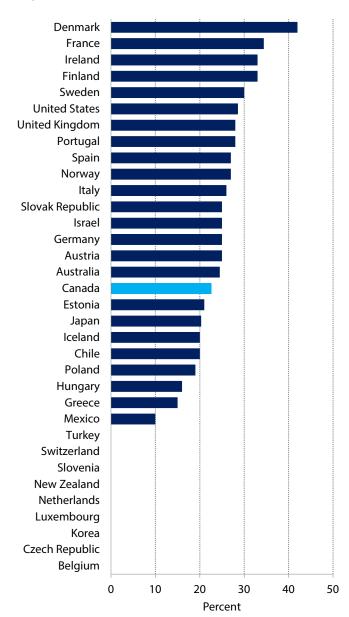
In addition to the economic costs discussed thus far, capital gains taxes also impose direct costs on taxpayers for compliance and administration. One Canadian study found that individuals who reported capital gains income incurred, on average, higher compliance costs than did those who did not report any such income. Specifically, the direct compliance costs for those individuals reporting capital gains income was, on average, 13.8 percent higher than those who did not (Speer, Palacios, Lugo, and Vaillancourt, 2014).

In sum, capital gains taxes have the effect of locking in capital to less productive investments, increasing the cost and therefore reducing the supply of investment (i.e., financing) available to firms and entrepreneurs, reducing the demand for engaging in entrepreneurship by lowering the rewards, and increasing compliance costs on tax filers. At the same time, capital gains taxes raise little revenue in Canada, meaning that the economic costs far outweigh the revenue benefits to governments.

### **Getting competitive on capital gains**

Unfortunately, because capital gains are included in regular income after being adjusted for the inclusion rate, income tax rate increases that the federal government and a host of provincial governments have implemented over the last few years have also increased capital gains tax rates. More specifically, half of any capital gain is included as regular income, to which personal income tax rates apply. Feder-

Figure 1: Top Marginal Tax Rate on Capital Gains (2015)



Source: Pomerleau (2015): table 2; calculations by Ernst and Young and Deloitte Tax Foundation.

ally, for instance, the top capital gains tax rate was increased from 14.5 percent to 16.5 percent in 2015. This increase was on top of recent provincial rate increases.

<sup>&</sup>lt;sup>7</sup> Cumming and Johan (2018) also discuss the link between capital gains taxes and entrepreneurship, and economic prosperity more broadly.

**Table 1: Canadian Top Marginal Capital Gains Tax Rates, 2018** 

	Personal Income Tax		Capital gains tax	
	Top marginal rate	Threshold for top marginal rate	Top marginal rate	Top marginal combined rate
Federal	33.0%	\$205,842	16.5%	_
British Columbia	16.8%	\$150,000	8.4%	24.9%
Alberta	15.0%	\$307,547	7.5%	24.0%
Saskatchewan	14.5%	\$129,214	7.3%	23.8%
Manitoba	17.4%	\$93,208	8.7%	25.2%
Ontario	20.5%	\$220,000	10.3%	26.8%
Quebec	20.3%	\$104,765	10.2%	26.7%
New Brunswick	20.3%	\$154,382	10.2%	26.7%
Nova Scotia	21.0%	\$150,000	10.5%	27.0%
Prince Edward Island	18.4%	\$98,701	9.2%	25.7%
Newfoundland & Labrador	18.3%	\$184,590	9.2%	25.7%

Source: PricewaterhouseCoopers (2018).

Figure 1 illustrates the current top capital gains tax rates for the OECD countries.8 It is important to note the number of industrialized countries, including Switzerland (Krugler and Lenz, 2001), the Netherlands, and New Zealand (Oliver, 2001) that maintain a zero capital gains tax rate. In addition, even among those countries that do impose a capital gains tax, Canada is generally in the middle of the pack.<sup>9</sup> The rates included in figure 1 are as of 2015, which means

Table 1 summarizes the federal and provincial personal income tax rates as well as the rates for capital gains taxes. It also includes the combined federal-provincial rate applicable in each of the provinces. At 27.0 percent, Nova Scotia has the highest combined capital gains tax rate, composed of 16.5 percent federal tax and 10.5 percent provincial tax. The lowest combined rate is in Saskatchewan at 23.8 percent. Simply put, the combined federal-provincial capital gains tax rate is comparable among all ten provinces. Alberta's combined capital gains tax rate is currently 24.0 percent.

they exclude both the federal and provincial income tax increases on capital gains after 2015. Put differently, Canada's capital gains tax rate gives it no advantage in its efforts to attract entrepreneurs, businesses, and investors.

