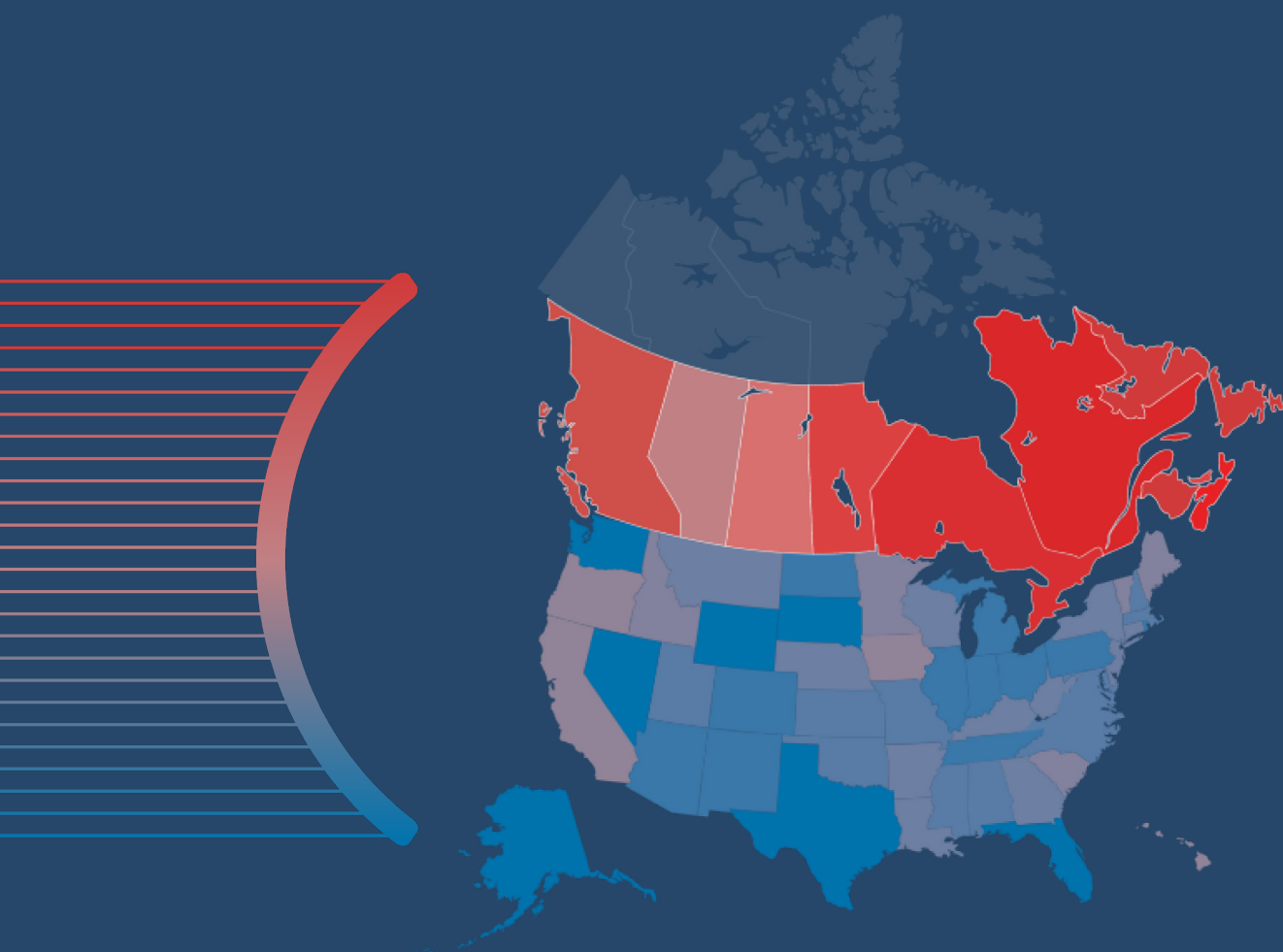


Canada's Rising Personal Tax Rates and Falling Tax Competitiveness

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Executive Summary

In December 2015, Canada's new Liberal government introduced changes to Canada's personal income tax system. Among the changes for the 2016 tax year, the federal government added a new income tax bracket, raising the top tax rate from 29 to 33 percent on incomes over \$200,000. This increase in the federal tax rate is layered on top of numerous recent provincial increases. Starting with Nova Scotia in 2010, through 2018 at least one Canadian government has increased the top personal income tax rate in every year except 2011. Over this period, seven out of 10 governments increased tax rates on upper-income earners. As a result, the combined federal and provincial top personal income tax rate has increased in every province since 2009.

The largest tax hike has been in Alberta, where the combined top rate increased by 9 percentage points (or 23.1 percent), in part because the new rates were added to a relatively low initial rate. In Ontario, the combined top rate increased by 7.1 percentage points (or 15.3 percent); in Quebec it increased by 5.1 percentage points (or 10.6 percent).

These increases have important consequences for Canada's economy. In particular, high and increasing marginal tax rates—that is, the tax rate on the next dollar earned—discourage people from engaging in productive economic activity, ultimately hindering economic growth and prosperity. This occurs because marginal tax rates reduce the reward of earning more income and, in the case of personal income taxes, more labour income. There is general agreement in the economic literature on this point; the debate is about the magnitude of the effect.

The federal and provincial increases to Canada's marginal income tax rates from 2009 to 2018 have put the country at a greater competitive disadvantage for attracting and retaining skilled labour and, less directly, investment and entrepreneurs. Even before the changes, the country's combined federal and provincial top marginal tax rates compared unfavourably to those in the United States and other industrialized countries.

Out of 61 Canadian and US jurisdictions (including the provinces, states, and Washington, DC), Nova Scotia currently has the highest combined top statutory marginal rate (54.00 percent), followed by Ontario (53.53 percent), and Quebec (53.31 percent). Nine Canadian provinces

occupy the list of 10 jurisdictions with the highest top combined marginal income tax rates and all provinces are in the top 12. There are a total of 49 US jurisdictions with combined top tax rates that are lower than all Canadian provinces.

The fact that Canada's top tax rates are often applied to lower levels of income than is the case in other countries further erodes our tax competitiveness. To adjust for differences in income thresholds, we compare the combined statutory marginal tax rates at various income levels in Canadian dollars for each Canadian and US jurisdiction. At an income of CA\$300,000, the highest threshold (with the slight exception of Alberta) in which a Canadian combined top rate is applied, Canadians in every province face a higher marginal income tax rate than Americans in any US state. Results are similar at an income of CA\$150,000 and Canada's marginal tax rates are also uncompetitive at incomes of CA\$75,000 and CA\$50,000.

Taken together, Canada's personal income tax rates are decidedly uncompetitive compared to those in the United States. And, Canada also competes with other industrialized countries for highly skilled workers and investment. To measure the competitiveness of Canada's top tax rates, the study compares the combined top statutory marginal income tax rates with rates in 34 industrialized countries. In 2017 (latest year of available international data) Canada had the 7th highest combined top tax rate out of 34 countries. The federal change to the top rate in 2016 has markedly worsened Canada's competitive position. For instance, Canada had the 13th highest combined tax rate in 2014, before the changes in the federal top rate.

Canadian governments have put the country in this uncompetitive position in part to raise more revenue as they grapple with persistent deficits and mounting debt. However, the tax increases are unlikely to raise as much revenue as governments expect since taxpayers—particularly upper-income earners—tend to change their behaviour in response to higher tax rates in ways that reduce the amount of tax they might pay. Federal and provincial governments would do well to consider reversing the trend towards higher marginal tax rates on upper-income earners, and lower personal income tax rates.

Introduction

In December 2015, Canada's new Liberal government introduced changes to Canada's personal income tax system. Specifically, for the 2016 tax year, the federal government added a new personal income tax bracket, raising the top tax rate from 29 to 33 percent on incomes over \$200,000. It also reduced the marginal tax rate on incomes between \$45,000 and \$90,000 (from 22.0 to 20.5 percent).

The federal government's tax rate hike is part of a recent trend that has seen Canadian governments increasing personal income tax rates on upper-income earners. Starting with Nova Scotia in 2010, through 2018 at least one Canadian government has increased the top personal income tax rate in every year except 2011. Over this period, seven out of 10 provincial governments increased tax rates on upper-income earners.¹ The federal tax changes are therefore being layered on top of numerous recent provincial increases in tax rates. As a result, the combined federal and provincial top personal income tax rate has increased in every province since 2009.

These increases, which partly motivated by a desire for higher revenues and concerns over income inequality,² have important consequences for Canada's economy. In particular, high and increasing marginal tax rates—that is, the tax rate on the next dollar earned—discourage people from engaging in productive economic activity, ultimately hindering economic growth and prosperity.³ This occurs because marginal

¹ For some provinces, the tax changes have been erratic over the period. For example, the government of British Columbia is among the provincial governments that increased personal income tax rates on upper-income earners. However, unlike those in many other provinces, this tax increase was temporarily rescinded. Specifically, the BC government created a new temporary personal income tax bracket with a higher top income tax rate in 2014. It was then removed for the 2016 tax year. Yet in 2018, the newly elected BC government restored the (higher) top tax bracket.

² However, a simulation by Milligan and Smart (2015) suggests that increasing top provincial income tax rates by five percentage points would have only a small effect on the share of income earned by the top 1 percent of income earners.

³ A series of studies led by Bev Dahlby have estimated the cost to society of raising an additional dollar of government revenue, referred to as the marginal cost of public funds. In a recent study, Dahlby and Ferede (2012), using data from 1972 to 2006,

tax rates reduce the reward of earning more income and, in the case of personal income taxes, more labour income. There is general agreement in the economic literature on this point; the debate is about the magnitude of the effect.⁴

The federal and provincial increases to Canada's personal income tax rates from 2009 to 2018 have put Canada at a greater competitive disadvantage for attracting and retaining skilled labour and, less directly, investment and entrepreneurs. Even before the changes, the country's combined federal and provincial top marginal tax rates compared unfavourably with those in the United States and other G7 countries (Murphy, Clemens, and Veldhuis, 2013), and this disparity was magnified when the US engaged in a significant tax reform in late 2017. The fact that Canada's top tax rates are often applied to lower levels of income than in other countries further erodes competitiveness. Worse still, the tax increases are unlikely to raise as much revenue as governments expect since taxpayers—particularly upper earners—tend to change their behaviour in response to higher tax rates in ways that reduce the amount of tax they pay (Lafleur, Palacios, and Emes, 2015).

This paper is divided into four sections. The first explains in more detail the changes to Canadian top personal income tax rates since 2009. The second section explores how Canada's top rates compare to those of the United States—including a brief discussion of *corporate* income taxes as well—while the third section compares Canada to other OECD countries. The final section discusses how the tax increases are unlikely to provide as much government revenue as expected.

estimated that the marginal cost of public funds from raising one dollar of personal income tax ranged from 1.44 in Alberta to 3.81 in Quebec.

⁴ For reviews of the literature on the economic impact of taxes, see Gale and Samwick, 2014; Speer, Palacios, and Ren, 2014; Murphy, Clemens, and Veldhuis, 2013; and Palacios and Harischandra, 2008. For a textbook discussion of Canada's income tax system and its impact on labour supply, savings, and other economic decisions, see Rosen, Wen, and Snodden, 2012.

1. Changes to Canada's Statutory Marginal Income Tax Rates on Labour Income

The discussion in this publication focuses on three aspects of tax rates.⁵ First is the statutory rate, which is the tax rate before accounting for the deductions and various tax credits that an individual tax filer claims. This can differ from the effective tax rate that people actually pay. Second, the discussion focuses on marginal tax rates, as opposed to average tax rates, because of the important role that the marginal tax rate plays in decision making (Murphy, Clemens, and Veldhuis, 2013).⁶ An individual generally decides to engage in additional work based on the extra or marginal benefit that the additional work could provide. A higher marginal benefit encourages someone to engage in additional work. Those given the opportunity to work more and earn more labour income are discouraged from doing so when a significant portion of their increased income is consumed by taxes. Third, the discussion focuses on statutory and marginal tax rates applied to *labour* income.⁷ This is opposed to corporate income or investment income from capital gains and dividends, which are taxed at different rates, although the tax rates on capital gains and dividends are affected by personal income tax rates. Notwithstanding our focus on the taxation of labour income, we still include a brief discussion of corporate taxation in section 2 because of the significant reduction in the US corporate income

⁵ All of the tax rates are adjusted for surtaxes and the Quebec abatement where appropriate. The federal abatement means that Quebecers pay less in federal taxes than other provinces. The abatement exists as part of an arrangement that allows provincial governments to opt out of certain federal-provincial programs. For more details, see Canada, Department of Finance, 2016.

