

THE BRASS TAX

Busting myths about overtaxed Canadians



INSTITUT
BROADBENT
INSTITUTE

by Richard Shillington and Robin Shaban* | June, 2017

*Richard Shillington is a statistician and the the head of Tristat Resources. Robin Shaban is an economist and public policy consultant and a member of the Alternative Alberta Budget project. The authors would like to acknowledge the comments from reviewers, which have contributed to a much- improved document.

TABLE OF CONTENTS

- 1.0 Executive Summary 3**
- 2.0 Introduction 5**
- 3.0 Putting Tax Rates in Context. 7**
- 4.0 Understanding Average and Marginal Tax Rates for Typical Canadians . . 10**
 - 4.1 Calculating Tax Rates 11
 - 4.2 The “Average” versus “Typical” Canadian. 13
 - 4.3 Taxes for High-Income Earners. 15
- 5.0 Problematic Studies 18**
 - 5.1 The Fraser Institute’s Tax Freedom Day 18
 - 5.2 The MLI’s Article *Redistribution and the Promise of Opportunity*. 20
- 6.0 Analysis of Typical Tax Rates 18**
 - 6.1 Income Taxes 22
 - 6.2 Individuals. 22
 - 6.3 Tax Rates including Payroll and Consumption Taxes 23
- 7.0 Conclusion 25**

1.0 EXECUTIVE SUMMARY

Canadian news media are awash with coverage of studies purporting to show the growing burden of taxation, reinforcing a narrative that Canadians are paying high tax rates and providing justification for tax cuts. This study investigates whether these claims, and the popular anti-tax narrative they help underpin, hold up to statistical scrutiny.

This report looks at a key publication on taxation covered extensively by Canadian news media every year: The Fraser Institute's annual *Tax Freedom Day*. That report claims "average" Canadian families pay a tax rate of over 40%. Our study also looks at the trend highlighted by the Macdonald-Laurier Institute (MLI) showing that the most affluent Canadians are paying a larger share of income taxes than they were in the past.

Employing more accurate statistical methods, this study finds compelling evidence that the Fraser Institute and MLI findings are problematic and do not provide an accurate depiction of typical Canadian tax rates.

The study's key findings can help guide a more productive public discourse on taxation and help inform federal policy-makers as they re-evaluate Canada's tax system:

- The effective tax rate including income, payroll, and commodity taxes for the typical Canadian family is 24%, a little over half of the 40% plus claimed by the Fraser Institute.
- The typical effective tax rate for a Canadian family, for income tax only, is 11%.
- The typical working Canadian individual aged 25 to 54 pays a rate of approximately 14% in income taxes.
- Only 20% of working Canadians pay more than 20% of their income as income taxes.
- The typical income tax rate for Canadians in the middle of the income distribution is 10% to 19%. Only 2% of working Canadians pay more than 30%.
- For Canadians that earn more than \$250,000, their average income tax rate was 29%.

- The share of income tax paid by the top 1%, has increased from 12% to 20% over the last 32 years. This is due to their share of all income increasing from 7% to 10% — a 45% jump. Their income tax rate has, in fact, been falling since 2000.

Finally, this study finds that Canada's tax revenue relative to GDP is trending downward and is substantially lower than that of most OECD countries — Canada ranks 25th of 35 member countries.

**MUCH OF THE MEDIA COVERAGE OF TAXATION GIVES CANADIANS
THE IMPRESSION THAT THEY PAY FAR MORE IN TAXES THAN
THEY DO IN REALITY.**

Taken together, this study's findings undermine the narrative of an undue and growing tax burden for typical Canadians and provide a cautionary tale for news media that cover these misleading tax studies and their calls for further tax cuts.

2.0 INTRODUCTION

It is no wonder many Canadians are confused about how much they actually pay in taxes. Canada's tax system is complex, and is even more befuddling when one considers our public discourse regarding taxation. Indeed, much of the media coverage of taxation gives Canadians the impression that they pay far more in taxes than they do in reality.

The well-publicized *Tax Freedom Day*, as calculated and reported by the Fraser Institute, is a case in point. Widely covered in the media with little scrutiny, it helps foster a skewed perception of tax rates paid by the typical Canadian family. *Tax Freedom Day*, according to the Fraser Institute, represents "the day in the year when the average Canadian family has earned enough money to pay the taxes imposed on it by the three levels of Canadian government: federal, provincial, and local."¹ By lumping together a host of various government fees and taxes beyond income tax, the Fraser Institute has claimed, over the past three years, that the tax rate of a typical Canadian family has been over 40%.²

The Fraser Institute study reports tax rates that Canadian families pay on "average." A later section of this report demonstrates how averages usually overstate the taxes paid by "typical" Canadians. It also digs into some of the troubling methodological flaws of the Fraser Institute report that undermine its credibility, but are rarely reported by the press.

**WHAT THOSE CALLING FOR FURTHER TAX CUTS RARELY MENTION IS
THAT CANADA'S PERSONAL INCOME TAX SYSTEM IS ONE OF THE ONLY
PROGRESSIVE ELEMENTS OF THE OVERALL TAX SYSTEM**

Another contributing factor to the misconception that Canadians are facing burdensome tax rates is an infatuation with the marginal personal income tax rates paid by the small group of Canada's highest income earners. A telling example of this is a recent Macdonald-Laurier Institute (MLI) article entitled *The Limits of Redistribution and the Promise of Opportunity*. The article asserts

¹ Milagros Palacios, Charles Lammam, and Feixue Ren, "Canadians Celebrate Tax Freedom Day on June 7, 2016," Fraser Institute.

² Milagros Palacios, Charles Lammam, "Canadians Celebrate Tax Freedom Day on June 9, 2014," Fraser Institute; Milagros Palacios, Charles Lammam and Feixue Ren, "Canadians Celebrate Tax Freedom Day on June 10, 2015," Fraser Institute; and Palacios, Lammam, and Ren, "Tax Freedom Day, 2016."

that the share of all income taxes paid by the highest income Canadians has increased by nearly 30% over the last three decades.³

The burden of taxation presented by the Fraser Institute and MLI is then often used to argue for lower taxation to improve national and provincial “tax competitiveness,”⁴ with the ultimate consequence of reducing federal fiscal capacity. Reducing this capacity would naturally lead to funding cuts to many valuable public services and social programs that benefit individual Canadians, families, and industry alike.