<sup>&</sup>lt;sup>8</sup> For more information on capital gains taxes internationally, and more specifically on jurisdictions that do not impose capital gains taxes, see Lammam and Clemens (2014) and Grubel (2001).

<sup>&</sup>lt;sup>9</sup> Note that Ontario is used as a representative province to calculate an overall federal-provincial rate for Canada.

#### We've cut capital gains taxes before...

Interestingly, the Liberal government of former Prime Minister Jean Chretien clearly understood the cost of capital gains taxes and introduced reforms to meaningfully reduce the tax rate applied to capital gains. In his 2000 budget speech, then finance minister Paul Martin stated:

Mr. Speaker we have talked about the importance of innovation in developing a modern economy. And just as we are making investments to that end, we must also introduce tax measures that encourage entrepreneurship and risk taking.

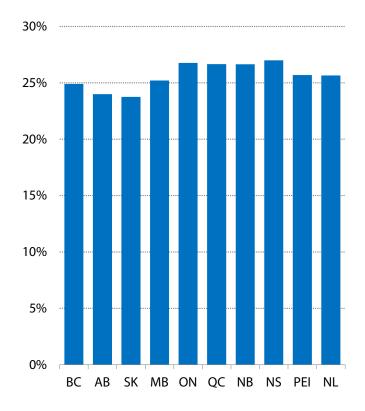
This budget proposes action on three fronts. First, we will reduce the taxation of capital gains by lowering their inclusion rate from three-quarters to two-thirds, effective immediately.

Second, we will allow up to \$100,000 in stock options granted annually to be exercised with the tax being paid only when the shares are actually sold.

Third, a key factor contributing to the difficulty of raising capital by new startups is the fact that individuals who sell existing investments and reinvest in others must pay tax on any realized capital gains. Therefore, Mr. Speaker, we will allow a \$500,000 tax-free rollover for qualifying investments, thereby increasing the amount these investors can put into new ventures. (Martin, 2000)

That fall the same government further reduced capital gains taxes and the improved rollover provision. Specifically, the Chretien government reduced the inclusion rate for capital gains from two-thirds to one-half, where it remains today. In addition, the size of invest-

Figure 2: Top Capital Gains Rate, **Combined Federal and Provincial (2018)** 



Source: PricewaterhouseCoopers (2018).

ments eligible for small businesses rollovers was increased from \$500,000 to \$2 million and the size of eligible firms was increased from \$10 million to \$50 million (Canada, Department of Finance, 2000). The previous federal Liberal government recognized the enormous potential for reduced capital gains taxes to spur entrepreneurship, risk-taking, and investment, all of which improve the economy.

#### Time for provincial reform

Given that capital gains tax rates in Canada range from 23.8 to 27.0 percent, and given that most US states (41 of 50 states) (Pomerleau, 2015) impose a capital gains tax on top of

their federal tax, Alberta has an opportunity to send a strong signal to both domestic and international entrepreneurs, investors, and businesses by eliminating its provincial capital gains tax. (Currently nine US states-Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming-impose no state-level capital gains tax. Several of them-Alaska, South Dakota, Texas, and Wyoming-are major energy-producers that compete directly with Alberta for investment, entrepreneurs, and even workers.)

There is some confusion, however, about how a province can practically eliminate the capital gains tax10 when it is a federal tax. First, tax reforms in the 1990s changed Canada's provincial income tax system from one that was based on the federal system to one where the provinces can set their policies more independently from the federal government.11

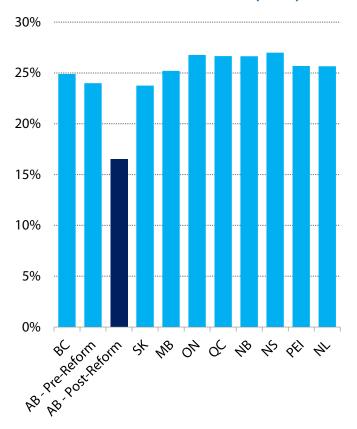
Currently, the federal government income tax system defines what constitutes income for both the federal government and the provinces. Specifically, Step 2 in the Income Tax and Benefit Return, or the T1 General (Canada Revenue Agency, 2018a), tallies all the various sources of defined income to arrive at a person's "total