⁶ For example, a study by Romer and Romer (2014) found that changes to the marginal rate in the years between World War I and World War II on those earning the highest income had a statistically significant impact on reported income and on business formation.

⁷ It is beyond the scope of this paper to measure total tax competitiveness, which would include other forms of taxes including corporate income taxes, payroll taxes, and sales taxes.

tax rate in late 2017, coupled with a trend of increases in Canadian corporate tax rates.

Although the entire tax structure is important for tax competitiveness, key metrics for assessing the competitiveness of a jurisdiction's personal income tax system are middle and upper marginal rates, and particularly the top (highest) marginal tax rate. Upper-income earners tend to be highly skilled, professional, and often mobile workers, so attracting and retaining them is important for a country's economic performance and prosperity.⁸ These workers include the country's doctors, engineers, lawyers, and senior managers.⁹ The rest of this section examines changes to Canadian personal income tax rates since 2009, with a particular focus on the top tax rates.

Changes in federal and provincial marginal personal income tax rates since 2009

In recent years, there have been a number of important changes to federal and provincial personal income tax rates across Canada. The most notable trend is for provincial governments, and now the federal government, to

⁸ University of Calgary professor Jack Mintz recently expressed a concern that Canada's weakening Canadian dollar and higher tax rates could contribute to a "brain drain" of highly productive Canadian workers leaving for other jurisdictions, particularly the United States (Mintz, 2016, January 13). Canada has a history of losing productive workers to the United States. A Statistics Canada study found that emigrants to the United States in the 1990s were overrepresented among Canadians who were well educated, of prime working age, and had higher incomes (Zhao, Drew, and Murray, 2000). In addition, Wagner (2000) finds that Canadians who had the most to gain from higher income or tax savings by moving to the United States were more likely to do so. Moreover, empirical research suggests that tax rates play an important role in attracting highly skilled labour. For example, Kleven, Jacobsen, Landais, and Saez (2013) provide evidence that the average and top (marginal) personal income tax rate and social security tax rates play a statistically significant role in attracting foreign professional soccer players to top leagues in 14 Western European countries. The effect was particularly strong for high quality players, defined as players who had been selected for national teams at least once in their career. In a separate study, Akcigit, Baslandze, and Stantcheva (2015) identify "superstar" inventors based on patent citation data in eight countries (including Canada and the United States) from 1977 to 2000 and find that their tendency towards international migration was significantly influenced by the effective top marginal tax rate.

⁹ Of the top 1 percent of income earners in 2011, 10.7 percent are in medicine, 7.1 percent in law and jurisprudence, 7.1 percent in general business/commerce, and about 6.0 percent in general engineering, civil engineering, and mechanical engineering (Lemieux and Riddell, 2015).

create an additional personal income tax bracket with a new, higher tax rate applied to upper income earners. Table 1 summarizes these changes from 2009 to 2018.

Most increases in the personal income tax since 2009 have come in the form of new income tax brackets with higher tax rates. The exception is New Brunswick, where the provincial government initially lowered, then raised, tax rates for every income tax bracket. New Brunswick once again reduced tax rates on upper-income earners in 2016, yet each of the province's tax rates are higher than they were in 2009.¹⁰ Some tax rates in other jurisdictions, however, have been reduced over the years. For example, Ontario's lowest rate was reduced from 6.05 to 5.05 percent in 2010 and the federal government enacted a reduction in 2016, decreasing the 22.0 percent rate to 20.5 percent. But most tax changes have brought new, higher tax rates.

Nova Scotia started the trend of increasing marginal tax rates on upper income earners in 2010 when it added a provincial income tax bracket with a tax rate of 21.00 percent applied to incomes over \$150,000. The previous top personal income tax rate was 19.25 percent on incomes over \$93,000. Canada's two most populous provinces, Ontario and Quebec, enacted similar changes in 2012 and 2013, respectively. Ontario's top provincial income tax rate (including surtaxes) is currently 20.53 percent for incomes over \$220,000, compared to the previous rate of 17.41 percent on incomes over \$78,370 in 2011. Although Quebec's statutory provincial tax rates are not directly comparable because of the federal abatement, the Quebec government has introduced a new rate of 25.75 percent for incomes over \$100,000 in 2013 and over \$104,765 in 2018 (in 2012, 24.00 percent on incomes over \$80,200).¹¹

In 2016, the federal government created a new top federal tax rate of 33 percent on incomes over \$200,000, whereas the previous top rate was 29 percent on incomes above approximately \$140,000.

The only provinces that did not enact changes to the top provincial personal income tax rates (or make any other changes to provincial tax rates) during this period were Manitoba and Prince Edward Island (see table 1). Furthermore, Saskatchewan also bucked the trend because its changes effective July 1, 2017 were to *reduce* personal income tax rates by a half percentage point across all brackets.

¹⁰ Personal income tax rates in New Brunswick have been remarkably volatile, with changes in provincial tax rates almost every year starting in 2009.

¹¹ The federal abatement results in Quebecers paying less in federal taxes than other provinces. A direct comparison between statutory provincial rates, without adjusting for the abatement, can be misleading in terms of judging the differences in tax rates paid in Quebec versus other provinces.

Table 1: Summary of Recent Changes to Canada's Personal Income Tax Rates,¹ Federal and Provincial, 2009 to 2018

Jurisdiction	Summary
Federal	The federal government created a new personal income tax bracket in 2016 with an income tax rate that is higher than the previous top income tax bracket. The new tax bracket has a tax rate of 33.00% and is applied to incomes over \$205,842.
British Columbia	In 2014, the British Columbia government added a new, temporary personal income-tax bracket with a tax rate that is higher than the previous top income-tax bracket. The new tax bracket was 16.80% applied to incomes over \$150,000. This tax bracket was eliminated for the 2016 tax year and the top tax rate returned to its previous level. But in 2018, the new elected British Columbia government reverted this tax rate cut and added back the tax bracket of 16.80%, which is applied to incomes over \$150,000.
Alberta	In 2015, the Alberta government eliminated the single tax rate of 10.00%, creating a total of five separate rates. The new personal tax rate structure is as follows: 10% on income between \$18,915 and \$128,145; 12% on income between \$128,145 and \$153,773; 13% on income between \$153,773 and \$205,031; 14% on income between \$205,031 and \$307,547; and 15% on income over \$307,547.
Saskatchewan	In 2017, the Saskatchewan government reduced each personal income tax bracket by 0.5%age points effective July 1, 2017. The three tax brackets now have tax rates of 10.5%, 12.5% and 14.5% respectively.
Manitoba	No changes.
Ontario	In 2010, the Ontario government reduced its lowest income tax rate from 6.05% to 5.05%. In 2012, the Ontario government added a new personal income tax bracket with a rate that is higher than the previous top personal income tax bracket. The new top rate was 18.97% and applied to income over \$500,000. In 2014, the income threshold for this rate was lowered to \$150,000 and another personal income tax bracket was added with a rate of 20.53% applied to income over \$220,000.
Quebec	In 2013, the Quebec government added a new personal income tax bracket with a rate that is higher than the previous top tax bracket. The new top tax rate is 25.75% applied to income over \$104,765 in 2018. In 2017, the Economic Plan Update announced that the tax rate for the lowest tax bracket would be reduced from 16% to 15%, retroactively to January 1, 2017.
New Brunswick ²	From 2008 to 2011, the New Brunswick government lowered the personal income tax rate for each of the income tax brackets. However, in 2013 the New Brunswick government partly reversed these tax rate cuts. For example, the top tax rate went down from 17.95% in 2008 to 14.30% in 2010 and then back to 17.84% by 2014. In 2015, the government added two new tax brackets with tax rates that are higher than the previous top tax bracket. The rates for the new tax brackets were 21.00% and 25.75% for incomes over \$150,000 and \$250,000 respectively. The top tax bracket has now been removed and the new top rate is 20.30% on incomes over \$154,382.

Table 1: Summary of Recent Changes to Canada’s Personal Income Tax Rates,¹ Federal and Provincial, 2009 to 2018

Jurisdiction	Summary
Nova Scotia	In 2010, the Nova Scotia government added a new tax bracket with a tax rate that is higher than the previous top personal income tax bracket. The new tax bracket has an income tax rate of 21.00% applied to income over \$150,000. At the same time, the Nova Scotia government removed its surtax, which effectively eliminated a tax bracket and reduced the second highest tax rate from 18.34% to 17.50%.
Prince Edward Island	No changes.
Newfoundland & Labrador	Starting in 2010, the Newfoundland government decreased the tax rates for the top and middle personal income tax brackets, from 15.50% to 13.30% and 12.80% to 12.50%, respectively. However, in 2015, the Newfoundland government added two new personal income tax brackets with tax rates higher than the previous top income tax bracket. The lower of the two new tax brackets originally had a personal income tax rate of 13.80% with a threshold of \$125,000 and the higher new tax bracket had a tax rate of 14.30% which was applied to incomes over \$175,000. In 2016, these rates increased to 14.3% and 15.30%, respectively. Additionally, the tax rates for the 1st bracket increased to 8.20%, the second bracket became 13.50%, and the third bracket increased to 14.55%. In 2017, all tax rates increased to 8.70%, 14.5%, 15.80%, 17.3%, and 18.3%.

Notes:

- 1) Personal income tax rates include surtaxes where applicable.
- 2) The description of changes in New Brunswick starts in 2008 to include the full extent of the decrease in personal income tax rates from 2008 to 2011.

Sources: CRA (2018); PwC (2009-2018); calculations by authors.

Table 2 displays the personal income tax rates and brackets for the federal and provincial governments. The tax brackets that have been added since 2009 are marked in **green**. Alberta stands out for having added four new income tax brackets, compared to the one or two added by other jurisdictions. Previously, Alberta had the unique advantage within Canada of a single, pro-growth tax rate of 10 percent.¹² The highest provincial marginal tax rate in Alberta is now 15 percent, 50 percent higher than the previous rate.

Another notable takeaway from table 2 is the variation in the threshold above which the top personal income tax rates are applied. The thresh-

¹² For a discussion of the advantages of a single personal income tax rate, see Clemens, 2008.

Table 2: Federal and Provincial Personal Income Tax Brackets Added from 2009 to 2018¹ (Marked in Green)

Federal		Manitoba		Nova Scotia	
\$0 – \$11,809	0.00%	\$0 – \$9,382	0.00%	\$0 – \$8,481	0.00%
\$11,809 – \$46,605	15.00%	\$9,134 – \$31,843	10.80%	\$8,481 – \$29,590	8.79%
\$46,605 – \$93,208	20.50%	\$31,843 – \$68,821	12.75%	\$29,590 – \$59,180	14.95%
\$93,208 – \$144,489	26.00%	Over \$68,821	17.40%	\$59,180 – \$93,000	16.67%
\$144,489 – \$205,842	29.00%			\$93,000 – \$150,000	17.50%
Over \$205,842	33.00%	Ontario^{2,3}		Over \$150,000	21.00%
British Columbia		\$0 – \$10,354	0.00%		
\$0 – \$10,412	0.00%	\$10,354 – \$42,960	5.05%	Prince Edward Island²	
\$10,412 – \$39,676	5.06%	\$42,960 – \$75,653	9.15%	\$0 – \$8,660	0.00%
\$39,676 – \$79,353	7.70%	\$75,653 – \$85,923	10.98%	\$8,660 – \$31,984	9.80%
\$79,353 – \$91,107	10.50%	\$85,923 – \$89,134	13.39%	\$31,984 – \$63,969	13.80%
\$91,107 – \$110,630	12.29%	\$89,134 – \$150,000	17.41%	\$63,969 – \$98,701	16.70%
\$110,630 – \$150,000	14.70%	\$150,000 – \$220,000	18.97%	Over \$98,701	18.37%
Over \$150,000	16.80%	Over \$220,000	20.53%		
Alberta		Quebec		Newfoundland & Labrador	
\$0 – \$18,915	0.00%	\$0 – \$15,012	0.00%	\$0 – \$9,247	0.00%
\$18,915 – \$128,145	10.00%	\$15,012 – \$43,055	15.00%	\$9,247 – \$36,926	8.70%
\$128,145 – \$153,773	12.00%	\$43,055 – \$86,105	20.00%	\$36,926 – \$73,852	14.50%
\$153,773 – \$205,031	13.00%	\$86,105 – \$104,765	24.00%	\$73,852 – \$131,850	15.80%
\$205,031 – \$307,547	14.00%	Over \$104,765	25.75%	\$131,850 – \$184,590	17.30%
Over \$307,547	15.00%	New Brunswick		Over \$184,590	18.30%
Saskatchewan		\$0 – \$10,043	0.00%		
\$0 – \$16,065	0.00%	\$10,043 – \$41,675	9.68%		
\$16,065 – \$45,225	10.50%	\$41,675 – \$83,351	14.82%		
\$45,225 – \$129,214	12.50%	\$83,351 – \$135,510	16.52%		
Over \$129,214	14.50%	\$135,510 – \$154,382	17.84%		
		Over \$154,38	20.30%		