What those calling for further tax cuts rarely mention is that Canada’s personal income tax system is one of the only progressive elements (whereby the tax rate increases with income) of the overall tax system. It should also be noted that personal income taxes are now about 60% of federal government tax revenue: an increase from about 35% over the last 50 years. At the same time, corporate income taxes have fallen from 45% to 23%.⁵

This study explores how various methodologies for measuring tax rates lead to the inflated figures and misconceptions widely reported in the media. The study provides a more accurate depiction of how much tax is paid by typical Canadians. The goal is to guide more productive public discourse on the topic, and inform federal policy-makers as they continue to re-evaluate our tax system.

³ Milagros Palacios, Charles Lammam, and Feixue Ren, “Canadians Celebrate Tax Freedom Day on June 7, Sean Speer and Brian Lee Crowley, “The limits of redistribution and the promise of opportunity,” Macdonald-Laurier Institute, November 27, 2016, <http://www.macdonaldlaurier.ca/the-limits-of-redistribution-and-the-promise-of-opportunity-sean-speer-and-brian-lee-crowley-in-sun-papers/>

⁴ Jack Mintz, “Canada is about to get Trumped on tax competitiveness,” *Financial Post*, December 19, 2016, <http://business.financialpost.com/fp-comment/jack-mintz-canada-is-about-to-get-trumped-on-tax-competitiveness-and-were-not-even-close-to-ready-for-it> and Steve Lafleur and Ben Eisen, “Tax hikes have wrecked Alberta advantage,” *Calgary Sun*, January 6, 2017, <http://www.calgarysun.com/2017/01/07/tax-hikes-have-wrecked-alberta-advantage>

⁵ Fiscal Reference Tables, Department of Finance Canada, last modified October 7, 2016, <https://www.fin.gc.ca/frt-trf/2016/frt-trf-16-eng.asp>

3.0 PUTTING TAX RATES IN CONTEXT

There has been renewed interest of late in examining Canada's federal tax system. After the 2016 budget, the federal government established a committee to review federal tax expenditures.⁶ The Liberals were criticized for failing to move on key progressive tax reform priorities, for example on taxing capital gains like other income or in closing loopholes for other kinds of investment income, in Budget 2017.⁷

Taxes, it has been said, are the “price we pay for civilized society”.⁸ They are critical for funding programs that provide great value to Canadians. Taxes fund our major government services and public programs, including health care, public education and income transfer programs like Old Age Security, the Guaranteed Income Supplement, and child tax benefits. The value provided by these supports and programs has been explored in the study *Canada's Quiet Bargain: The Benefits of Public Spending*.

“For the vast majority of Canada's population, public services are, to put it bluntly, the best deal they are ever going to get. [...] Looking at Canadians in median income households, their benefit from public services amounts to \$41,000 — equivalent to roughly 63% of their total income. Overall, the average per capita benefit from public services in Canada in 2006 came to \$16,952. Approximately 56% of that benefit comes from health care, education and personal transfer payments.”⁹

To put the *tax burden* paid by Canadians into context, it is helpful to look at Canada in comparison to other countries. Despite the importance of tax revenues, Canada's total tax revenue over all levels of government as a percentage of GDP is modest relative to our OECD peers. Chart 1 shows that of all 35 OECD countries, Canada ranks 25th in terms of total tax revenue to GDP. Canada's government revenue as a percentage of GDP is significantly lower than that of many European countries.

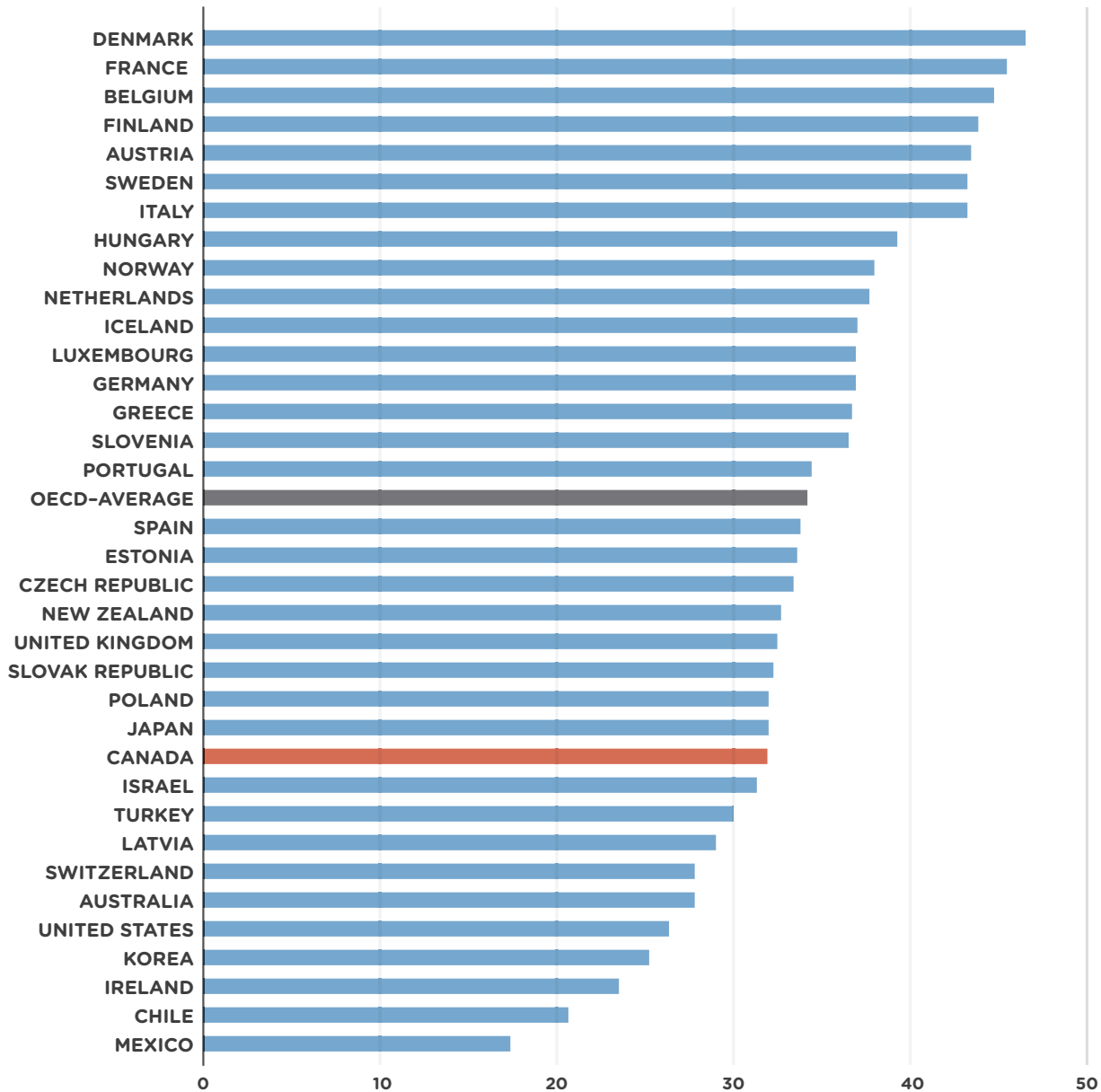
⁶ Review of Federal Tax Expenditures, Department of Finance Canada, accessed April 20, 2017, <http://www.fin.gc.ca/access/tt-it/rfte-edff-eng.asp>.

