

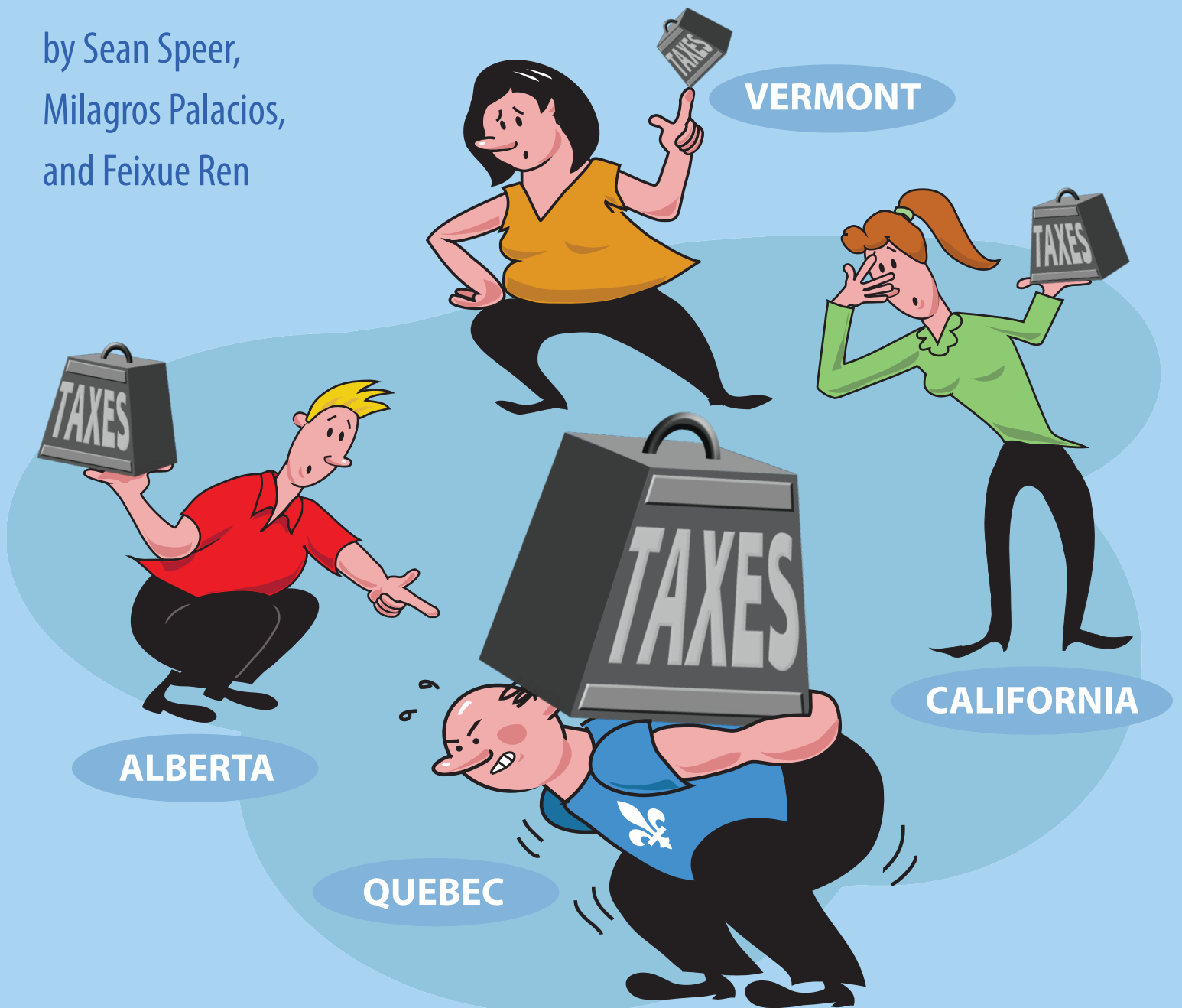
Quebec Prosperity Initiative

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Quebec's Tax Competitiveness: A Barrier to Prosperity

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by Sean Speer,
Milagros Palacios,
and Feixue Ren



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Executive summary

The Quebec government's latest budget announced the creation of an independent committee to evaluate the province's tax system and to make recommendations to improve its competitiveness. The Quebec Taxation Review Committee's work is important for the short- and long-term prospects for the Quebec economy.