Notes:

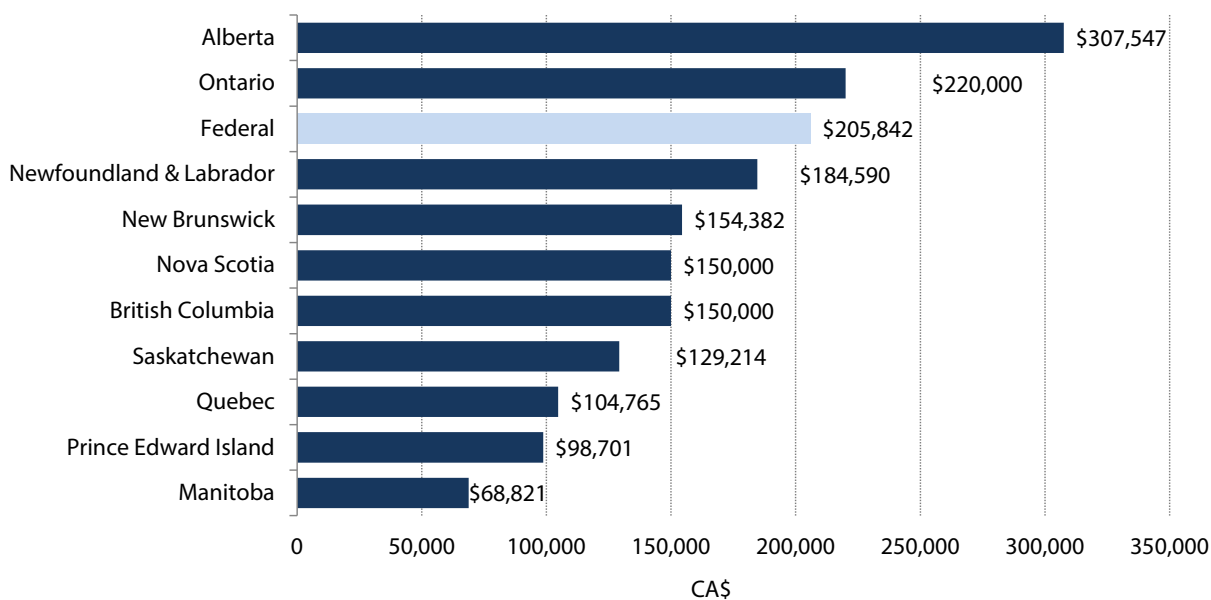
1) Thresholds and rates are for the 2018 tax year. The federal and some provincial governments changed tax rates in existing tax brackets in addition to adding new tax brackets. For example, the federal reduced its second tax rate from 22.00% to 20.50%. New Brunswick and Newfoundland & Labrador is the only province that increased tax rates in tax brackets that existed in 2009.

2) Includes surtax.

3) These tax rates are the current rates and not the proposed tax rates, as per the Ontario 2018 Budget. These tax changes were not tabled, and the government was defeated in a June 2018 election, so the proposed tax changes will not happen.

Sources: CRA (2018); Revenu Quebec (2018); calculations by authors.

Figure 1: Income above which the Top Personal Income Tax Rate is Applied, by Jurisdiction, 2018



Note: Thresholds take into account surtaxes where applicable.

Sources: CRA (2018); Revenu Quebec (2018); calculations by authors.

olds range from \$68,821 in Manitoba to \$307,547 in Alberta. The federal threshold for the top income tax rate is \$205,842. Figure 1 illustrates the range of thresholds.

The thresholds at which tax rates are applied are important to consider as part of assessing overall competitiveness. Simply comparing the top rate across jurisdictions can be misleading if the top tax rate in one jurisdiction is applied to a much lower level of income. For example, consider the case of Manitoba, where the provincial top rate is 17.40 percent. The rate considered on its own suggests that Manitoba's top tax rate makes its competitiveness mid-range among Canadian provinces. However, the threshold for Manitoba's top marginal rate is unusually low (\$68,821). Compare this to Nova Scotia, where the top provincial rate is considerably higher (21.00 percent) but the income threshold (\$150,000) is more than twice the highest threshold in Manitoba. So to give a specific example, someone earning the relatively high income of \$149,000 would face a marginal tax rate of 17.50 percent in Nova Scotia and an almost identical 17.40 percent in Manitoba, which shows that simply looking at top bracket rates can give a misleading idea of the relative tax treatment among the provinces.

Table 3: Provincial Statutory Marginal Tax Rates¹ at Various Income Levels, 2018

	Marginal tax rate (%) at \$50,000	Marginal tax rate (%) at \$75,000	Marginal tax rate (%) at \$150,000	Marginal tax rate (%) at \$300,000	Number of tax brackets
British Columbia	7.70	7.70	16.80	16.80	6
Alberta	10.00	10.00	12.00	14.00	5
Saskatchewan	12.50	12.50	14.50	14.50	3
Manitoba	12.75	17.40	17.40	17.40	3
Ontario	9.15	9.15	18.97	20.53	7
Quebec ²	16.62	16.62	20.97	20.31	4
New Brunswick	14.82	14.82	17.84	20.30	5
Nova Scotia	14.95	16.67	21.00	21.00	5
Prince Edward Island	13.80	16.70	18.37	18.37	4
Newfoundland & Labrador	14.50	15.80	17.30	18.30	5

Notes:

1) Personal income tax rates include surtaxes where applicable.

2) For comparability, the Quebec tax rates are adjusted downwards due to the federal abatement. The federal abatement results in Quebecers paying less in federal taxes than other provinces. A direct comparison between statutory provincial rates, without adjusting for the abatement, can be misleading in terms of judging the differences in tax rates paid in Quebec versus other provinces.

Sources: CRA (2018); Revenu Quebec (2018); calculations by authors.

For this reason, top tax rates alone are not precisely comparable because they do not capture the marginal tax rate that people with equivalent incomes face in the jurisdictions compared. A comparison of the marginal rates at a particular income level helps mitigate this problem, although it admittedly does not capture differences in tax credits and deductions, which can affect the effective tax rate. Nonetheless, the point is that, when measuring the competitiveness of tax rates between jurisdictions, as much as possible it is important to account for differences in income thresholds when comparing marginal tax rates.

Table 3 compares marginal income tax rates across the provinces at different income levels—\$50,000, \$75,000, \$150,000, and \$300,000. The marginal rate at the \$300,000 income level represents the top combined

marginal rate in every province except Alberta (see figure 1).¹³ This comparison at different income levels allows for an assessment of the competitiveness of the various provincial income tax systems. For example, marginal tax rates are lowest in British Columbia at the \$50,000 and \$75,000 income levels, and British Columbia's marginal tax rate at \$150,000 is the third lowest. By contrast, the rates in Nova Scotia are among the highest at each income level. Ontario is an interesting case because the provincial marginal tax rates are relatively more competitive at incomes of \$50,000 and \$75,000 but much less so at \$150,000 and \$300,000.

Increases in combined federal and provincial marginal income tax rates

While the federal government is responsible for administering the personal income tax system, both the federal and provincial governments maintain their own structure of rates and thresholds for taxing personal income.¹⁴ Because Canadians pay both federal and provincial taxes, considering the tax rates separately does not capture the full extent of the personal income taxes they pay. An analysis of tax competitiveness must account for both the federal and provincial tax rates. Since most of the increases in personal income tax rates since 2009 have been to the top rate, the focus of the discussion will be on the combined top rate.¹⁵

Table 4 shows all 10 top provincial personal income tax rates, the federal top tax rate, and the combined federal-provincial top rates for 2009 and 2018. In 2009, the highest top combined personal income tax rate was 48.25 percent, in Nova Scotia, followed closely by 48.22 percent in Quebec. Alberta had the lowest combined rate at 39.00 percent. In 2018, up-

¹³ When Alberta's new top rate was instituted in 2016, it was at the \$300,000 threshold. Since then, the threshold for Alberta's top income tax rate has risen to \$307,547 due to indexation (see table 2). We have decided to retain the clean \$300,000 cutoff for our analysis in figure 1, even though it means we are actually only catching the second highest tax bracket in Alberta by doing so.

¹⁴ Prior to 2000, provinces other than Quebec determined the income tax owed by multiplying the provincial rate by the federal rate, a so-called tax-on-tax (Emes and Walker, 2001). After 2000, provincial governments moved to the current system of tax rates that are applied to taxable income rather than federal tax rates.

¹⁵ The combined marginal tax rates for incomes of \$50,000 and \$75,000 has decreased in every province (except for Newfoundland & Labrador for incomes of \$50,000) from 2009 to 2018, largely due to the 2016 reduction in the federal income tax rate applied to income between \$45,000 and \$90,000. The combined marginal rate at \$150,000 either increased or remained the same in each province, except for Saskatchewan, where it decreased slightly by 1.1 percent.

Table 4: Top Statutory Marginal Income Tax Rate,¹ Provincial, Federal, and Combined, 2009 and 2018

	2009			2018		
	Top provincial rate	Top federal rate	Combined top rate	Top provincial rate	Top federal rate	Combined top rate
British Columbia	14.70	29.00	43.70	16.80	33.00	49.80
Alberta	10.00	29.00	39.00	15.00	33.00	48.00
Saskatchewan	15.00	29.00	44.00	14.50	33.00	47.50
Manitoba	17.40	29.00	46.40	17.40	33.00	50.40
Ontario	17.41	29.00	46.41	20.53	33.00	53.53
Quebec ²	24.00	24.22	48.22	25.75	27.56	53.31
New Brunswick	17.00	29.00	46.00	20.30	33.00	53.30
Nova Scotia	19.25	29.00	48.25	21.00	33.00	54.00
Prince Edward Island	18.37	29.00	47.37	18.37	33.00	51.37
Newfoundland & Labrador	15.50	29.00	44.50	18.30	33.00	51.30

Notes:

(1) Personal income tax rates include surtaxes where applicable.

(2) The federal personal income tax rate is lower in Quebec due to the Quebec Abatement, which is applied because Quebec has opted out of various federal programs. For more information, see <http://www.fin.gc.ca/fedprov/altpay-eng.asp>

Sources: CRA (2018); PwC (2009); Revenu Quebec (2018); calculations by authors.

per-income earners in Nova Scotia face the highest marginal income-tax rate at 54.00 percent, an increase of 5.75 percentage points. Ontario now has the second highest marginal personal income tax rate (53.53 percent), followed by Quebec (53.31 percent). At 47.50 percent, Saskatchewan has the lowest combined rate in 2018, slightly below Alberta at 48.00 percent.