⁷ Don Pittis, “It never seems a good time for a tax-the-rich budget,” CBC News, March 23, 2017, <http://www.cbc.ca/news/business/canada-budget-equity-1.4036031>

⁸ Oliver Wendell Holmes Jr., 1927.

⁹ Hugh Mackenzie and Richard Shillington, “Canada's Quiet Bargain; The Benefits of Public Spending,” Canadian Centre for Policy Alternatives, April 15, 2009, 3.

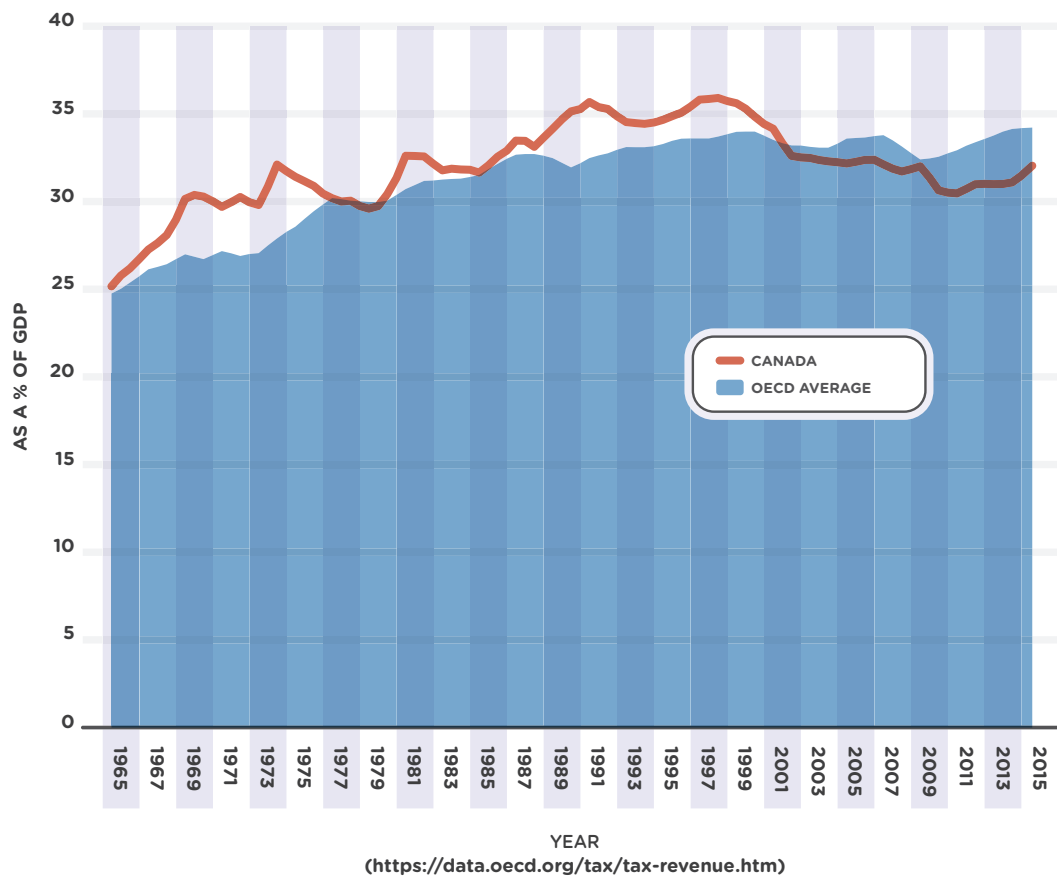
Chart 1: Tax Revenue, All Levels of Government, as Percentage of National GDP, 2015



AS A % OF GDP
 Source: (<https://data.oecd.org/tax/tax-revenue.htm>)

Furthermore, as Chart 2 illustrates, Canadian tax revenues as a percentage of GDP have fallen over the last two decades. From 2000 to 2015, government revenues as a proportion of GDP have fallen from a high of 36% in 1997 to 32% in 2015. Over the last two decades, the percentages of tax revenues reached their lowest point in 2011 and have not varied much since that time.¹⁰

Chart 2: Tax Revenue, All Levels of Government, as a Percentage of GDP, Canada and OECD, 1965-2015



¹⁰ Most recent OECD data, accessed March 2017, <https://data.oecd.org/tax/tax-revenue.htm>

4.0 UNDERSTANDING AVERAGE AND MARGINAL TAX RATES FOR TYPICAL CANADIANS

Calculating the typical tax rate a person or family pays is not a straightforward exercise.

First, one has to define a tax. Governments can earn revenues from multiple sources, and not all government revenues are taxes. As a report by Neil Brooks explains, “[t]axes are normally defined as compulsory payments to the government for which the payer receives no specific benefit”.¹¹ Taxes such as income and sales taxes, like GST, HST or PST, fit this definition. However, revenue earned by the government in exchange for services or goods is not taxes. For example, resource royalties are not taxes because firms obtain natural resources in exchange for their payment to the government. Notably, the Fraser Institute considers resource royalties for its calculations for Tax Freedom Day.¹²

THERE ARE SEVERAL METHODS FOR MEASURING A TAX RATE, AND NOT ALL METHODS ARE CREATED EQUAL.