The rationale for the committee's work is well-rooted in economic theory and history. Marginal tax rates are closely tied to economic performance across a range of indicators, including economic growth, employment, savings, investment, and capital formation. This is partly because individuals and businesses are more likely to work and invest in jurisdictions with competitive marginal tax rates.

This paper compares Quebec's tax competitiveness—with respect to personal and corporate income taxes and payroll taxes—to the tax competitiveness of other Canadian provinces and American states. It also compares economic performance across a range of indicators over the past 10 years. The analysis shows that Quebec's marginal tax rates are among the least competitive in North America, and that its economic performance has lagged most other Canadian provinces and US states.

Executive Summary Table 1

Quebec's 2014 provincial comparative marginal personal income tax rates at three income levels

Income levels	Tax rate	Rank out of 10 provinces
\$50,000	16.37%	10
\$75,000	16.37%	7
\$150,000	20.97%	9

Source: Calculations by authors based on Canada Revenue Agency (2014a).

The Quebec government's overall tax policies over the past several years have poorly positioned the province relative to other Canadian

provinces and US states, particularly with respect to its personal income tax rates and the income thresholds at which they apply. Quebec's personal income tax rates are among the highest in North America, with combined federal-provincial marginal income tax rates approaching nearly 50 percent for those Quebecers earning \$136,270 and over.

Executive Summary Table 2

Quebec's relative economic performance indicators between 2003 and 2012

Economic performance indicators	Average, 2003–2012	Rank out of 10 provinces
Real GDP growth	1.5%	7
Real GDP per capita growth	0.7%	9
Total employment growth	1.1%	6
Unemployment rate	7.0%	6
Gross fixed capital formation growth	3.9%	7

Note: The unemployment rate is not the official rate, but rather the rate comparable to the United States.

Source: Calculations by authors based on Statistics Canada data.

Quebec's lack of tax competitiveness is reflected in its weaker economic outcomes relative to other Canadian provinces and US states over the last ten years (2003–2012). Quebec's average annual real GDP growth of 1.5 percent over this period was the fourth lowest among Canadian provinces and almost one-third lower than the average growth rate in the rest of Canada. Quebec's real per-capita GDP (a broad measure of income) was lower than the rest of Canada's for the entire ten-year period. On job creation and average unemployment rate, Quebec's performance has been mediocre. Another measure indicative of Quebec's relatively poor economic performance is its level of business investment, or what is technically referred to as gross fixed capital formation, which measures the value of new additions to productive assets such as buildings, machinery, and equipment. On average, Quebec's growth on gross fixed capital formation has been the fourth lowest in the country.

Although the paper does not make any specific recommendations on how to improve Quebec's tax competitiveness, the empirical and theoretical research shows that more competitive taxation contributes to positive economic outcomes. To this point, Quebec's Taxation Review Committee should put forward proposals to make Quebec's tax policies more competitive if the province is to improve its economic prospects.

Introduction

Taxes play an important role in our society. They are key to covering the cost of basic government services such as protecting property, building infrastructure, and upholding the legal system. These types of services protect citizens and help to create the conditions for communities to flourish.

We also know from both economic theory and history that taxes play an important role in affecting economic growth, employment, savings, investment, capital formation, and other key economic indicators.

Marginal tax rates influence many of our economic decisions, including how individuals divide their time between work and leisure, determine whether to find a job or start a new business, and whether to save or invest, and if businesses will invest, expand, or hire new employees.