Notably, in 2009, upper-income earners in all provinces faced marginal tax rates that were below 50.0 percent. However, as a result of the changes that have since been implemented, upper-income earners in seven out of 10 provinces—Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland & Labrador—now face a marginal tax rate above 50.0 percent. This means that after a certain income threshold, upper-income earners in these provinces lose to taxes more than 50 cents of every extra dollar of labour income earned.¹⁶

¹⁶ To reiterate, the analysis here and throughout this publication assumes that no

Figure 2a: Growth in Top Combined Statutory Marginal Income Tax Rates from 2009 to 2018 (in Percentage Points)

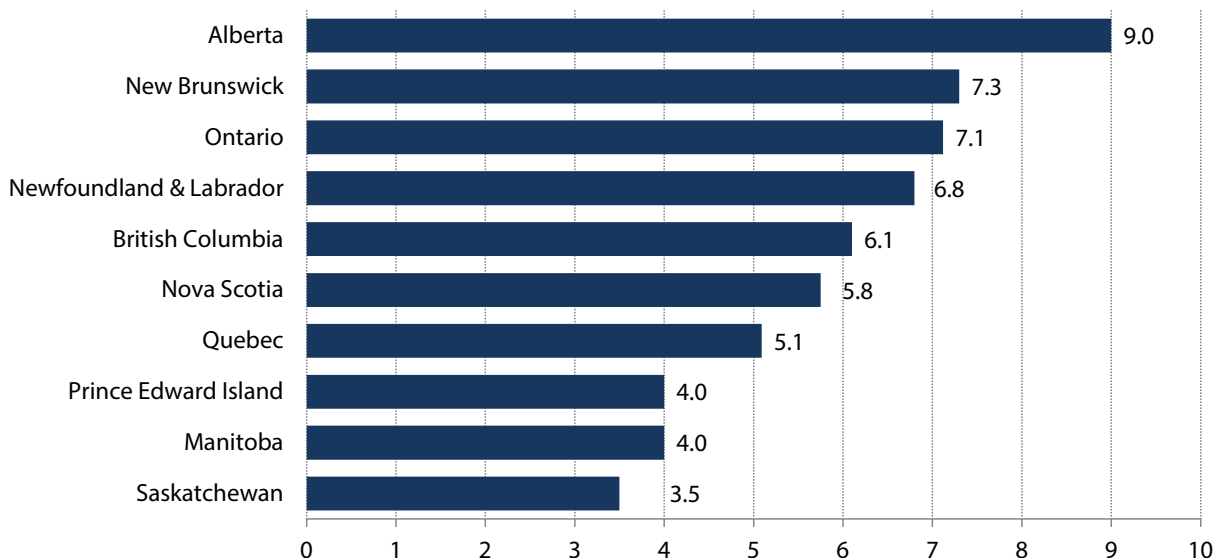
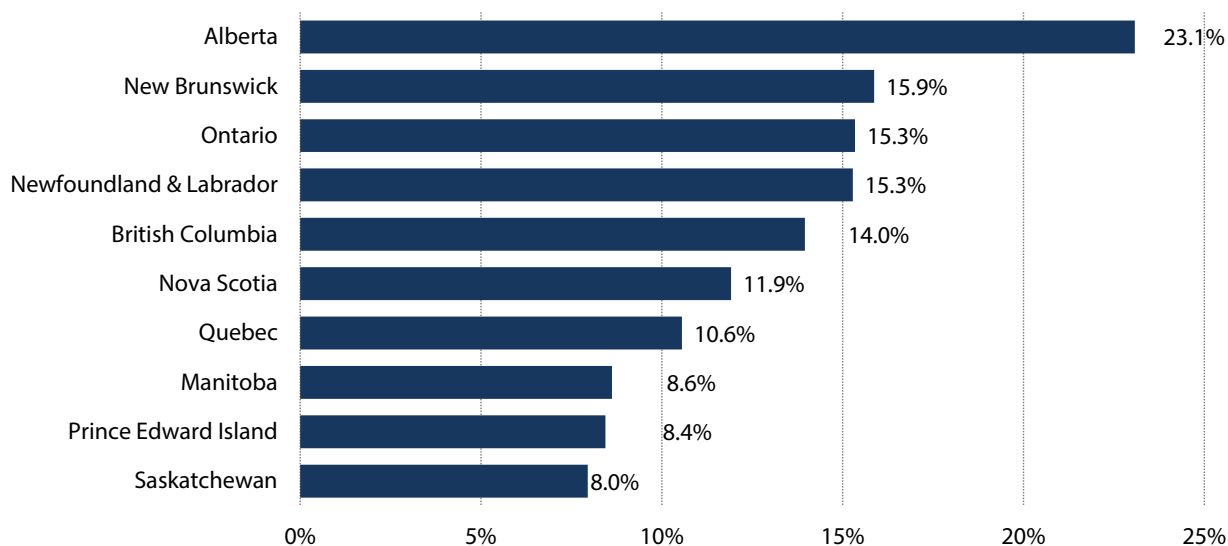


Figure 2b: Growth in Top Combined Statutory Marginal Income Tax Rates from 2009 to 2018 (in Percent)



Notes:

- 1) Personal income tax rates include surtaxes where applicable.
- 2) Quebec's tax rates are adjusted for the federal abatement.

Source: Table 4.

Figures 2a and 2b display the percentage-point increase and percentage change, respectively, of the top combined federal-provincial personal income tax rate by province from 2009 to 2018. The largest increase is in Alberta, where the combined top tax rate went from 39.0 to 48.0 percent, an increase of 9.0 percentage points (or 23.1 percent). In other words, Alberta had large increases that left its top rate lower than most other provinces but, even so, because it started from such a low base it also had the largest proportional increase in its top rate. Traditionally, Alberta had Canada's most competitive top tax rate but now that advantage is much less pronounced. New Brunswick saw the second largest increase in combined top tax rates, 7.3 percentage points (or 15.9 percent). This is despite the decrease in tax rates announced by the provincial government in the 2016 budget. Saskatchewan saw the smallest percentage-point increase (3.5 percentage points) as well as the smallest percentage change (an 8.0 percent increase).

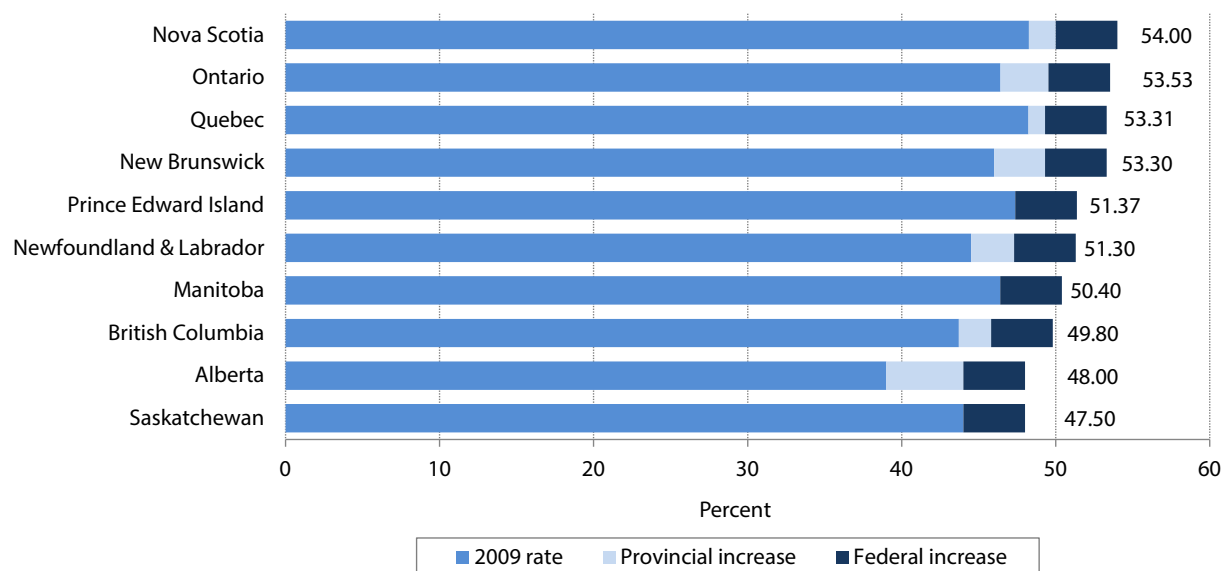
Ontario and Quebec saw considerable growth in their highest combined federal-provincial marginal tax rates. Ontario's combined top tax rate grew by 7.1 percentage points, an increase of 15.3 percent. In Quebec, the combined top tax rate increased by 5.1 percentage points (or 10.6 percent). Notably, the combined top tax rates in both Quebec and Ontario were below 50.0 percent in 2009 but have both since climbed above the 50.0 percent threshold.

Figure 3 displays the combined top rates in 2009 and 2018, while illustrating how much of the change in each province has been driven by increases in the provincial rate and how much by increases in federal rate. In most of the provinces, the increase in the combined top personal income tax rate was driven by changes at both the federal and provincial levels. (Only the provinces of Manitoba and Prince Edward Island saw no change in the top provincial marginal income tax rate, while Saskatchewan actually saw a slight *decrease* of a half percentage point.) Even so, except for Alberta, the increase in the federal top rate was larger than the provincial increase between 2009 and 2018. Furthermore, without the federal tax changes, the highest combined federal-provincial top tax rate would have been 50.00 percent, in Nova Scotia, followed closely by 49.53 percent in Ontario and 49.31 percent in Quebec. In other words, the combined top rate would not have exceeded 50.00 percent anywhere in Canada.

The federal increase in the tax rate for upper-income earners prompted the New Brunswick government to reduce its own provincial top rate (New Brunswick, Department of Finance, 2016). Without the provincial reduction, the combined top rate would have been 58.75

use is being made of tax credits or other tax mechanisms available in the tax code to reduce the effective marginal rate.

Figure 3: Top Combined Statutory Marginal Income Tax Rate in 2009 and 2018, with Federal and Provincial Changes Delineated



Notes:

- 1) Personal income tax rates include surtaxes where applicable.
- 2) Quebec's tax rates are adjusted for the federal abatement.
- 3) Saskatchewan's provincial top rate was 15.0% in 2009 and 14.5% in 2018, a decrease of 0.5 percentage points.

Source: Table 4.

percent, instead of 53.30 percent. Despite the provincial government's actions, the combined top rate in New Brunswick has increased relative to the 2009 rate.¹⁷

The trend throughout Canada in recent years has been towards higher marginal income tax rates on upper-income earners. This has important consequences for Canada's ability to attract and retain the highly skilled workers, professionals, and entrepreneurs who are key contributors to overall economic prosperity. Even before the most recent changes to federal tax rates, Canada's tax rates compared unfavourably to rates in the United States and other G7 countries (Murphy, Clemens, and Veldhuis,

¹⁷ In addition, the New Brunswick government increased other taxes such as the HST and corporate income taxes. In 2016, the provincial portion of the HST increased from 8 to 10 percent, and the general corporate income tax rate increased from 12 to 14 percent (New Brunswick, Department of Finance, 2016).

2013). In fact, the two previous governments (one Liberal and the other Conservative) in their respective economic plans called for a reduction in personal income taxes to encourage skilled workers to work in Canada (Canada, Department of Finance, 2005, 2006). Since then, the marginal tax rates on upper-income earners have generally become less, not more, competitive. The next two sections compare Canada's current personal income tax rates with competitive rates offered by the United States and members of the OECD.

2. Statutory Marginal Income Tax Rates in Canada Compared to the United States

The United States is Canada's most direct competitor in attracting and retaining highly skilled labour, entrepreneurs, and investors. Like Canada, the United States has both federal and subnational (state) personal income tax rates.¹⁸ The combined federal and state tax rates differ among states just as they differ among provinces in Canada. The combined top tax rate in the United States ranges from a high of 50.3 percent, in California, to a low of 37.0 percent in states that have no state-level personal income tax, namely, Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming.¹⁹ To get a sense of how competitive Canada is as a result of its top personal income tax rates, it is useful to compare the combined statutory marginal tax rates on labour income across Canadian and American subnational jurisdictions. This includes the 10 provinces, the 50 states, and Washington, DC.²⁰

¹⁸ In the United States, local governments also impose income taxes. According to the Tax Foundation, over 23 million Americans in 17 states live in jurisdictions with local income taxes (Henchman and Sapia, 2011). That represents about 7 percent of the population. Local income tax rates are typically between 1 and 3 percent and can be as low as a flat charge of \$2 or \$3 per week (in West Virginia). Local income tax is not included in this report's analysis because the rates differ within a state and the number of local governments that impose an income tax is typically small. For example, again according to the Tax Foundation, San Francisco is the only local government in California with an income tax. In Pennsylvania, on the other hand, there are nearly 3,000 local governments that impose a local income tax, more than half of the national total of 4,943.

¹⁹ Since these states have no personal income taxes at state level, the 37 percent top tax rate is solely the federal rate.