<sup>10</sup> Other noted economists have recommended creating a rollover account for capital gains such that it is exempt from income taxes if the proceeds of the gain are invested within a certain time period. Such a reform, while beneficial, would be difficult to implement if done exclusively at the provincial level. For information about the benefits of rolling over capital gains, see Mintz and Wilson (2006).

income" for the year. Line 127 of Step 2 is "Taxable Capital Gains." The schedule used for capital gains (Canada Revenue Agency, 2018b) allows certain exemptions and adjusts the total capital gains earned by 50 percent such that only half of the non-exempted capital gains are included in a person's total income. Principal residences, it should be noted, are exempt from capital gains taxation.

An individual's total income is then adjusted by a number of deductions such as pension and RRSP contributions, child care expenses, and other allowances to arrive at their taxable income (line 260 in the federal return).

Figure 3: Top Capital Gains Tax Rate, **Combined Federal-Provincial (2018)** 



Source: PricewaterhouseCoopers (2018).

<sup>&</sup>lt;sup>11</sup> Admittedly, the reform outlined in this essay may require clarification or even amendments to the Tax Collection Agreement (TCA) with the federal government. However, given the simplicity of the reform discussed, the authors do not envision such a change to the TCA as prohibitive.

Line 260 of the federal tax return schedule is the starting point from which taxable income in Alberta is determined (Canada Revenue Agency, 2018c). In other words, the inclusion of half of any capital gains in a person's taxable income for the purposes of determining their federal taxes flows through to determine their taxable income in Alberta. A simple adjustment in the Alberta personal income tax return to exempt the capital gains income included in their federal taxable income would exempt capital gains from provincial income taxes.

Figure 3 illustrates Alberta's capital gains tax rate both before and after the proposed reform. Specifically, Alberta's top capital gains tax rate would decline from 24.0 percent to 16.5 percent, which represents the federal-only capital gains tax rate. Alberta's new rate would be 30.5 percent below the next lowest province of Saskatchewan and it would be one of the few jurisdictions in North America to not impose a capital gains tax at the sub-national level.

Such a change in Alberta's income tax system would result in the province being the only jurisdiction in Canada to not assess a capital gains tax and one of the few jurisdictions in North America to exempt capital gains from income taxes. In addition, Alberta would join energy-producing states such as Alaska, South Dakota, Texas, and Wyoming that do not impose state-level capital gains taxes. Such a reform would send a very strong positive signal to potential domestic and international entrepreneurs, investors, and businesses.

#### References

Baylor, Maximilian, and Louis Beauséjour (2004). Taxation and Economic Efficiency: Results from a Canadian CGE Model. Department of Finance working paper. Government of Canada, Department of Finance. < https:// www.fin.gc.ca/pub/pdfs/wp2004-10e.pdf>, as of November 14, 2018.

Canada, Department of Finance (2000). Economic Statement and Budget Update: Overview. Government of Canada. <a href="https://www. fin.gc.ca/ec2000/pdf/overe.pdf>, as of November 14, 2018.

Canada Revenue Agency (2018a). Income Tax and Benefit Return: T1 General 2017. Government of Canada. <a href="https://www.cana-">https://www.cana-</a> da.ca/content/dam/cra-arc/formspubs/ pbg/5000-r/5000-r-17e.pdf>, as of November 14, 2018.

Canada Revenue Agency (2018b). Schedule 3: Capital Gains (or Losses) in 2017. Income Tax and Benefit Return: T1 General 2017. <a href="https://">https://</a> www.canada.ca/content/dam/cra-arc/ formspubs/pbg/5000-s3/5000-s3-17e.pdf>, as of November 14, 2018.

Canada Revenue Agency (2018c). Form AB428: Alberta Tax and Credits. Income Tax and Benefit Return: T1 General 2017. Government of Canada. < <a href="https://www.canada.ca/con-">https://www.canada.ca/con-</a> tent/dam/cra-arc/formspubs/pbg/5009-<u>c/5009-c-17e.pdf</u>>, as of November 14, 2018.