High marginal tax rates can discourage individuals from working more hours or pursuing entrepreneurial opportunities. They can also discourage businesses from investing or expanding. Indeed, extensive research has shown that high marginal tax rates inhibit economic growth, business activity, and investment.¹

In light of this evidence, tax competitiveness is an important public policy issue.² Individuals—particularly highly-skilled ones in high-demand professions such as entrepreneurs, doctors, and engineers—may move to jurisdictions with lower marginal tax rates. Capital is mobile, and so businesses can move their operations and focus their capital investment in jurisdictions with competitive taxation.³ A jurisdiction with uncompetitive tax policies in general and high marginal tax rates in particular therefore risks lower levels of entrepreneurial activity, business investment, and ultimately job creation.

1. See Koester and Kormendi (1989); Engen and Skinner (1996); Wyslensko (1997); Daveri and Tabellini (2000); Pavodano and Galli (2001, 2002); Lee and Gordon (2005).

2. For more on evidence of tax competition between Canadian provinces, see Crisan (2007).

3. For more on the extent to which business investment responds to tax changes, see Cummins, Hassett and Hubbard (1996).

The Quebec government's overall tax policies over the past several years have poorly positioned the province relative to other Canadian provinces and US states, particularly with respect to personal income tax rates and the income thresholds at which they apply. The government's recent budget signaled its intention to create an independent committee to evaluate the Quebec tax system and make recommendations to improve its competitiveness,⁴ and the minister of finance announced its establishment in June 2014 (Quebec, 2014b). The Quebec Taxation Review Committee is expected to submit its recommendations to the government in advance of the 2015 budget.

The purpose of this paper is to compare Quebec's tax competitiveness and medium-term economic performance with the other Canadian provinces and US states. The study compares Quebec's competitiveness with respect to personal and corporate income taxes and payroll taxes. It also compares its economic performance across a range of indicators over the past 10 years. The analysis shows that Quebec's taxes are among the least competitive in North America, and that its economic performance has lagged most other Canadian provinces and US states.

Although the paper does not make any specific recommendations on how to improve Quebec's tax competitiveness, the empirical and theoretical research shows that more competitive taxation contributes to positive economic outcomes. To this point, Quebec's Taxation Review Committee should put forward proposals to make Quebec's tax policies more competitive if the province is to improve its economic prospects. The province has made some progress on improving its business tax competitiveness but, as shown in subsequent sections, it is decidedly uncompetitive on personal income taxes. This should be a top priority for the Quebec Taxation Review Committee's work.

4. See Quebec, Finances Quebec (2014a: A95), which states: "The government will set up the Québec Taxation Review Committee with a mandate to, among other things, propose changes to make the tax system more competitive for individuals and businesses and review tax expenditures as a whole."

Taxes and economic outcomes

Economists have studied the relationship between marginal tax rates and economic outcomes. This research has tended to find considerable empirical evidence that taxes are closely linked to performance indicators such as economic growth, business activity and investment, savings, and entrepreneurship. A key insight is the extent to which marginal tax rates influence individual decisions on whether to invest, save, and work, and thus influence economic outcomes.⁵

The research has also assessed the impact of different forms of taxation—including personal income taxes, corporate income taxes, and payroll taxes—and found that, while their economic effects may differ to a certain extent, all of them carry economic costs.⁶

American economists David Romer and Christina Romer (2010) carried out an important study on the impact of changes in the general level of taxation on economic growth in the post-war United States. They find that tax changes have a significant effect on economic output, with a tax increase of 1 percent of GDP correlated with a lowering of real GDP by roughly 2 or 3 percent over the span of ten quarters.

Another US study by Merterns and Ravn (2012) examined the extent to which reductions in personal income tax rates could contribute to higher levels of economic growth. The authors found that a 1 percentage point cut in the average personal income tax rate raises real GDP per capita by 1.4 percent in the first quarter and by up to 1.8 percent after three quarters.