²⁰ This measure of US tax rates excludes the deductibility of state and local taxes from the federal personal income tax as well as other tax deductions. US taxpayers who elect to itemize deductions on their federal tax returns can deduct either state and local income taxes or sales taxes, but not both (see United States, Internal Revenue Service, 2018a). In 2016, 30.3 percent of US federal income tax returns had itemized deductions (United States, Internal Revenue Service, 2018b).

Figure 4 displays combined top personal income tax rates for the 61 Canadian and American jurisdictions. Of the 61 jurisdictions, Nova Scotia has the highest combined top rate (54.00 percent), followed by Ontario (53.53 percent), Quebec (53.31 percent), and New Brunswick (53.30 percent). California, the state with the highest combined top rate in the United States, falls behind seven Canadian jurisdictions with its combined top rate of 50.30 percent. Nine Canadian jurisdictions occupy the list of 10 jurisdictions with the highest combined marginal income tax rates and all 10 provinces appear in the top 12. There are a total of 49 US jurisdictions with combined top tax rates lower than *all* Canadian provinces. Overall, figure 4 suggests that Canada's top personal income tax rates are generally uncompetitive with the United States.

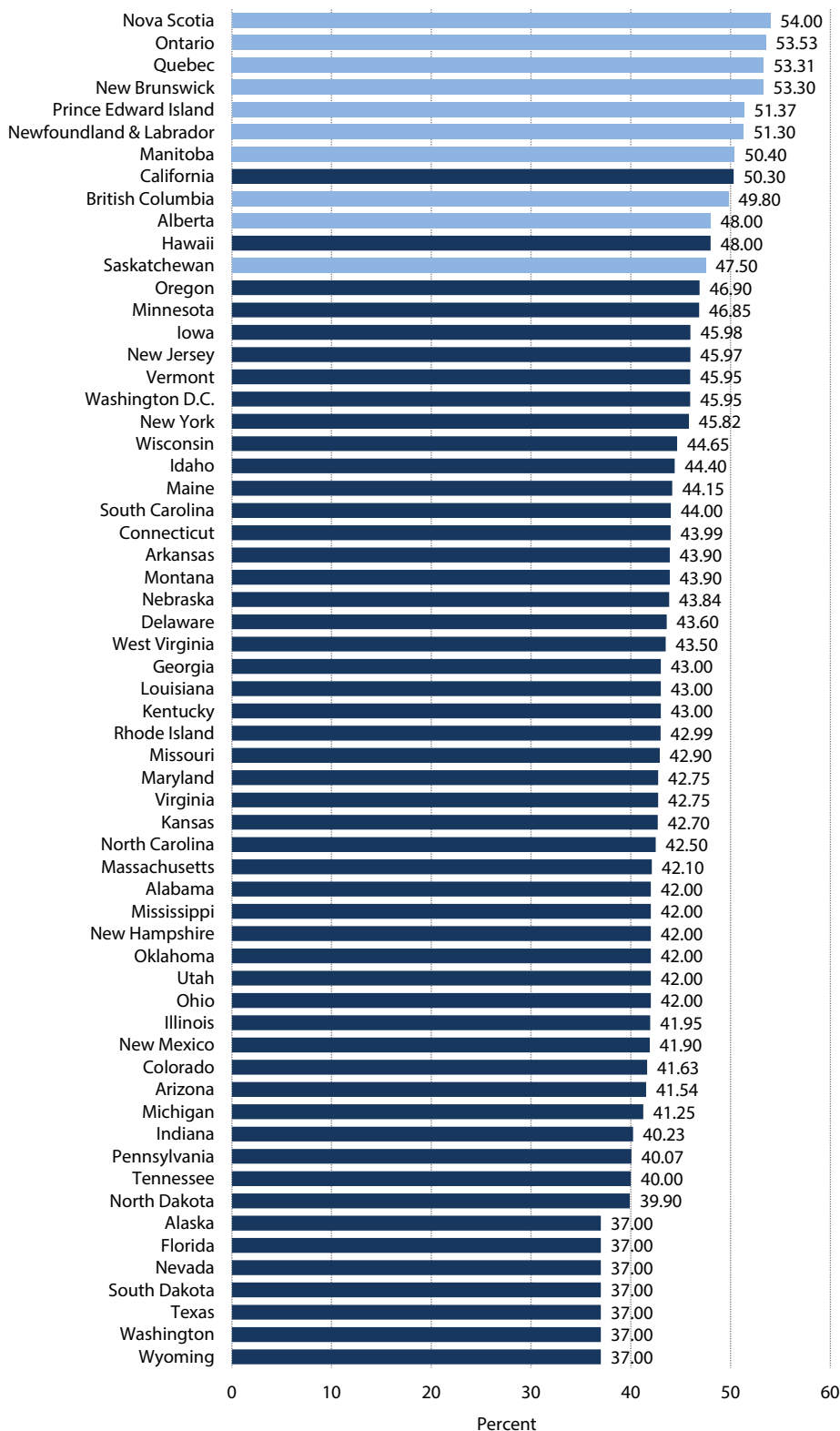
Importantly, figure 4 does not account for the fact that Canadian top tax rates tend to apply at lower levels of income than in the United States. For example, California's top personal income tax rate only applies to income above US\$1 million.²¹ Similarly, the top marginal tax rate in New York is applied to incomes above about US\$1.1 million. The US federal top marginal tax rate for a single filer applies to incomes over US\$500,000 in 2018 (Scarboro, 2018). By comparison, Canada's federal top marginal tax rate applies to income over CA\$205,842 and Alberta is the province with the highest income threshold for the top marginal rate at CA\$307,547.

An individual earning the equivalent of CA\$307,547 in California or New York faces a lower marginal income tax rate than what is implied by the combined top tax rate. To adjust for differences in income thresholds, figure 5 presents the combined statutory marginal personal income tax rates at the equivalent income of CA\$300,000 for each Canadian and US jurisdiction since this income level is the highest threshold (except for Alberta) at which a Canadian combined top rate is applied.²² Notably, at this income level, the US federal marginal rate is 35 percent rather than the top federal rate of 37 percent.

²¹ The US tax rate thresholds are reported for a single tax filer. Different thresholds generally apply depending on whether the tax filer is single, married and filing jointly, married but filing separately, or head of a household. For details, see US Tax Center, 2018.

²² To repeat our explanation from a previous footnote: Originally, the top Alberta income tax threshold was \$300,000, but to account for price inflation the top threshold is now \$307,547. In our analysis, we have decided to retain the clean \$300,000 cutoff, at the cost of now only catching the second highest tax bracket in Alberta. Also note that in figure 5, Canadian dollars are converted into US dollars using the average noon exchange rate. We also did the analysis using the purchasing power parity rate provided by the OECD, which produced very similar results (see OECD, 2018b).

Figure 4: Top Combined Statutory Marginal Income Tax Rate in Canadian Provinces and US States, 2018



Notes:

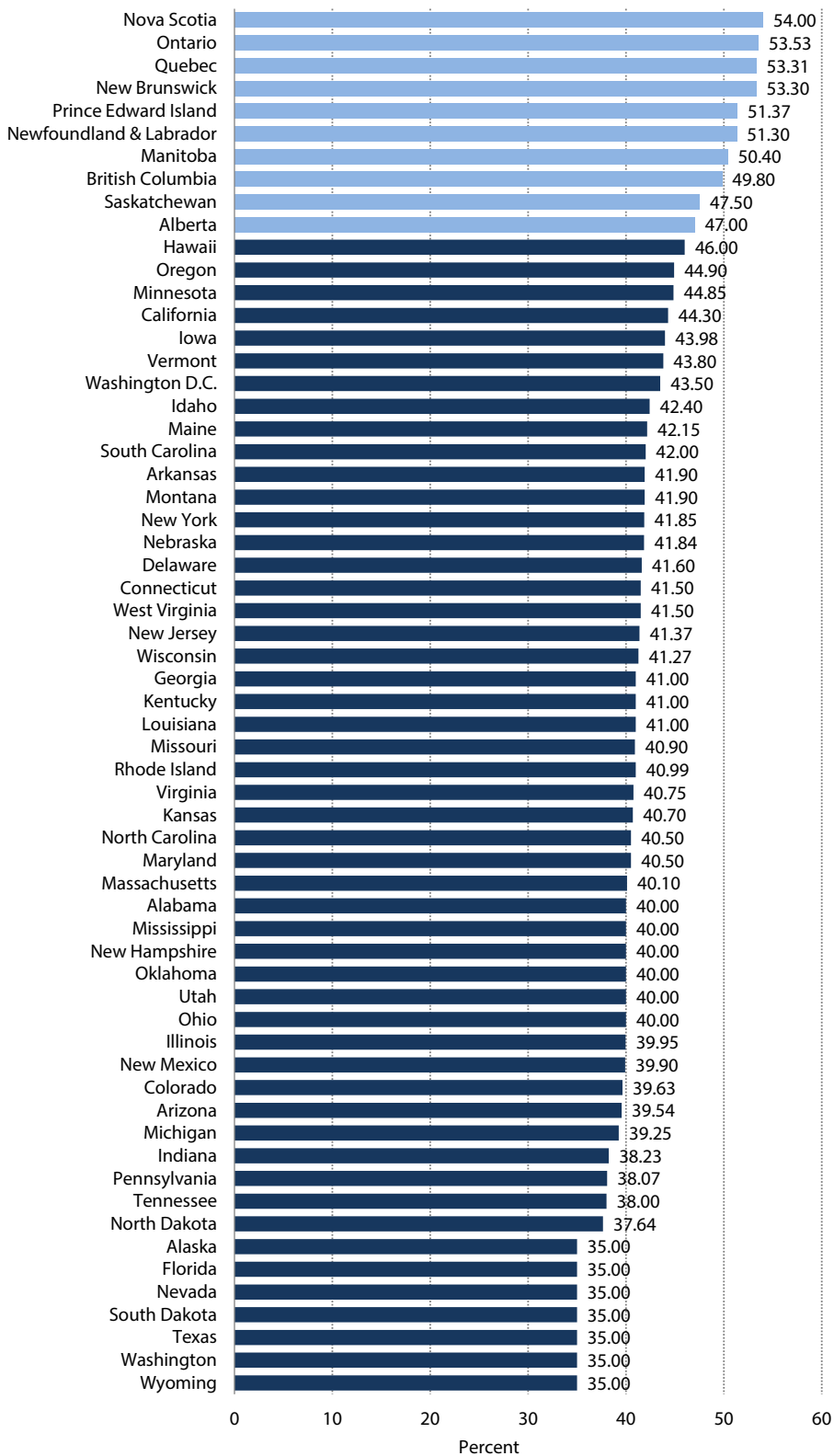
1) Personal income tax rates include surtaxes where applicable. Quebec's tax rate is adjusted for the federal abatement.

2) For US states, local income taxes are excluded.

Sources:

CRA (2018); Revenu Quebec (2018); Scarboro (2018); El-Sibaie (2018); calculations by authors.

Figure 5: Combined Statutory Marginal Income Tax Rate at CA\$300,000 in Canadian Provinces and US States, 2018



Notes:

1) Personal income tax rates include surtaxes where applicable. Quebec's tax rate is adjusted for the federal abatement.

2) For US states, local income taxes are excluded.

3) The 2018 exchange rate for converting Canadian dollars to US dollars in 2018 is 1.2945, which is estimated by the TD Economics (2018) average quarterly projection. At this rate, CA\$300,000 is equivalent to US\$231,750.

Sources:

CRA (2018); Revenu Quebec (2018); Scarborough (2018); El-Sibaie (2018); TD Economics (2018); calculations by authors.

At an income of CA\$300,000, Canadians in every province face a higher marginal tax rate on labour income than Americans in any US state. The province with the lowest marginal tax rate is Alberta (ranked 10th overall) with a rate of 47 percent. Hawaii, ranked next below Alberta, has a marginal tax rate of 46 percent.

An interesting subset of jurisdictions is those with large energy sectors that generally compete for a similar pool of skilled workers and investment. Three of these jurisdictions are Canadian provinces—Alberta, Newfoundland & Labrador, and Saskatchewan—and seven are US states—Alaska, Colorado, Louisiana, North Dakota, Oklahoma, Texas, and Wyoming.²³ All three energy-producing Canadian provinces have higher combined marginal tax rates than the seven energy-producing states. Among these jurisdictions, Newfoundland & Labrador has the highest combined marginal tax rate at 51.30 percent. The tax rates are considerably lower in Alaska, Texas, and Wyoming, where there are no state-level personal income taxes, meaning only the federal rate of 35 percent applies to our benchmark income level. The marginal rate in Alberta (47.0 percent) and Saskatchewan (47.5 percent) is higher than Louisiana (41.0 percent), the energy-producing US jurisdiction with the highest rate. Notably, Alberta was much more competitive prior to the recent changes to provincial and federal income tax rates. As recently as the summer of 2015, Alberta's combined marginal tax rate at CA\$300,000 was just 39.00 percent—the same rate as Louisiana at that time.