Second, there are several ways to calculate the overall tax rate faced by an individual or family, and several factors to consider when determining this figure. For example, income taxes are best evaluated on an individual basis because the income tax system fundamentally taxes individuals,¹³ with some recognition to family situations. When looking at other types of taxes, such as consumption or property taxes, the appropriate unit of analysis is the family because it is unclear how taxes are specifically borne by each individual in a family.

¹¹ Neil Brooks, “Tax Freedom Day: A Flawed, Incoherent, and Pernicious Concept,” Canadian Centre for Policy Alternatives, June 2005, 16.

¹² Palacios, Lammam, and Ren, “Tax Freedom Day, 2016,” 2.

¹³ The statistical calculations for income taxes were repeated using families and the results reflecting the tax rate of typical Canadians is not appreciably different.

4.1 CALCULATING TAX RATES

When people think of taxes, they may think primarily of the rate associated with their tax bracket, what is called their marginal tax rate. In fact, determining an individual's or family's effective tax rate is more complicated. There are several methods for measuring a tax rate, and not all methods are created equal.

The *effective tax rate* of a person or family is the ratio of income taxes to income. It is calculated by dividing the family's or individual's federal and provincial income tax by total income. This is the predominant measure we use in our analysis.

The *average tax rate* is the ratio of all income taxes to income for a specific group of individuals. It is the sum of all income taxes paid by that group divided by all the income earned by the group, collectively. If a few individuals have a higher tax rate than most, they skew the average tax rate higher. We will discuss the implications of this tax measure in later sections.

These two ways of calculating taxes provide different, useful information. Both are statistical measures; they are derived from statistical data. The effective tax rate provides a measure of how much of a person's or family's income goes toward taxes. Thus, it is a measure of what we might call tax burden. Average tax rates are useful for understanding the average tax burden of a group of people, rather than individuals.¹⁴

IMPORTANTLY, A TAX CUT FOR LOW- OR MID-INCOME BRACKETS SHOULD NOT BE VIEWED AS A TAX CUT FOR THE MIDDLE CLASS BECAUSE A TAX CUT IN THESE BRACKETS BENEFITS INCOME EARNERS BOTH IN AND ABOVE THAT TAX BRACKET.

A *marginal tax rate*, or *statutory marginal tax rate*, applies to income, and refers to a theoretical rate of tax that would be paid by an individual if they were to earn one additional dollar of income. This measure does not apply to income that is taxed at a lower rate than employment income, such as capital gains or dividends, for example. It also does not apply to income that individuals direct to government programs that provide a tax deduction, like pension income or

¹⁴ There is also an important distinction to be made regarding the average tax rate of Canada and the average of the effective tax rates of Canada. This difference has attracted some interest in the economic literature. The difference between the average of the ratios, as opposed to the ratio of the averages, was pointed out some time ago in the following literature: Michael Wolfson and Brian Murphy, "Income Taxes in Canada and the United States," Perspectives, 2000, Catalogue 75-001, Statistics Canada.

RRSP contributions. As we will explore in this report, the marginal tax rate is a statutory tax rate, not a figure calculated from statistical data.

Last, by extension, the *empirical marginal tax rate* is a statistical measure of the marginal tax rate, which accounts for preferential tax treatments (i.e. tax loopholes). It is generally less than the top statutory marginal tax rate an individual or family pays. This tax measurement concept will be explored in more detail in later sections of the document.

Marginal tax rates, and by extension effective income tax rates, are progressive. If an individual's income increases such that they enter a higher tax bracket, their tax rate also increases. Currently the highest possible statutory marginal tax rate, federally and provincially combined, is approximately 50%.¹⁵ However, effective tax rates are far below the marginal tax rates we commonly associate with our taxes.

It is helpful to illustrate the difference between effective and marginal tax rates. The true tax rate of a high-income Canadian is their effective tax rate, which is an average rate of taxation over all their income. In the case of federal income taxes, the first \$12,000 of a high-income Canadian's income is not taxed, and then the next \$34,000 of income is taxed at the lowest marginal tax rate of 15%. Then, the next \$47,000 of income is taxed at approximately 20.5%, and etc. Only the income attributable to the highest tax bracket is taxed at the highest marginal tax rate. The highest marginal tax rate is 33% at the federal level and about 45%-50% when combined with provincial income taxes.

Table 1 presents the federal marginal tax rates and tax brackets for 2017.

Table 1: Federal Marginal Tax Rates and Tax Brackets, 2017¹⁶

INCOME BRACKET (\$)	MARGINAL RATE (%)
0 to 45,916*	15.0
45,916 to 91,831	20.5
91, 831.01 to 142,353	26.0
142,353.01 to 202,800	29.0
Over 202,800	33.0

* A personal credit exempts the first \$11,635 of income from tax.

¹⁵ "Canadian income tax rates for individuals - current and previous years," Canada Revenue Agency, January 4, 2017, <http://www.cra-arc.gc.ca/tx/ndvdl/fq/txrts-eng.html#>.

¹⁶ Ibid.

Importantly, a tax cut for low- or mid-income brackets should not be viewed as a tax cut for the middle class because a tax cut in these brackets benefits income earners both in and above that tax bracket.¹⁷

4.2 THE “AVERAGE” VERSUS “TYPICAL” CANADIAN

When calculating tax rates, it is important to distinguish between two mathematical concepts – average and median.

Consider the example of Canadian incomes. The average income of Canadians is a per capita measure. It is the total amount of income earned by individuals divided by the number of individuals. The average does not necessarily represent an actual person or type of person, but is simply a mathematical concept.

However, the median income of Canada best represents the income of the typical Canadian – those “smack in the middle” of the income distribution. Importantly, the average income of Canada will always be higher than the median because of the small number of very high-income earners in Canada. These outliers skew the average income upward. Thus, the median income better represents the income earned by the typical Canadian than does average income. The distinction between median and average incomes is useful for understanding misconceptions that are rampant in news media about Canadians’ tax burden.

**TYPICAL CANADIANS, SMACK IN THE MIDDLE OF THE INCOME SPECTRUM,
EARN INCOMES OF ROUGHLY \$50,500 AND PAY ABOUT \$7,000
IN INCOME TAXES.**

When calculating the tax rate of Canadians for its *Tax Freedom Day* publication, the Fraser Institute reports the average of all families, not the tax rate of median or typical families. Much like when calculating average income, the average tax rate reflects the average rate all families pay as a whole, not the tax rate of the typical family.