Clemens, Jason, Niels Veldhuis, and Milagros Palacios (2007). Tax Efficiency: Not All Taxes Are Created Equal. Studies in Economic Prosperity, number 4. The Fraser Institute. <a href="https://www.fraserinstitute.org/sites/de-">https://www.fraserinstitute.org/sites/de-</a> fault/files/TaxEfficiency.pdf>, as of November 14, 2018.

- Clemens, Jason, Charles Lammam, and Matthew Lo (2014). 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 (The Fraser Institute): 17-46. <a href="https://www.fra-">https://www.fra-</a> serinstitute.org/sites/default/files/capitalgains-tax-reform-in-Canada.pdf>, as of November 14, 2018.
- Cumming, Douglas, and Sofia Johan (2018). Financial Markets, Laws, and Entrepreneurship. In Steven Globerman and Jason Clemens (eds.), Demographics and Entrepreneurship: Mitigating the Effects of an Aging Population (The Fraser Institute): 201–238. <https://www. fraserinstitute.org/sites/default/files/demographics-and-entrepreneurship-financialmarkets-laws-entrepreneurship-chapter6. pdf>, as of November 14, 2018.
- Grubel, Herbert G. (2000). Unlocking Canadian Capital: The Case for Capital Gains Tax Reform. The Fraser Institute. <a href="https://www.fra-">https://www.fra-</a> serinstitute.org/sites/default/files/UnlockingCanadianCapital.pdf>, as of November 14, 2018.
- Grubel Herbert G. (ed.) (2001). International Evidence on the Effects of Having no Capital Gains Tax. The Fraser Institute. <a href="https://">https://</a> www.fraserinstitute.org/studies/international-evidence-on-the-effects-of-having-nocapital-gains-taxes>, as of November 14, 2018.
- Krugler, Peter, and Carlos Lenz (2001). Capital Gains Taxation: Evidence from Switzerland. In Herbert Grubel (ed.), International Evidence on the Effects of Having No Capital Gains Taxes (The Fraser Institute): 55-71. <a href="https://www. fraserinstitute.org/sites/default/files/IntlEvidenceNoCapitalGainsTaxSec2B.pdf>, as of November 14, 2018.
- Lammam, Charles, and Jason Clemens (eds.) (2014). Capital Gains Tax Reform in Canada: Lessons from Abroad. The Fraser Institute.

- <a href="https://www.fraserinstitute.org/sites/de-">https://www.fraserinstitute.org/sites/de-</a> fault/files/capital-gains-tax-reform-in-Canada.pdf>, as of November 14, 2018.
- Martin, Honourable Paul (2000). The Budget Speech 2000. Government of Canada, Department of Finance. < https://fin.gc.ca/budget00/pdf/speeche.pdf>, as of Nov. 14, 2018.
- Milligan, Kevin, Jack Mintz, and Thomas A. Wilson (1999). Capital Gains Taxation: Recent Empirical Evidence. Working paper. The Heward Stikeman Institute.
- Mitchell, Daniel J., Brian Garst, Charles Lammam, and Taylor Jackson (2018). Chapter 5: Spurring Entrepreneurship through Capital Gains Tax Reform. In Steven Globerman and Jason Clemens (eds.), Demographics and Entrepreneurship: Mitigating the Effects of an Aging Population (The Fraser Institute): 155–200. <a href="https://www.fraserinstitute.org/sites/de-">https://www.fraserinstitute.org/sites/de-</a> fault/files/demographics-and-entrepreneurship-chapter5.pdf>, as of September 21, 2018.
- Mintz, Jack A., and Thomas A. Wilson (2006). Removing the Shackles: Deferring Capital Gains Taxes on Asset Rollovers. CD Howe Institute. < <a href="https://www.cdhowe.org/sites/de-">https://www.cdhowe.org/sites/de-</a> fault/files/attachments/research\_papers/ mixed/backgrounder\_94.pdf>, as of November 14, 2018.
- Oliver, Robin (2001). Capital Gains Taxation: The New Zealand Case. In Herbert Grubel (ed.), International Evidence on the Effects of Having No Capital Gains Taxes. (The Fraser Institute): 73-87. < <a href="https://www.fraserinstitute.org/">https://www.fraserinstitute.org/</a> sites/default/files/IntlEvidenceNoCapital-GainsTaxSec2C.pdf>, as of November 14, 2018.
- Pomerleau, Kyle (2015). The High Burden of State and Federal Capital Gains Tax Rates in the United States. The Tax Foundation. <a href="https://">https://</a> files.taxfoundation.org/legacy/docs/Tax-Foundation FF460.pdf>, as of November 14, 2018.