Another interesting subset of jurisdictions in figure 5 is Ontario and Quebec plus the US “rust belt” states with large manufacturing sectors: Illinois, Indiana, Michigan, Ohio, and Pennsylvania.²⁴ Ontario and Quebec's combined marginal tax rates are both above 50.00 percent (53.53 percent and 53.31 percent, respectively). In contrast, each of the rust belt states has a combined rate at or below 40 percent. Of the rust belt states, Ohio has the highest combined marginal tax rate (applicable to our benchmark income level) at 40.00 percent.

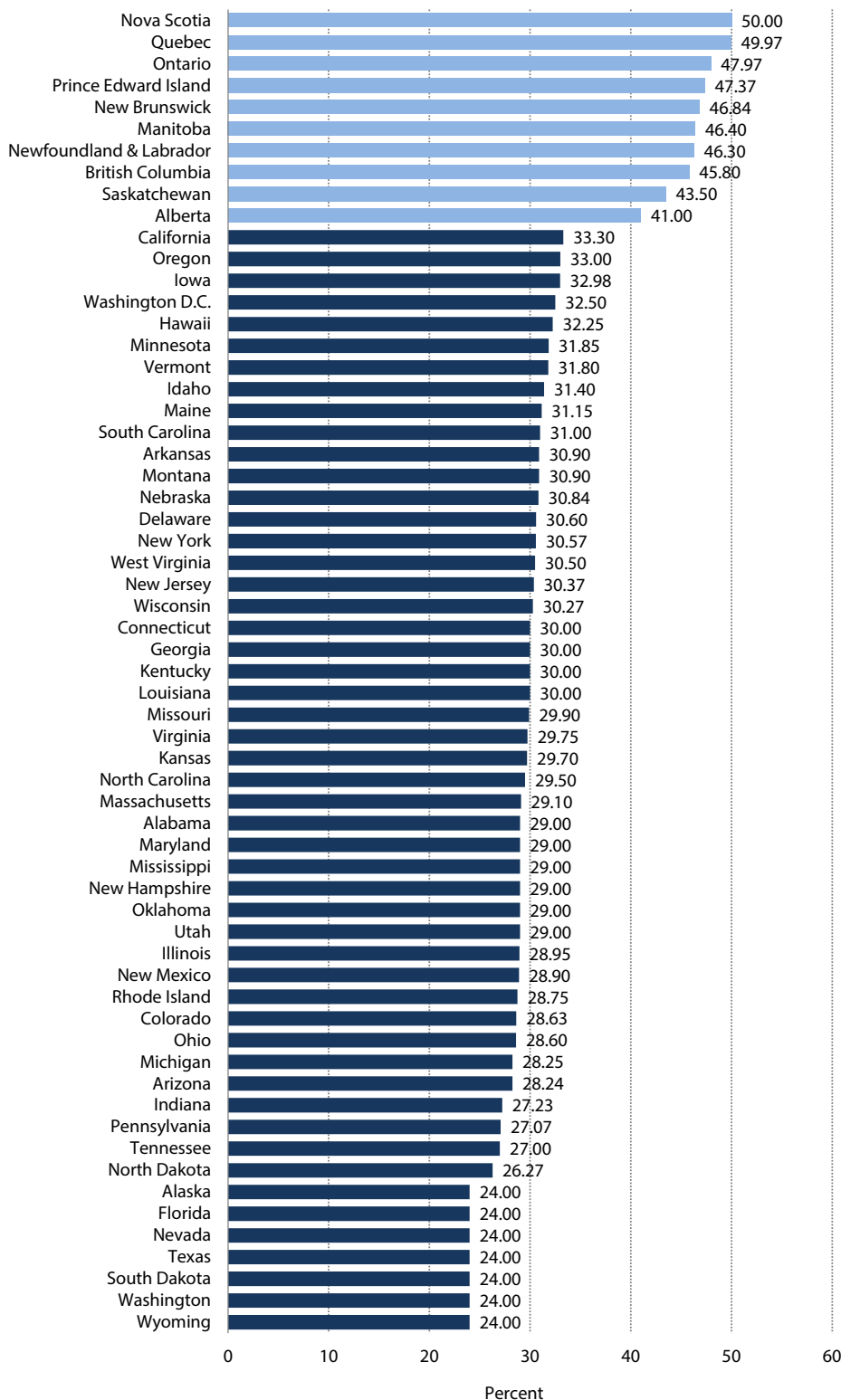
Canada's marginal income tax rates are also uncompetitive at the CA\$150,000 income level.²⁵ Figure 6 compares the combined marginal tax

²³ This list of energy-producing jurisdictions is drawn from Di Matteo et al. (2014), where jurisdictions were selected based on the size of the energy sector (Canada) or the oil and gas sector (United States) as a percentage of the jurisdiction's GDP.

²⁴ The list of rust belt states is drawn from Murphy, Emes, Clemens, and Veldhuis (2015).

²⁵ The new, higher federal income tax rate introduced in 2016 did not change the marginal rate at the \$150,000 income level for 2018. However changes to the tax rate by several provincial governments did increase the combined marginal rate in those provinces. The \$150,000 combined marginal tax rate increased in

Figure 6: Combined Statutory Marginal Income Tax Rate at CA\$150,000 in Canadian Provinces and US States, 2018



Notes:

1) Personal income tax rates include surtaxes where applicable. Quebec's tax rate is adjusted for the federal abatement.

2) For US states, local income taxes are excluded.

3) The 2018 exchange rate for converting Canadian dollars to US dollars in 2018 is 1.2945, which is estimated by the TD Economics (2018) average quarterly projection. At this rate, CA\$150,000 is equivalent to US\$115,875.

Sources:

CRA (2018); Revenu Quebec (2018); Scarboro (2018); El-Sibaie (2018); TD Economics (2018); calculations by authors.

rate at this income level in Canadian provinces and US states. The results in figure 6 are similar to those in figure 5, except that the gap between the lowest Canadian marginal tax rate and the highest US rate is wider. At \$150,000 CAD, Alberta has the lowest Canadian combined marginal tax rate at 41.00 percent. California has the highest combined marginal tax rate among US states, with a rate of 33.30 percent. That represents a gap of 7.7 percentage points, or 23.1 percent, from the highest US rate to the lowest Canadian rate.

Thus far the discussion has focused on the competitiveness of Canada's personal income tax system at income levels directly affected by the tax increases on upper-income earners since 2009. However, the federal government reduced the tax rate on incomes between \$45,000 and \$90,000 from 22.0 to 20.5 percent. Even at income levels in this range, Canada's marginal rates are generally uncompetitive.

Figure 7 shows the combined marginal personal income tax rate for those earning CA\$75,000; figure 8 gives the rate for those earning CA\$50,000. In both cases, Canadian provinces generally have uncompetitive combined marginal tax rates. British Columbia is the only exception in that it is relatively competitive with many US jurisdictions at the \$75,000 income level. In other words, despite the reduction in the federal government's second-lowest income tax rate, Canada remains generally uncompetitive at these income levels compared to the United States.

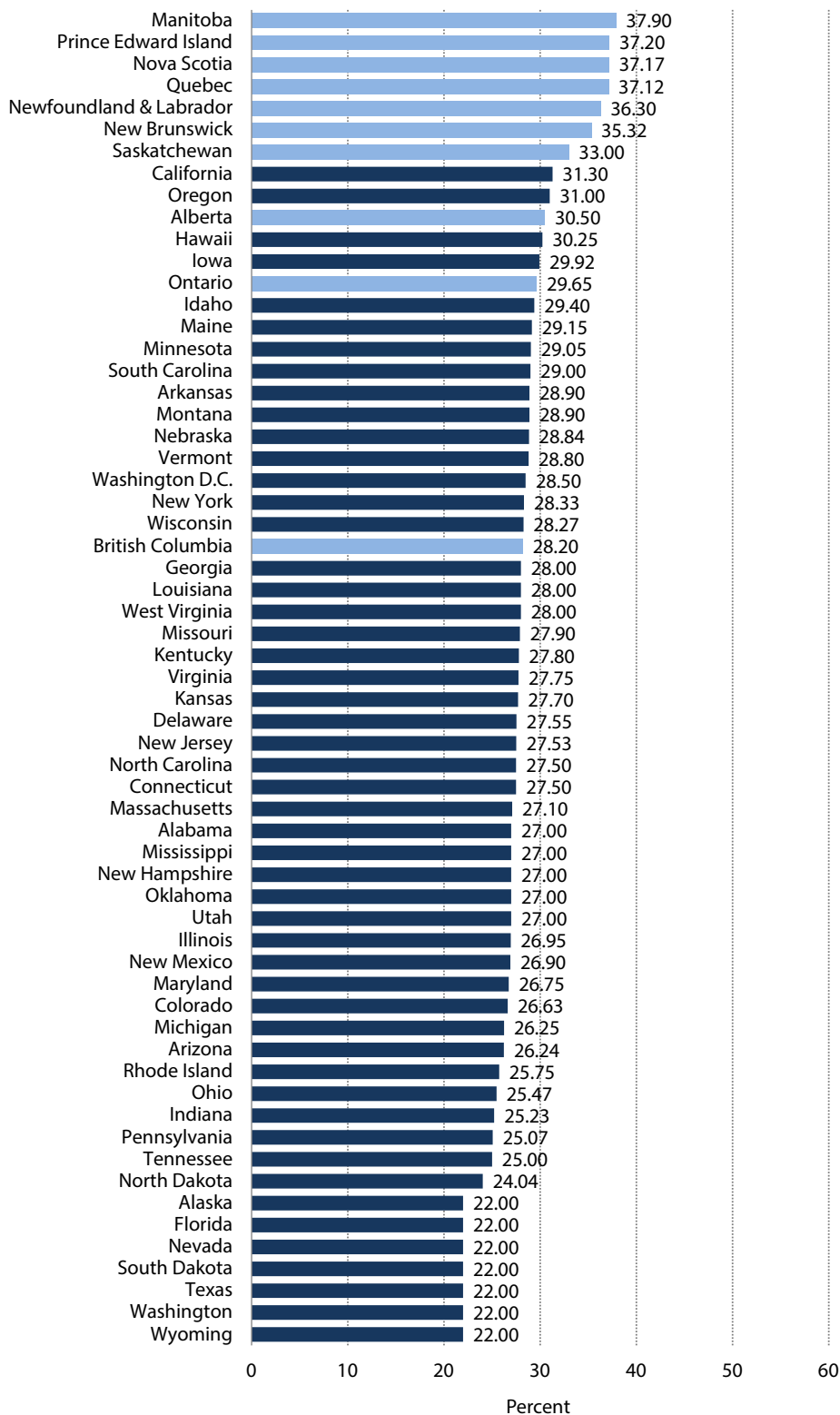
In comparisons at multiple income levels, Canada's overall statutory marginal income tax rates are decidedly uncompetitive compared to those in the United States. This puts Canada at a disadvantage for attracting and retaining skilled and mobile workers.

Trends in corporate income taxation also hurt Canadian competitiveness

This study focuses on Canadian competitiveness as it relates to *personal* income tax rates. However, it is appropriate in this section to outline the drastic changes that have been made to the US corporate income tax rate. Specifically, the Tax Cuts and Jobs Act of 2017 reduced the statutory US corporate income tax rate from 35 percent down to 21 percent, and the corporate Alternative Minimum Tax was eliminated (Tax Foundation, 2017). This change in US policy was very significant, taking the US from

all provinces except for Prince Edward Island and Saskatchewan. In PEI, the combined marginal tax rate remained the same and in Saskatchewan, the tax rate decreased slightly from 2009, by 1.1 percent.