Corporate income taxes can also affect different economic indicators. Considerable empirical and theoretical research has found that high rates of corporate taxation can impede business investment and job creation.

University of Calgary economists Chen and Mintz (2011) measure the effect of a 3 percentage point reduction in the federal corporate tax rate on capital investment, work effect and the cost of doing business in Canada by

5. For more on the behavioural and economic effects of marginal tax rates, see Murphy, Clemens, and Veldhuis (2013) and Palacios and Harischandra (2008).

6. For more on the efficiency costs of different forms of taxation, see Clemens, Veldhuis, and Palacios (2007).

province and industry in 2011 and 2012. The authors found that corporate income tax reductions can effectively contribute to economic growth and job creation. They estimate that the result of corporate tax reductions that occurred up to 2012 would increase Canada's capital stock by \$30.6 billion, and employment by nearly 100,000. Chen and Mintz point out that among Canadian provinces, even though Quebec has a competitive tax burden on capital relative to other provinces, it still has an inefficient tax structure with a long list of tax preferences such as sector-specific credits and deductions.⁷

A recent study used data from 21 OECD countries over the period 1970 to 2005 to identify the impact of corporate taxation on long-run economic growth. Heady, Johansson, Arnold, Brys and Vartia (2009) demonstrate that corporate income taxes have strong negative effects on GDP growth per capita and the firm-level total factor productivity. Their simulation analysis suggests that a reduction in the statutory corporate income tax rate from 35 percent to 30 percent reduces the cost of capital by approximately 2.8 percent.

In a more recent paper, Canadian economists Ferede and Dahlby (2012) analyze the effect of provincial corporate taxation on economic growth in Canada during the period between 1977 and 2006. They report "that a higher provincial statutory corporate income tax rate is associated with lower private investment and slower economic growth" (2012: 563). Moreover, they estimate that a 1 percentage point reduction in the corporate tax rate will lead to a 0.1 to 0.2 percent increase in economic growth.⁸

In addition to personal income taxes and corporate income taxes, payroll taxes are mandatory levies applied to employers and/or employees for health services, unemployment benefits, and contributory public pensions. Research shows that these taxes can also have deleterious effects on employment.

Lakehead University economists Di Matteo and Shannon (1995) find there is a negative and significant relationship between payroll taxes and employment, operating through real wage effects. They found that, according to Canadian data, a 1 percent increase in the average payroll tax rate would lead to a 0.56 percent rise in wage costs and a 0.32 percent fall in employment—or approximately 41,000 jobs.

7. In another paper, Chen and Mintz (2013) compare the marginal effective tax rate on capital investment within Canada and OECD countries in 2013 and find that Quebec ranks in the top third with respect to lowest METR among these jurisdictions.

8. Dahlby and Ferede (2008) examined the potential economic outcomes of a series of income tax reductions announced by the British Columbia government in 2001 and 2005. They estimate that the government's 4.5 percentage point reduction to the provincial corporate tax rate would increase GDP per capita by 18 percent relative to the status quo tax rate. They also estimated that the government's 5 percentage point reduction to the top personal income tax rate would increase long run GDP per person by 7.6 percent.

Professors Kugler and Kugler (2001) assess the effect of higher payroll taxes on employment and wages in Colombia over the 1980s and 1990s. Their results find that a 10 percent increase in payroll taxes lowers employment by 4 percent and wages by 2 percent.

A considerable body of research shows the extent to which key economic indicators—economic growth, business investment, and ultimately job creation—are affected by taxation. A jurisdiction's tax competitiveness is therefore an important part of a policy agenda that fosters economic dynamism.

Quebec's relative economic performance

Quebec's lack of tax competitiveness (as will be discussed in the next section) is reflected in its weaker economic outcomes relative to other Canadian provinces and US states. It is useful to compare the province across a range of indicators to measure its relative performance over the past decade.