Like in the case of calculating average income, the average tax rate is drastically higher than the median rate because of the distribution of income in Canada.

¹⁷ Indeed, this was the case as part of the Trudeau government’s supposed “middle class” tax cut. See: Andrew Jackson, “So called ‘Middle Class’ tax cut leaves out most Canadians,” Broadbent Institute, November 14, 2015, http://www.broadbentinstitute.ca/andrew_ajackson/so_called_middle_class_tax_cut_leaves_out_most_canadians.

High-income earners pay higher income tax rates by virtue of our progressive income tax system. There are also relatively few high-income earners in the country. Thus, very high-income earners are outliers and skew the average tax rate higher. So, there will always be an upward bias in the average tax rate of Canada. In other words, the average tax rate reflects disproportionately the tax rate of the highest-paid.

The difference between median and average effective tax rates is very important, as shown in Table 2. The table shows the median effective tax rates for people aged 25 to 54 across 10 income deciles. This age group would exclude most individuals who are still in school or are in early retirement.¹⁸ The last two lines of the table report average and median figures for this population.

Table 2: Income Taxes (Federal and Provincial) and Income by Deciles; Individual Canadians Aged 25-54 with Earned Income, 2016¹⁹

INCOME TAXES (FEDERAL AND PROVINCIAL) AND INCOME BY DECILES; Canadians Aged 25-54 with Earned Income, 2016				
Decile of Income	Income Limits (\$)	Median Income Tax (\$)	Median Income (\$)	Tax Rate (%)
Lowest	0 - 17,000	0	10,500	0
2	17,000 - 26,000	1,000	21,600	5
3	26,000 - 35,000	3,000	30,600	10
4	35,000 - 43,000	4,600	38,700	12
5	43,000 - 51,000	6,200	46,500	13
6	51,000 - 59,000	8,500	54,900	15
7	59,000 - 71,000	10,700	64,700	17
8	71,000 - 85,000	14,300	77,400	18
9	85,000 - 109,000	19,300	95,700	20
Highest	109,000+	35,300	137,700	26
TOTAL	Median Values	7,000	50,500	14
	Average Values	12,000	62,600	19

Source: Tabulations by the author using SPSD (see disclaimer)

As Table 2 demonstrates, effective income tax rates range between 0% and 26%, according to how much money a person earns.

The “Median Values” at the bottom of the table show that typical Canadians, smack in the middle of the income spectrum, earn incomes of roughly \$50,500 and pay about \$7,000 in income taxes; their effective tax rate was roughly 14%. The table also shows that only 20% of working Canadians pay more than 20% of their income as income taxes.

¹⁸ The table only includes those with earned incomes because including individuals with no income would generate lower effective tax rates, even though those without this earned income pay no income tax.

¹⁹ This analysis is based on Statistics Canada's Social Policy Simulation Database and Model (V22.2). The assumptions and calculations underlying the simulation results were prepared by Richard Shillington. The responsibility for the use and interpretation of these data is entirely ours.

Contrary to popular rhetoric, Canada's highest earners have an effective income tax rate of only 26%. Indeed, individuals in this income category have an effective income tax rate nowhere near the highest marginal tax rates of 40%-50% that get so much press. These individuals typically pay about \$35,300 in taxes on an income of \$137,700. Individuals in this income category earn almost one-third of all income earned in Canada (30% of income), and pay almost half of all income tax (44% of all tax revenue). They also generally have tax rates lower than most people would expect because they earn income from a variety of different sources, and many of these incomes are taxed at lower rates.

The last two lines of Table 2 allow one to compare the difference between using average and median measures to calculate the tax rate of the "typical" Canadian. These lines show tax rates calculated using estimates for the average and median income and income tax paid by working individuals. As one would expect, the average income tax and income figures are greater than the median ones. The small number of high-income earners in Canada has a pronounced impact on the size of the average figures, relative to that of the median figures.

Specifically, the average amount of income tax paid by individuals was \$12,000, yet approximately 75% of Canadians paid less than this amount. Furthermore, the average income of \$62,600 is greater than the income earned by almost 70% of Canadians. By comparison, the median income tax of \$7,000 and the median income of \$50,500 represent the values for typical Canadians — meaning the typical working Canadian's effective income tax rate is roughly 14%.

The average tax rate of income in total (19%) is not representative of what typical Canadians pay because high-income Canadians pay tax at a higher rate. So, while the median or typical Canadian has a 14% rate, Canadians *as a group* have a rate that is much higher, at 19%. In fact, 19% is the tax rate of someone with an income closer to \$74,100, which is far greater than the Canadian median income of \$50,500. Indeed, 77% of Canadians have a tax rate below 19%.²⁰

Not included in Table 2 are tax rates for broader segments of the Canadian population. For those aged 25-54 with income from any source,²¹ the median effective income tax rate is only 12%. For those 25 years and older with income from any source, the median effective income tax rate is 10%.

²⁰ The data source used for this analysis cannot provide reliable statistics for the top 1%.

²¹ These sources include investment income and transfers like welfare, disability pensions, and the Child Tax Credit.

4.3 TAXES FOR HIGH-INCOME EARNERS

Another important point is that high-income earners generally pay tax at a rate far below their marginal tax rate.

High-income individuals typically earn a greater proportion of their income in forms that are taxed at preferential rates, such as dividends, stock options and capital gains, and they can afford expert tax advice to take best advantage of these preferential tax rates. For example, almost all the benefit of special tax treatment of dividends (some 91%) goes to the top tenth of all tax filers.²² Furthermore, recent research has shown the top one percent of individual taxpayers receives almost all of the benefit of the stock options deduction and 87.4% of the benefit of the capital gains deduction.²³

High-income earners are also more likely to use savings vehicles that allow them to defer taxes, such as pensions and RRSP contributions. Contributions to these savings programs are often deducted from taxable income.

Table 3 illustrates this point using data from the Canada Revenue Agency.²⁴ The table compares the average taxes paid in 2014 by those with incomes between \$150,000 to \$249,999 with those with incomes over \$250,000.²⁵ Comparing the taxes paid by individuals in the two income groups illustrates the preferential tax treatments that wealthy Canadians benefit from, and the difference between marginal tax rates and empirical marginal tax rates.