Figure 7: Combined Statutory Marginal Income Tax Rate at CA\$75,000 in Canadian Provinces and US States, 2018



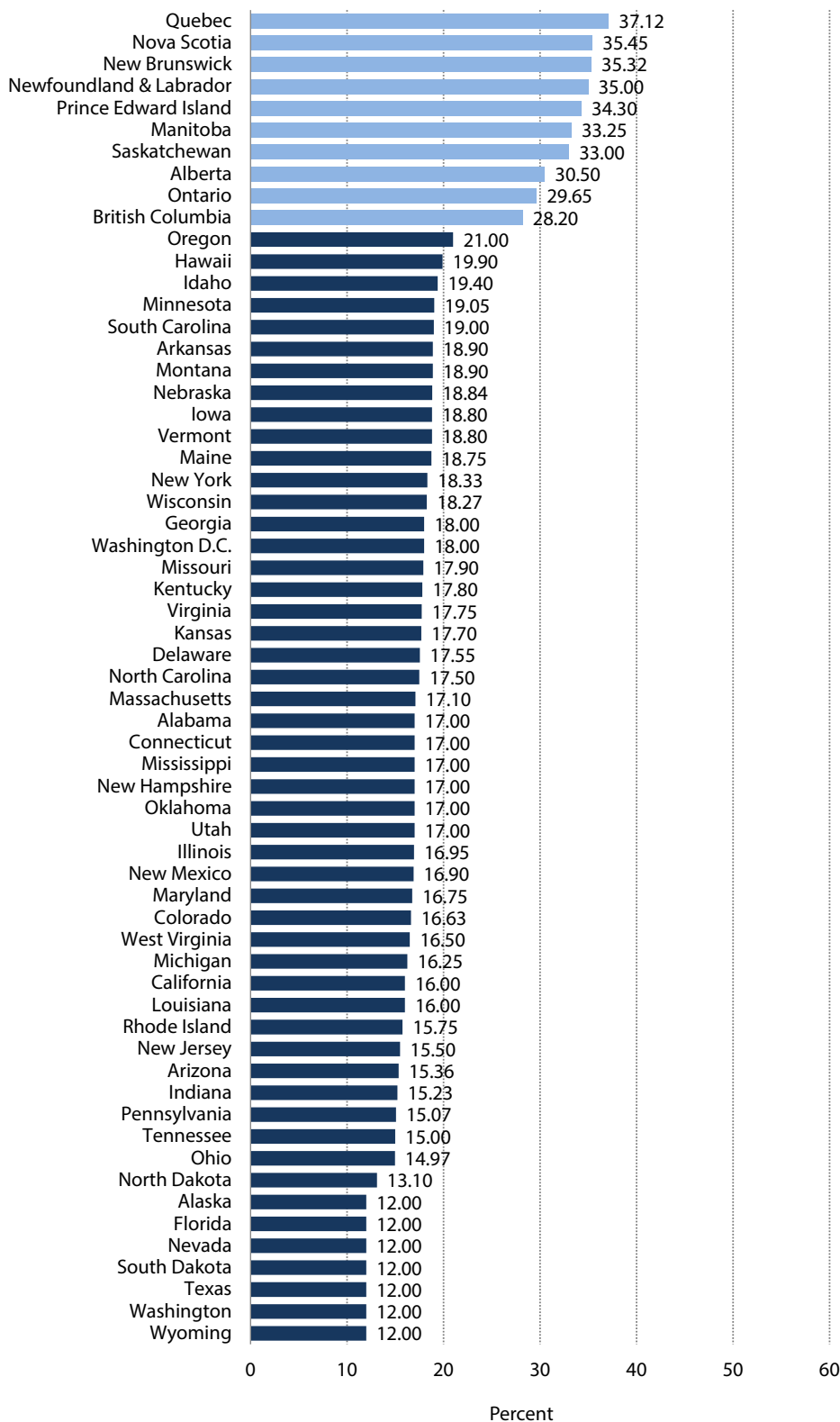
Notes:

- 1) Personal income tax rates include surtaxes where applicable. Quebec's tax rate is adjusted for the federal abatement.
- 2) For US states, local income taxes are excluded.
- 3) The 2018 exchange rate for converting Canadian dollars to US dollars in 2018 is 1.2945, which is estimated by the TD Economics (2018) average quarterly projection. At this rate, CA\$75,000 is equivalent to US\$57,937.

Sources:

CRA (2018); Revenu Quebec (2018); Scarborough (2018); El-Sibaie (2018); TD Economics (2018); calculations by authors.

Figure 8: Combined Statutory Marginal Income Tax Rate at CA\$50,000 in Canadian Provinces and US States, 2018



Notes:

1) Personal income tax rates include surtaxes where applicable. Quebec's tax rate is adjusted for the federal abatement.

2) For US states, local income taxes are excluded.

3) The 2018 exchange rate for converting Canadian dollars to US dollars in 2018 is 1.2945, which is estimated by the TD Economics (2018) average quarterly projection. At this rate, CA\$50,000 is equivalent to US\$38,625.

Sources:

CRA (2018); Revenu Quebec (2018); Scarborough (2018); El-Sibaie (2018); TD Economics (2018); calculations by authors.

having one of the highest corporate tax rates in the world to having rates that are below the average for the EU (Bunn, 2018).

The Canadian federal corporate income tax has remained steady at 15 percent. (However, Alberta raised its provincial corporate income tax rate in 2015 and then again in 2016.) Thus the federal Canadian corporate rate is still six percentage points lower than the comparable US rate. However, the fourteen percentage point drop in the US rate has obviously made that jurisdiction much more competitive than it was before 2018, which only exacerbates the analysis of the *personal* income tax that forms the core of this study.

3. Statutory Marginal Income Tax Rates in Canada Compared to OECD countries

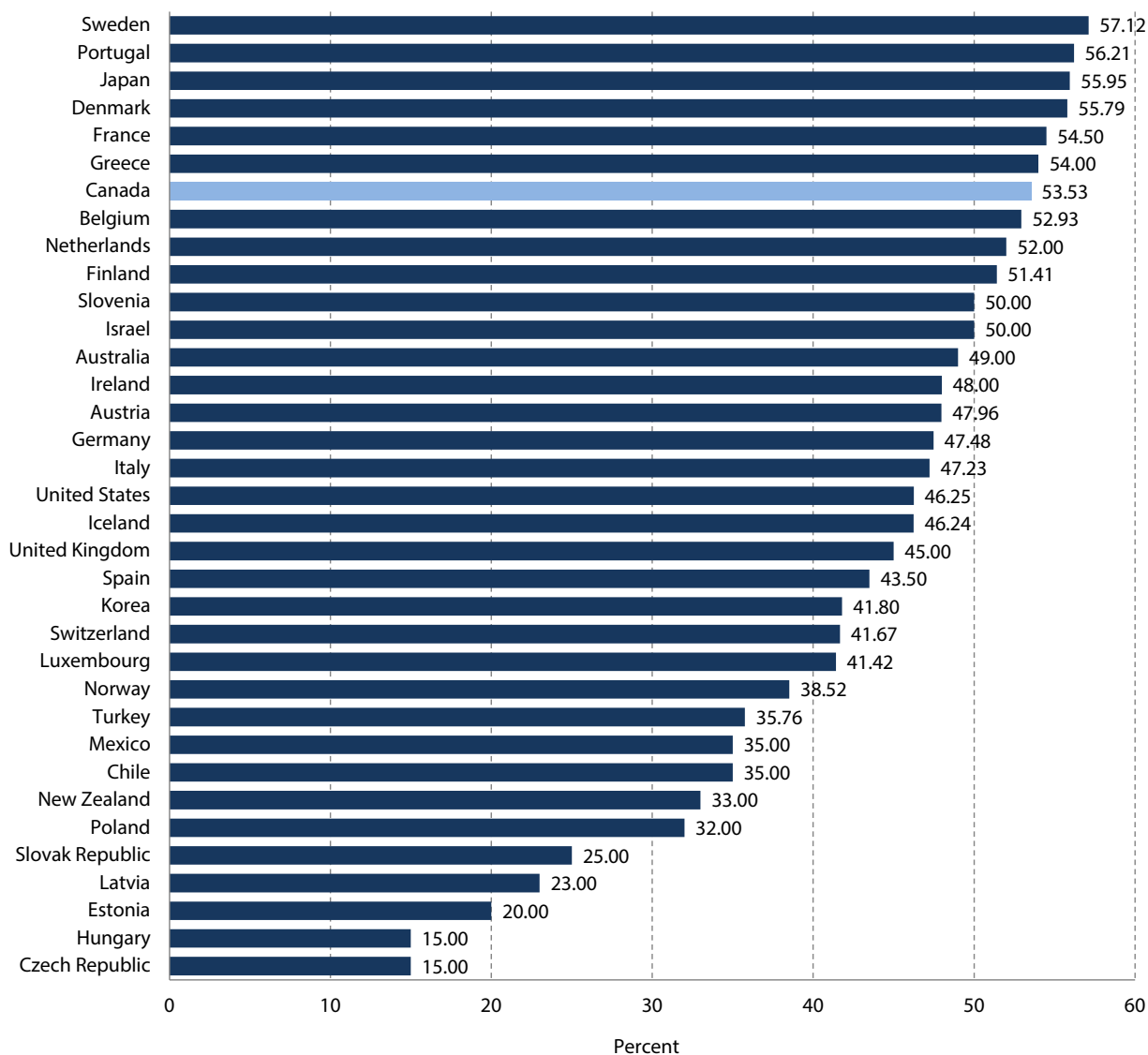
Taken together, Canada's personal income tax rates are decidedly uncompetitive compared to those of the United States. This is particularly true after accounting for the important fact that Canada's combined top tax rates generally apply to lower income levels than those in the United States. But Canada also competes with other industrialized countries for highly skilled workers and investment. To measure the competitiveness of Canada's top tax rates, in this section we compare the combined top marginal income tax rates on labour income with the rates in the 34 industrialized countries making up the Organisation for Economic Co-operation and Development (OECD). The available data for this section come from the OECD and are limited to the combined top rates for 2017. To capture the changes in Canada's provincial income tax rates up to 2018, we compare the 2018 Canadian provincial tax rates with the available OECD rates for 2017. Although some countries may have changed their income tax rates since 2017, this comparison provides a general sense of how Canada compares to other industrialized countries.²⁶

Figure 9 displays the combined top tax rate for 2017 for Canada and other industrialized countries.²⁷ It is important to mention that the combined top tax rate in Canada was the same in 2017 and 2018. Of the 34 OECD countries, Canada had the 7th highest combined tax rate in 2017 (53.53 percent). This indicates that in 2017, while Canada's top tax rate was more competitive than in some countries, it was uncompetitive compared

²⁶ The US PIT rate is for 2017. In 2018, the statutory top rate decreased from 39.6 to 37.0 percent.

²⁷ For countries with subnational and/or local personal income tax rates, the OECD calculates the combined rate either by taking an average of the subnational and local rates or by selecting a jurisdiction that the OECD considers representative. In Canada's case, the "representative" jurisdiction is Ontario; for the United States, it is Detroit, Michigan.