For the ten-year period starting from 2003 and ending in 2012, Quebec's economic performance was sluggish. Its real GDP growth, real GDP per capita growth, total employment growth, and rate of increase in capital formation were substandard with respect to its Canadian and US comparators. Table 1 shows five economic performance indicators—real GDP growth, real GDP per capita growth, total employment growth, the unemployment rate, and the gross fixed capital formation growth in Quebec over this ten-year period.

As shown in [table 1](#), the province's real GDP growth and real GDP per capita growth all followed a similar trend peaking in 2004, declining considerably during the global recession in 2009, and remaining at low levels relative to historical norms in recent years.⁹

Table 1 also shows that the province's employment growth rate peaked in 2007 over this period and has remained below this level in subsequent years. Quebec's unemployment rate fell from 8.2 percent in 2003 to 6.2 percent in 2007 and has remained at approximately 6.6 percent since the global recession. The gross fixed capital formation growth peaked in 2004 at 10.7 percent and thereafter has remained at lower levels, including hitting negative 4.2 percent in 2009 during the global recession.

9. To put this in perspective: Between 1993 and 2002, average real GDP growth was 3.1 percent, which is 1.5 percentage points higher or more than double the growth over the ten-year period from 2003 to 2012.

Table 1
Quebec economic performance indicators between 2003 and 2012

	Real GDP growth	Real GDP per capita growth	Total employment growth	Unemployment rate	Gross fixed capital formation growth
2003	1.3%	0.7%	1.5%	8.2%	5.8%
2004	2.6%	1.9%	1.5%	7.6%	10.7%
2005	1.5%	0.9%	0.8%	7.3%	2.3%
2006	1.3%	0.7%	1.1%	7.1%	3.0%
2007	1.8%	1.0%	2.4%	6.2%	6.4%
2008	1.9%	1.0%	1.2%	6.2%	2.2%
2009	-0.6%	-1.7%	-0.8%	7.2%	-4.2%
2010	2.3%	1.2%	1.7%	6.7%	5.0%
2011	1.8%	0.8%	1.0%	6.6%	1.7%
2012	1.5%	0.5%	0.8%	6.6%	6.5%
Average, 2003–2012	1.5%	0.7%	1.1%	7.0%	3.9%

Sources: Statistics Canada, 2014a, 2014b, 2014c; calculations by authors.

Key to the figures

Alberta	AB	Alaska	AK	Nevada	NV
British Columbia	BC	Arkansas	AR	New Hampshire	NH
Manitoba	MB	California	CA	New Jersey	NJ
New Brunswick	NB	Colorado	CO	North Carolina	NC
Newfoundland & Labrador	NL	Connecticut	CT	North Dakota	ND
Nova Scotia	NS	District of Columbia	DC	Oklahoma	OK
Ontario	ON	Florida	FL	Oregon	OR
Prince Edward Island	PE	Georgia	GA	Pennsylvania	PA
Quebec	QC	Hawaii	HI	Rhode Island	RI
Saskatchewan	SK	Idaho	ID	South Carolina	SC
		Illinois	IL	South Dakota	SD
		Iowa	IA	Texas	TX
		Kentucky	KY	Utah	UT
		Maine	ME	Vermont	VT
		Minnesota	MN	Virginia	VA
		Mississippi	MS	Washington	WA
		Montana	MT	Wyoming	WY
		Nebraska	NE		