PricewaterhouseCoopers [PwC] (2018). Tax Facts and Figures: Canada 2018. PricewaterhouseCoopers. < https://www.pwc.com/ca/ fr/tax/publications/pwc-tax-facts-figures-2018-07-en.pdf>, as of September 21, 2018.

Schumpeter, Joseph A. (1934). The Theory of Economic Development. Transaction Publishers.

Schumpeter, Joseph A. (1989a). The Analysis of Economic Change. In Richard V. Clemence (ed.), Essays on Entrepreneurs, Innovations, Business Cycles, and the Evolution of Capitalism. Transaction Publishers.

Schumpeter, Joseph A. (1989b). Economic Theory and Entrepreneurial History. In Richard V. Clemence (ed.), Essays on Entrepreneurs, Innovations, Business Cycles, and the Evolution of Capitalism. Transaction Publishers.

Speer, Sean, Milagros Palacios, Marco Lugo, and Francois Vaillancourt (2014). The Cost to Canadians of Complying with Personal Income Taxes. The Fraser Institute. <a href="https://www.">https://www.</a> fraserinstitute.org/sites/default/files/costto-canadians-of-complying-with-personalincome-taxes.pdf>, as of September 21, 2018.

Veldhuis, Neils, Keith Godin, and Jason Clemens (2007). The Economic Costs of Capital Gains Taxes. Studies in Entrepreneurship and Markets, number 4. The Fraser Institute. <a href="https://">https://</a> www.fraserinstitute.org/sites/default/files/ EconomicCostsCapitalGainsTax.pdf>, as of September 21, 2018.

Copyright © 2018 by the Fraser Institute. All rights reserved. Without written permission, only brief passages may be quoted in critical articles and reviews.

#### ISSN 2291-8620

Media queries: For media enquiries, please contact our communications department via e-mail: communications@fraserinstitute.org; telephone: 604.714.4582. In Toronto, contact our media specialist via telephone at 416.363.6575, ext. 238.

**Support** the Institute: call 1.800.665.3558, ext. 574 or e-mail: development@fraserinstitute.org

Visit our website: www.fraserinstitute.org

#### **Acknowledgments**

The authors would like to thank the anonymous reviewers for their suggestions and feedback. Any remaining errors or oversights are the sole responsibility of the authors. As the researchers have worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, or supporters.



Niels Veldhuis is President of the Fraser Institute. He has written six books and more than 50 peerreviewed studies on a wide range of economic topics. He holds a Bachelor's Degree in Business Administration, with joint majors in business and economics, and a Master's Degree in Economics from Simon Fraser University. In 2010 he was named one of Vancouver's Top 40 under 40 by Business in Vancouver.



Taylor Jackson is an Independent Researcher and a former Senior Policy Analyst with the Fraser Institute. He holds a B.A. and M.A. in Political Science from Simon Fraser University. He is the coauthor of a number of Fraser Institute studies, including Safety in the Transportation of Oil and Gas: Pipelines or Rail?, and the Fraser Institute's annual Global Petroleum Survey, and Survey of Mining Companies.



**Joel Emes** is President of Abacus Economics and a Fraser Institute Senior Fellow who rejoined the Institute after a stint as a senior advisor to British Columbia's provincial government. He previously served as a senior analyst, then as acting executive director, at the BC Progress Board. Prior to that, Joel was a senior research economist at the Fraser Institute, where he initiated and led several flagship projects in the areas of tax freedom and government performance, spending, debt, and unfunded liabilities. Joel holds a B.A. and an M.A. in economics from Simon Fraser University.



**Jason Clemens** is the Executive Vice President of the Fraser Institute. He has an Honors Bachelors Degree of Commerce and a Master's Degree in Business Administration from the University of Windsor as well as a Post Baccalaureate Degree in Economics from Simon Fraser University. He has published over 70 major studies on a wide range of topics, including taxation and entrepreneurship. He has published over 300 shorter articles in US, Canadian, and international newspapers.