Figure 9: Top Combined Statutory Marginal Income Tax Rates in OECD Countries, 2017



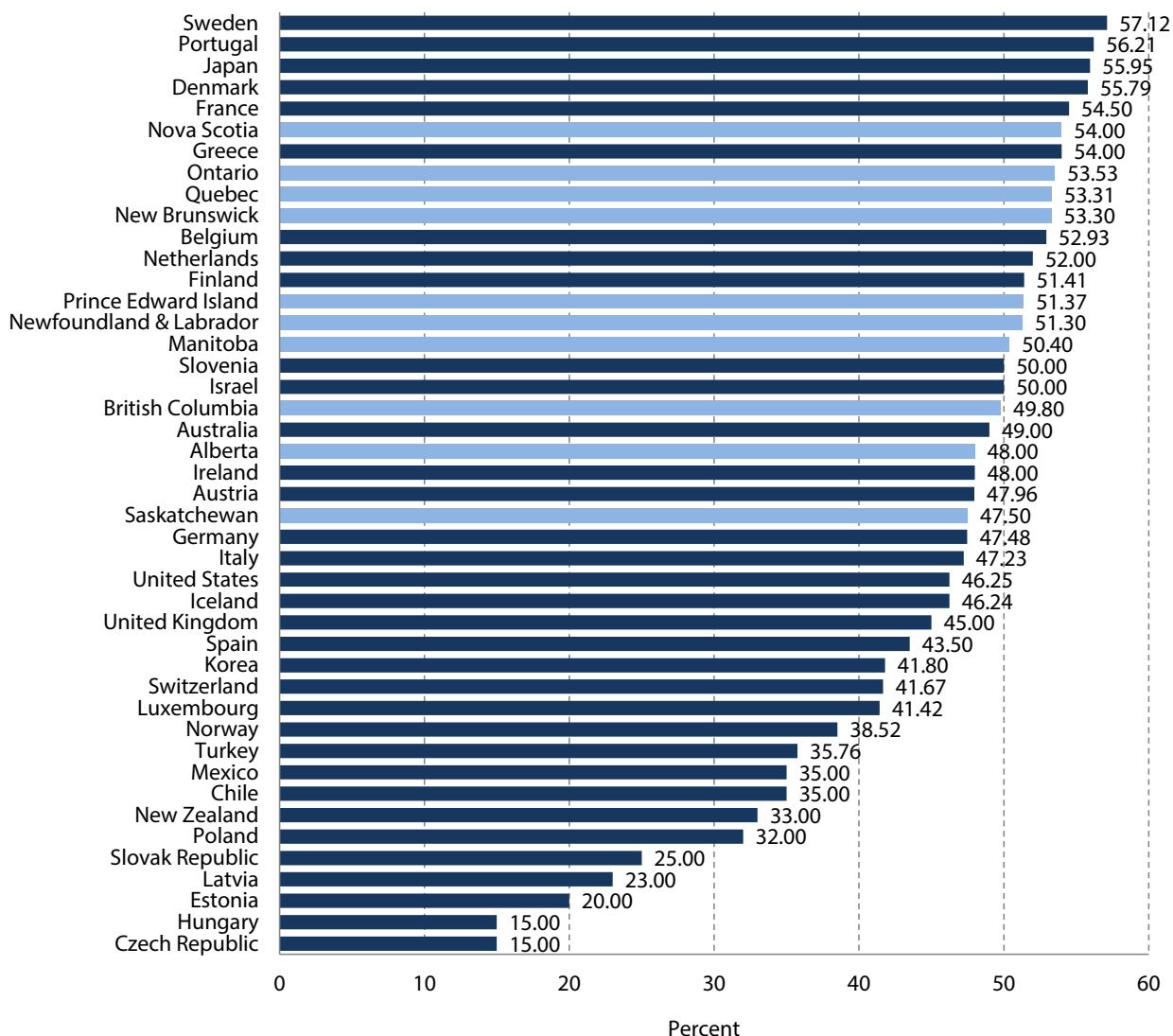
Notes:

1) The graph shows the highest combined statutory personal income-tax rate that is applied on earned income, taking into account that some personal income taxes may be deductible from the base of other personal income taxes, but before any other tax deductions. The top statutory tax rates are the combined rates of the national and subnational governments.

2) For countries with subnational and/or local personal income tax rates, the OECD calculates the combined rate by either taking an average of the subnational/local rates or selecting a jurisdiction that OECD considers representative. For Canada, the “representative” jurisdiction is Ontario; for the United States, it is Detroit, Michigan.

Source: OECD (2018a).

Figure 10: Top Combined Statutory Marginal Income Tax Rates in Canadian Provinces (2018) and OECD Countries (2017)



Notes:

- 1) The Canadian tax rates are for 2018 tax year and the OECD rates are for 2017.
- 2) The graph shows the highest combined statutory personal income-tax rate that is applied on earned income, taking into account that some personal income taxes may be deductible from the base of other personal income taxes, but before any other tax deductions. The top statutory tax rates are the combined rates of the national and subnational governments.
- 3) For countries with subnational and/or local personal income tax rates, the OECD calculates the combined rate by either taking an average of the subnational/local rates or selecting a jurisdiction that OECD considers representative. For Canada, the “representative” jurisdiction is Ontario; for the United States, it is Detroit, Michigan.

Source: OECD (2018a); table 4.

to most OECD countries including the United States, the United Kingdom, and other English-speaking countries such as Australia.

We have seen, however, that personal income tax rates vary considerably across Canada and that the top combined tax rate in some provinces is significantly less competitive than in others. Figure 10 illustrates this by displaying the 2018 combined top tax rate for each province and the 2017 rate for each OECD country. Out of 44 jurisdictions, Canadian provinces occupy four of the top 10 spots for highest top tax rates: Nova Scotia (54.00 percent), Ontario (53.53 percent), Quebec (53.31 percent), and New Brunswick (53.30 percent) all have among the highest combined top personal income tax rates in the OECD. Prince Edward Island (51.37 percent), Newfoundland & Labrador (51.30 percent), Manitoba (50.40 percent), British Columbia (49.80 percent), Alberta (48.00 percent), and Saskatchewan (47.50 percent) have rates that are in the middle range. These rates are higher than those in the United States (46.25 percent)—and note that this number does *not* reflect the recent, and significant, changes in the US income tax code—and the United Kingdom (45.00 percent). Overall, Canada's top personal income tax rates are generally uncompetitive. It is particularly notable that the two most populous Canadian provinces, Ontario and Quebec, are among the top 10 jurisdictions with the highest personal income tax rates. Among industrialized countries, Canada generally has relatively high marginal tax rates on upper-income earners, and this diminishes Canada's attractiveness as a destination for highly skilled workers and investment.

4. Tax Rate Increases Do Not Generate the Expected Government Revenue

A primary reason that various governments have increased their top personal income tax rates since 2009 is to bring in more government revenue, either to reduce their budget deficit, to partly pay for a reduction in other tax rates, or to finance new spending.²⁸ However, governments often overestimate how much revenue they will reap from increasing the tax rate because they fail to take into account the various ways that taxpayers respond to such increases. As a result, government finances often do not gain as much new revenue as initially expected.

The level of revenue collected from a specific tax depends not just on the tax rate, but on the base, or the total income that is subject to the tax. Multiplying the tax rate by the tax base results in the amount of revenue that a government will receive from a particular tax. When governments increase tax rates, taxpayers often respond by changing their behaviour in ways that shrink the tax base. This often results in governments collecting significantly less revenue than they expect as a result of new tax rate increases, especially if they assume that these tax rate increases will induce no behavioural responses that will shrink the tax base.

There are a number of ways that taxpayers can respond to a tax increase that would reduce the tax base (Lafleur, Palacios, and Emes, 2015). First, a higher tax rate can encourage some taxpayers to work less and report less taxable income. Second, higher income taxes could lead taxpayers to negotiate with employers to substitute away from taxable income to more tax favourable forms of compensation such as fringe benefits. Third, a taxpayer can take advantage of lower small business tax rates by channeling income through a small business. Fourth, a taxpayer could make use of other legal means to avoid taxes via various rules in Canada's complex tax code.²⁹ Finally, some taxpayers can shift income to other jurisdictions

²⁸ Addressing concerns over income inequality is another stated motivation.

²⁹ For a discussion on the complexity of Canada's tax code, see Vaillancourt, Roy,

with lower tax rates. Upper-income earners tend to be more responsive to tax increases.³⁰

A series of recent tax changes in the United Kingdom provides an illustration of a tax increase that took in less revenue than expected due to the response in taxpayers' behaviour (HM Revenues and Customs, 2012). Specifically, the UK government introduced a 50.0 percent income tax rate on upper-income earners in 2010. The tax increase was expected to bring in £2.5 billion but a government report estimated that it brought in £1 billion or less. The United Kingdom's top rate has since been reduced to 45.0 percent.

Another illustrative example, this one from Canada, is the evolving estimates of how much revenue will be brought in by the new, higher federal marginal income tax rate. During the 2015 election, the federal Liberal Party estimated that the proposed tax hike on upper-income earners would bring in \$2.8 billion in 2016/17 (Liberal Party of Canada, 2015). This estimate included a \$600 million "prudence factor," which reduced the estimate from \$3.4 billion. These estimates, however, did not appropriately account for the likely responses of taxpayers to a higher marginal income tax rate. Once the Liberal Party formed government after the election, the estimate provided by the Department of Finance, which then included behavioural responses, was \$2.0 billion (Canada, Department of Finance, 2015).

Other organizations have produced their own estimates of how much revenue will be gained by the federal government's increase in the rate of income tax paid by upper-income earners. For example, the Parliamentary Budget Office estimated that taxpayers responding to the tax hike by reducing taxable income would decrease the amount of revenue taken in by \$8.6 billion from \$19.1 billion, over the period from 2015/16 to 2020/21 (PBO, 2016). An earlier estimate by the CD Howe Institute showed that the federal tax increase on upper-income earners will bring in \$2.3 billion in 2016 before behavioural responses and less than \$1 billion after adjusting for how taxpayers will likely respond (Laurin, 2015).³¹

and Lammam, 2015. For a measure of the cost of tax complexity in Canada, see Vaillancourt, Roy-César, and Silvia Barros, 2013.

³⁰ Milligan and Smart (2015) examine provincial tax rate changes in Canada from 1982 to 2011 and find that the top 1 percent and top 0.1 percent of income earners had a stronger behavioural response than other income earners. Similarly, Canada's Department of Finance (2010) study finds a stronger behavioural response in terms of taxable income for upper-income earners.

³¹ Estimates from the Parliamentary Budget Office (2016) and Laurin (2015) are based on an assumption about the "elasticity of taxable income," which is the percentage change in taxable income after a one percentage-point change in the "net-of-tax" rate (1 minus the tax rate). The elasticity of taxable income for individuals earning more than

The CD Howe Institute also estimated that, because taxpayers' responses would also likely reduce the provincial income tax base, provincial governments will lose \$1.4 billion in revenue, more than the amount the federal government is estimated to gain.³²

Furthermore, in a recent Fraser Institute study, Lafleur, Palacios, and Emes (2015) estimated the impact on government revenues from Alberta's new provincial income tax rates. They estimated that between 2016 and 2020, behavioural responses resulting from the tax increases will reduce the amount of revenue generated by the tax increase by 25.8 percent compared to what would be generated in the absence of a behavioural response.³³

\$200,000 assumed by PBO (2016) is 0.38 and the preferred assumption by Laurin (2015) is 0.62. The Department of Finance examined the elasticity of taxable income based on Canada's experience reducing marginal income tax rates in the late 1990s and early 2000s (Canada, Department of Finance, 2010). That study estimated an elasticity of 0.72 for individuals earning \$150,000 or more (in \$2006).

³² Milligan and Smart (2015) made a similar point by regarding the negative effect on federal government revenue from a reduction in the tax base due to provincial tax increases. That is, taxpayers that respond to provincial tax increases by reducing their provincial taxable income will also be reducing their federal taxable income, which adversely affects federal government revenue. The same likely applies to federal tax increases that erode the provincial base.

³³ This estimate assumes an "elasticity of taxable income" of 0.762 in the short run and 2.89 in the long run (Lafleur, Palacios, and Emes, 2015).

Conclusion

Since 2009, the federal government and most provincial governments have imposed new, higher top personal income tax rates. These increases have led to considerable increases in the marginal tax rates that upper-income earners across Canada pay. This has important economic consequences because higher income taxes discourage productive economic activity. Higher income taxes also put Canada at a competitive disadvantage in attracting and retaining highly skilled workers, ultimately hurting the country's economic prospects.

Canada has traditionally had a relatively uncompetitive personal income tax system, particularly compared to the United States. This situation has recently worsened and Canada now has among the highest marginal tax rates on upper-income earners among industrialized countries. A comparison of tax rates with those in the United States, in particular, highlights Canada's lack of competitiveness, particularly after differences in income thresholds are accounted for. Someone making CA\$300,000 or CA\$150,000 anywhere in Canada would face a higher marginal income tax rate on labour income than a person with the same income anywhere in the United States.

Canadian governments have put the country in this uncompetitive position partly in an effort to raise more revenue. However, taxpayers, especially upper-income earners, respond to tax increases in ways that reduce the amount of revenue that governments would otherwise collect. For this reason, Canadian governments are unlikely to receive as much of a revenue boost from increasing the top personal income tax rate as they expect. Federal and provincial governments would do well to consider reversing the trend towards higher marginal tax rates on upper-income earners, and lower personal income tax rates.

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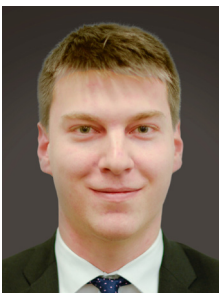
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