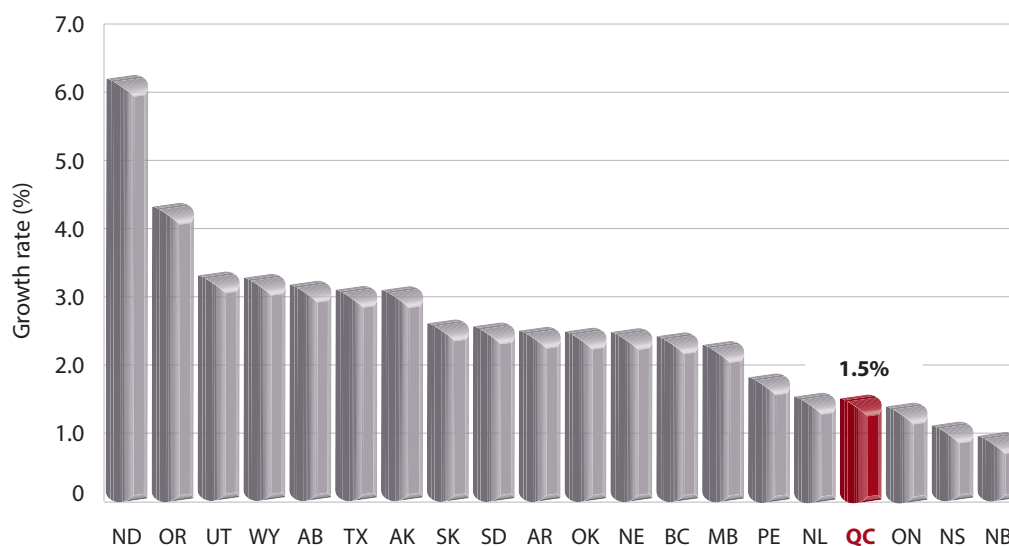
A comparison of Quebec's average annual real GDP growth

Quebec's sluggish economic performance is better illustrated by comparing it to other Canadian provinces and a group of US states.

Figure 1 compares Quebec's average annual real GDP growth (in chained dollars) from 2003 to 2012 to the other Canadian provinces and the ten best performing US states over the same period.¹⁰ As shown in the figure, Alberta and Saskatchewan experienced average annual real GDP growth during this period that compares reasonably well to the top-performing US states. The other eight Canadian provinces all performed worse than the top ten US states. Quebec's average annual real GDP growth of 1.5 percent over this period is the fourth lowest among Canadian provinces and almost one-third lower than the average growth rate in the rest of Canada.

Figure 1

Average annual real GDP growth for Canada and top ten US States, 2003–2012



Sources: Statistics Canada, 2014a; US Department of Commerce, BEA, 2014; calculations by authors.

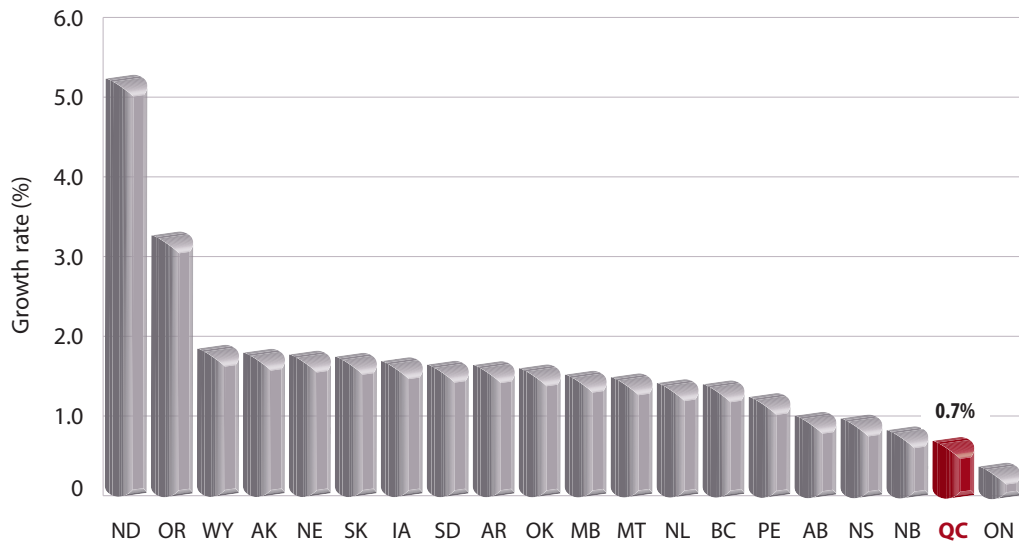
10. Expanding the comparison to include the Canadian provinces and all US states does not change the fact that Quebec's performance is relatively poor. It would be in the bottom half of the overall ranking (34 out of 61 jurisdictions). To put this in perspective: Alberta's average real GDP growth over the period analysed is twice the growth experienced by Quebec. The top performer is North Dakota, which experienced average real GDP growth 4 times that of the growth in Quebec.