Table 3: Taxes Paid by Canadian High-Income Earners, 2014

	\$150,000 - \$249,999	\$250,000 +	Difference Between Income Groups
Average Income (\$)	185,000	538,000	353,000
Average Taxes (\$)	45,000	1,57,000	112,000
Average Tax Rate (%)	24	29	
Empirical Marginal Tax Rate (%)			32

Source: Canada Revenue Agency. (2017). Final Table 2

²² Andrew Jackson, "Taxing dividends: the case for reform," Broadbent Institute, February 1, 2017, http://www.broadbentinstitute.ca/taxing_dividends_case_for_reform.

²³ Andrew Jackson, "Federal tax review must target loopholes for wealthy," Broadbent Institute, August 16, 2016, http://www.broadbentinstitute.ca/andrew_ajackson/federal_tax_review.

²⁴ "Final Statistics 2016 edition," Canada Revenue Agency, last modified January 31, 2017, Final Table 2 - All returns by total income class [Data file]. Retrieved from http://www.cra-arc.gc.ca/gncy/stts/t1fnl/2014/menu-eng.html#_Tables_in_CSV_1.

²⁵ We use average tax figures in this analysis due to data availability. Given that we are examining a small, relatively homogeneous segment of the population, bias issues arising from using an average measure will be less significant.

Table 3 shows that the average tax rates of wealthy Canadians are far lower than their marginal tax rate. Canadians who make between \$150,000 and \$249,999 have an average income tax rate of 24%, and those with incomes of over \$250,000 have an average income tax rate of 29%. These rates are far below the corresponding marginal rates of 45%-50% (depending on the person's province of residence) for these income levels.²⁶

This table also demonstrates the difference between marginal tax rates and empirical marginal tax rates. The difference in the average income of individuals in the "\$150,000-\$250,000" and "\$250,000+" income groups was \$353,000. If the marginal tax rate faced by these individuals was truly 45%-50%, we would expect a difference in the average income taxes paid of at least \$158,850 (45% of \$353,000). However, the actual difference in the average income tax paid between these two groups was \$112,000. The marginal tax rate wealthy Canadians actually face — the empirical marginal tax rate — was about 32%.

Table 3 demonstrates that the marginal tax rate, near 50% for the highest-income Canadians, is a worst-case scenario. In fact, high-income earners benefit from the dozens of tax credits, deductions and deferrals available federally²⁷ and provincially, and can afford professional advice to navigate our complex tax system to claim these tax benefits.

It is also worth noting that income taxes are the only tax source designed to be progressive; that is, the tax rate (tax as a percentage of income) increases with income. Other taxes, such as property taxes, sales and excise taxes, are regressive. Payroll taxes tend to be neutral up to some income threshold and regressive thereafter. In fact, many studies of taxation in Canada have found that when all of these various taxes are considered as a whole, the effective tax rate in the country is reasonably flat across the income spectrum.²⁸ In other words, higher-income earners don't pay a higher share of these taxes. If anything, at very high incomes, tax breaks tend to slightly decrease the effective tax rates of the wealthiest.

²⁶ Although not presented in this table, these CRA data also demonstrate that the effective tax rate of typical Canadians with incomes from \$35,000-\$45,000 is about 11%.

²⁷ David Macdonald, "Out of the Shadows," Canadian Centre for Policy Alternatives, December 5, 2016.

²⁸ W. Irwin Gillespie, *The incidence of taxes and public expenditures in the Canadian economy* (Queen's Printer, 1966); Sheila Block and Richard Shillington, "Incidence of Taxes in Ontario in 1991," *Taxation and the Distribution of Income*, ed. Allan M. Maslove (University of Toronto Press); and Marc Lee, "Eroding Tax Fairness; Tax Incidence in Canada," Canadian Centre for Policy Alternatives, 1990-2005.

5.0 PROBLEMATIC STUDIES

In this section, we will provide an overview and critique of two reports that espouse tax rates that do not represent the experience of the typical Canadian – the Fraser Institute’s annual *Tax Freedom Day* study and the MLI’s article on taxation of high-income earners.

5.1 THE FRASER INSTITUTE’S TAX FREEDOM DAY

The Fraser Institute’s annual report *Tax Freedom Day* invites readers to believe that almost half of a household’s income, a little over 40%, goes to paying taxes. They then use their effective tax rate figure to calculate “Tax Freedom Day” – the day that if a household were to pay all its taxes in the beginning of the year, it would finish paying them on Tax Freedom Day. In the last five years, the Institute has calculated its Tax Freedom Day to land sometime in early to mid-June.

One major criticism of the Tax Freedom Day calculation is a notable mismatch between the data included in the numerator (the total amount of taxes paid) and denominator (family cash income).

The Fraser Institute chooses to define income in a very narrow manner, which reduces the size of the denominator of their tax rate and causes an inflated tax rate. They define the denominator as “cash income,” which is a limited subset of all the income a family can earn. One problem with this approach is that cash income excludes some types of income, yet they include the taxes paid on these forms of income in the numerator of their calculated tax rate. As Neil Brooks explains in his paper *Tax Freedom Day: A Flawed, Incoherent, and Pernicious Concept*, “since they attribute all taxes paid in Canada to individual families – including those paid by employers, corporations, and taxes paid on capital gains – their calculations treat families as having paid a good deal of their taxes out of income they are not treated as having received.”²⁹

For example, the Fraser Institute calculations imply that households ultimately pay all business taxes charged by the government through higher prices for goods and services and lower wages. While there is a possible argument that households bear some of the tax burden of corporate taxes, the Fraser

²⁹ Brooks, “Tax Freedom Day,” 5.

Institute's assumption would certainly not apply in a case where a corporation is foreign owned (whereby profits are exported) or exports much of its product (any impact on price is exported).

Another criticism of the Tax Freedom Day calculations is that the Fraser Institute includes non-tax government revenues as taxes, resource royalties most notably. Their choice to include non-tax revenues in the numerator of their tax rate overstates the amount of taxes people are purported to pay, leading to an inflated tax rate.

The Fraser Institute calculates a tax rate using average taxes and income, rather than median measures of taxes, which further inflate the tax rate calculation. As demonstrated in the previous sections, tax rates calculated using average values of taxes paid and income earned are significantly greater than, and not representative of, the tax rates of typical Canadians. Indeed, based on our calculations, the average tax rate of Canadians overstates the tax rate paid by the typical Canadian by close to 50%. The average tax rate value reported by the Fraser Institute would hardly represent the "typical" Canadian.

There are other issues with how the Fraser Institute calculates its effective tax rate for the Tax Freedom Day publication, and they have been thoroughly reviewed by Neil Brooks in his paper *Tax Freedom Day: A Flawed, Incoherent, and Pernicious Concept*.

ANOTHER COMMON REFRAIN THAT MUDDIES PUBLIC DISCOURSE ABOUT TAXATION IS THAT THE MOST AFFLUENT ARE PAYING MORE TAXES THAN IN THE PAST.

In summary, the Fraser Institute's tax rate figures are not representative for two core reasons. First, they use average measures rather than median measures. Thus, their figures are a tax rate for families in aggregate, not the tax rate of the typical family. As we demonstrated in a previous section, the average tax rate significantly overstates the tax rate paid by the typical family. Second, the Fraser Institute tax rate is inflated because they include in the numerator taxes and other government revenue not paid by persons, and the household income they include in the denominator does not correspond with the taxes included in the numerator.

5.2 THE MLI'S ARTICLE *REDISTRIBUTION AND THE PROMISE OF OPPORTUNITY*

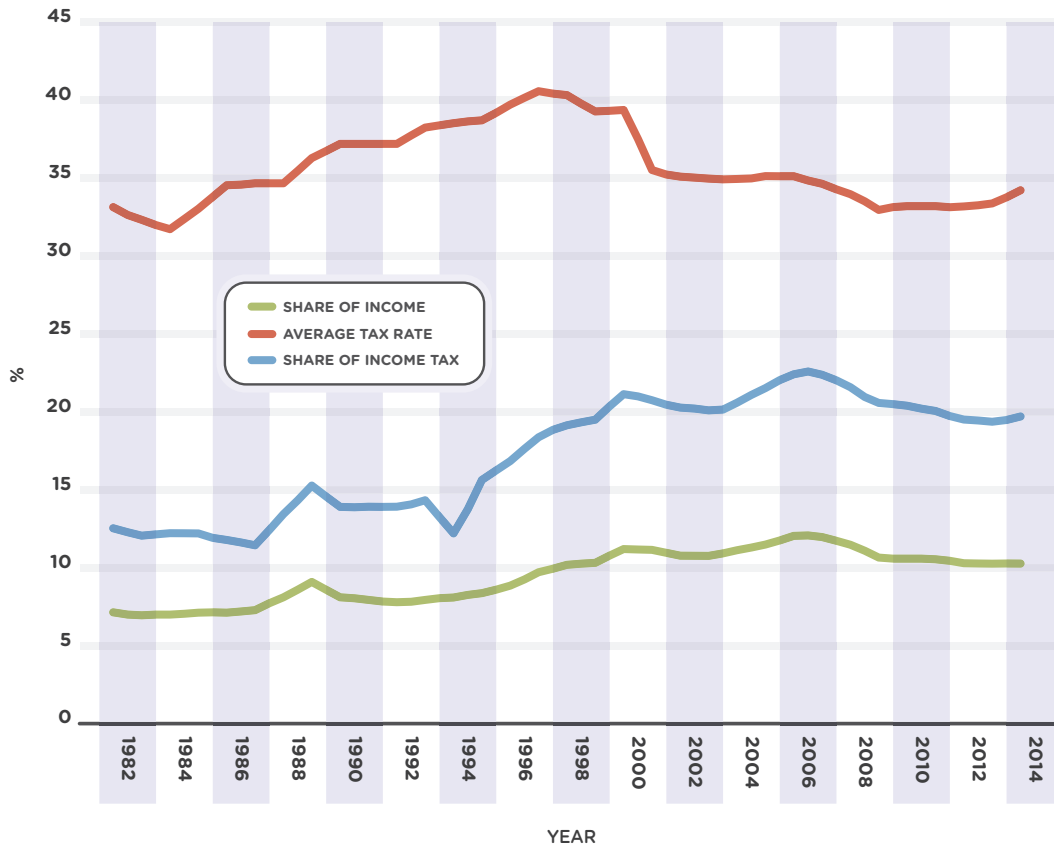
Another common refrain that muddies public discourse about taxation is that the most affluent are paying more taxes than in the past. The MLI's article *Redistribution and the Promise of Opportunity* uses data from the Canadian Revenue Agency (CRA) to argue that over the last 30 years, taxes on high-income earners have become more burdensome. Their evidence is that the share of all taxes paid in Canada by the top 1% of income earners have increased by nearly a third.

Although the share of taxes paid by the wealthiest Canadians has increased, the report does not mention how much the incomes of the top 1% of tax filers have increased in the last 30 years. In fact, Canadians that earn high incomes pay more in tax because they are earning more income, not because their tax rates have increased.

Chart 3 presents the very data referenced in the MLI article. The data demonstrate that the relative incomes of top income earners have increased over time. The most affluent Canadians have increased their contribution to the public purse, but the tax rate of these individuals has fallen substantially since 2001 as well.³⁰

³⁰ We use average tax figures in this analysis due to data availability. Given that we are examining a small, relatively homogeneous segment of the population, bias issues arising from using an average measure will be less

Chart 3: Shares of Income and Income Tax of the Top 1% of Earners, 1982 to 2014³¹



Source: Statistics Canada (CANSIM 204-0001)

Over the 32 years shown in the chart, the share of income tax paid by the top 1% increased from 12% to 20%. However, their share of all income earned in Canada increased from 7.1% to 10.3%, a 45% jump. The income tax rates for this wealthy group have, in fact, fallen from 2000 onward.

The key explanation for the increased share of income taxes paid by the top 1% is their increased share of income.

³¹ Source: Statistics Canada CANSIM 204-0001.

6.0 ANALYSIS OF TYPICAL TAX RATES

In the previous sections, we provided an overview of some popular misconceptions regarding taxation in Canada. We also outlined better methods for creating statistics that paint a more accurate picture of the current state of taxation. In the sections that follow, we use these methods to calculate effective income tax rates for the typical Canadian and typical Canadian families.

6.1 INCOME TAXES

We begin by looking at the effective income tax rates paid by Canadian individuals. The data can be presented for individuals, for income taxes, or for families, when taxes include commodity taxes, as both play a role in our tax system. Fundamentally, however, personal taxes are levied on individuals, not families. To provide a direct comparison to the figures presented in the Fraser Institute's Tax Freedom Day calculations, however, we also provide some data for families.

6.2 INDIVIDUALS

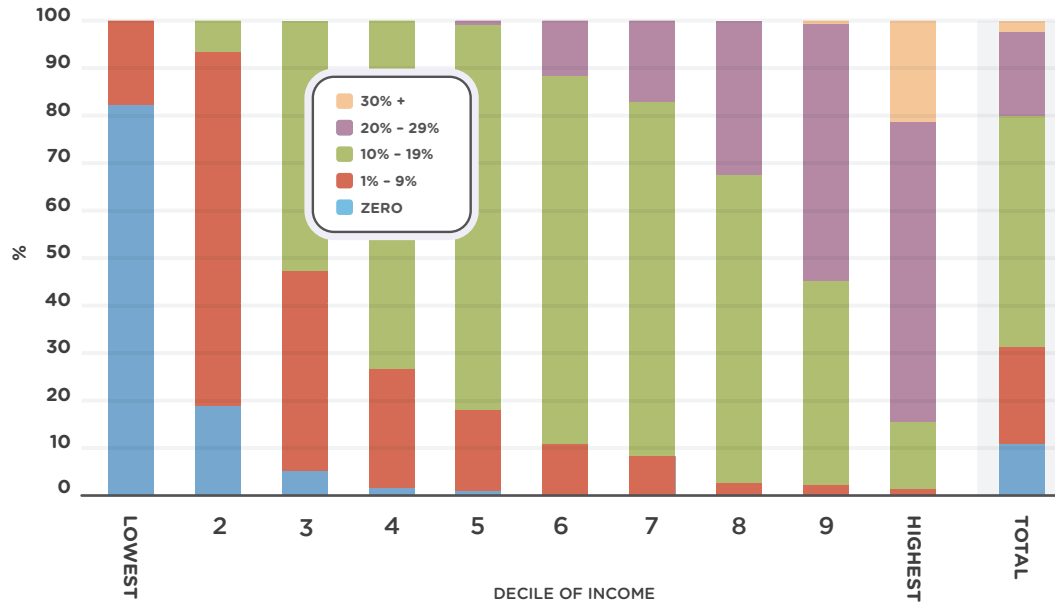
Calculating the effective income tax rates for Canadian individuals 25 to 54 years old that have earned an income is revealing. It paints an entirely different narrative than that of the “over-taxed” country so often reported in the news media.

**ONLY 2% OF WORKING CANADIANS AGED 25 TO 54 PAY MORE THAN 30%
OF THEIR INCOME AS INCOME TAX.**

As of 2016, the typical effective income tax rate was approximately 14%. In fact, only 2% of income earners have an income tax rate above 30%, and only 20% of income earners have a tax rate over 20%. There are about 12 million Canadians who earn income and are between the ages of 25 and 54. Of those Canadians, about 1.3 million of these pay no income tax. Only about 260,000 Canadians pay more than 30% of their income in income tax.

Chart 4 provides a general breakdown of typical effective income tax rates of individuals aged 25 to 54 who are earning an income, according to income decile.

Chart 4: Distribution of Canadians Aged 25 to 54 with Income, by Income Tax Rate (Federal and Provincial), by Deciles, 2016



The chart shows that the median effective income tax rate for the lowest 20% of income earners is zero. The top 10% of income earners typically have an income tax rate between 20% and 29%. The typical income tax rates for Canadians that earn incomes in the middle of the income distribution varies from 10% to 19%.³² The last bar in the chart shows that only 2% of working Canadians aged 25 to 54 pay more than 30% of their income as income tax.

6.3 TAX RATES INCLUDING PAYROLL AND CONSUMPTION TAXES

We have supplemented the data for individuals with effective tax rates for families, including additional classes of taxes: the employee share of payroll taxes, sales, and other commodity taxes.³³ Since we are examining commodity taxes, we conduct our analysis at the family level. Furthermore, doing the analysis at the family level also facilitates comparisons with the Fraser Institute results.

³² Income tax rates can vary, even for families with similar income because of different income sources (investment and employment income), access to deductions for pensions or RRSPs, and deductions related to health or children.

³³ Commodity taxes are as defined in the SPSPD/M, including sales, property, amusement, gasoline, liquor, carbon and tobacco taxes.

Recall that the Fraser Institute has calculated that the tax rate of the “average” Canadian family has been over 40% for the past three years. Our calculations, as presented in Table 4, yield far different results. The table presents income tax rates, payroll taxes and commodity taxes, (including sales taxes).

Table 4: Tax Rates for Families and Unattached Individuals by the Range of Taxes Included, 2016

	Income Tax Rate	Rate Including Payroll Taxes*	Tax Rate All Taxes on Persons**
Median	11%	15%	24%
* Here taxes include federal and provincial income taxes and payroll rates.			
** Here taxes include federal and provincial income taxes, payroll taxes and commodity taxes.			

Source: Tabulations by the author using SPSPD (see disclaimer)

The income tax rate of the typical or median Canadian family, including all types, is approximately 11%. By including the employee’s share of payroll taxes, the typical rate increases to about 15%. Adding commodity and sales taxes increases the tax rate to 24%.

The effective tax rate for a typical family for all taxes on the personal sectors is 24%. This value is far lower than that suggested by the Fraser Institute’s study.

7.0 CONCLUSION

The evidence provided in this report demonstrates that many of the popular sentiments and figures reported in public discussion about taxation and overtaxation are simply inaccurate. A case in point is the Fraser Institute's annual *Tax Freedom Day* report, which calculates that Canadian families generally pay a tax rate of over 40%.

This study finds that the effective tax rate for the typical Canadian family is approximately 24% when you include income, payroll and commodity taxes. Moreover, the typical working Canadian individual pays a rate of approximately 14% in income taxes. Only 2% of working Canadians aged 25 to 54 pay more than 30% of their income as income tax, and only 20% of working Canadians pay more than 20% of their income as income tax.

This study also explains the trend highlighted by the Macdonald-Laurier Institute that the most affluent Canadians are paying a larger share of income taxes than in the past. In fact, wealthier Canadians are paying more taxes because they are receiving a larger share of income. Their tax rate has fallen over time — these individuals pay a larger share of tax simply because their share of income is increasing.

The findings in this study are particularly challenging for proponents of the narrative of overtaxation when one considers that as a share of GDP, government tax revenue in Canada is trending downward and is lower than that of most countries in the OECD.