A comparison of Quebec's average annual real GDP per capita growth

Real GDP per capita growth is a common measure used as an indicator of standards of living especially when comparing jurisdictions. **Figure 2** compares Quebec's average annual real GDP per capita growth (in chained dollars) over the past ten years with the rates experienced in other Canadian provinces and the top-ten-performing US states.¹¹ Two Canadian provinces compared positively to the top US states over this period, with Saskatchewan experiencing the highest average increase in real GDP per capita growth among the ten Canadian provinces. Quebec's performance—0.7 percent on average over the period—is second worst among the group. Only Ontario experienced a slower rate of growth. Interestingly, Alberta's real GDP per capita in 2012 was the highest in the country at \$74,201 (in 2007 dollars), but its average growth rate over this period is slower than some provinces, in large part due to its higher population growth rate.

Figure 2

Average annual real GDP growth per capita for Canada and top ten US States, 2003–2012



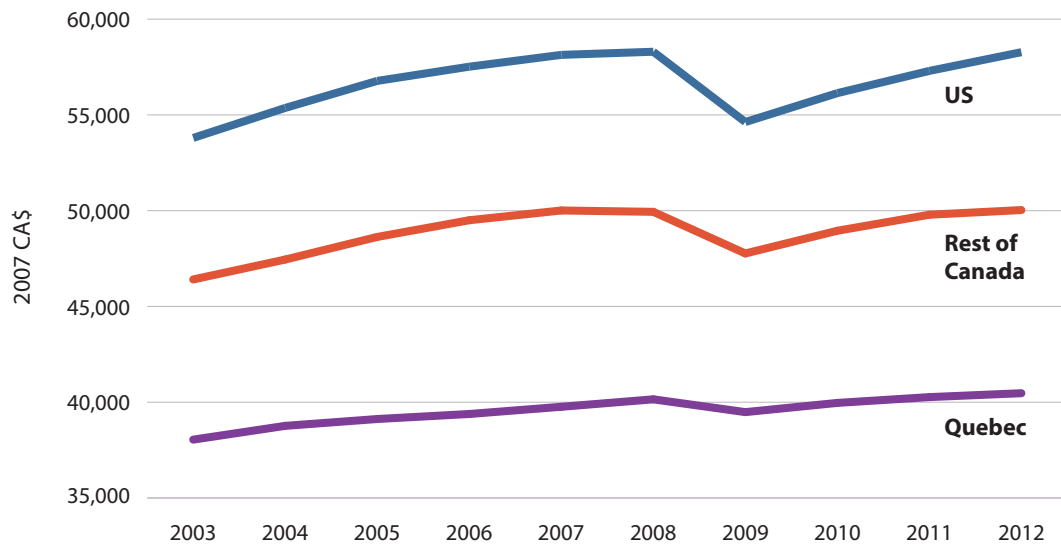
Sources: Statistics Canada, 2014a; US Department of Commerce, BEA, 2014; calculations by authors.

¹¹ Among all Canadian provinces and US states, Quebec ranks 41 out of 61 jurisdictions, and is the second-worst performer among the Canadian provinces.

A comparison of Quebec's real GDP per capita

Figure 3 displays the trend of real GDP per capita (in 2007 chained dollars) in Quebec, Canada (Quebec excluded) and the United States between 2003 and 2012. Quebec's real GDP per capita consistently lagged behind the rest of the country and the US over this period. The gap between Quebec and the rest of Canada peaked in 2007 at \$10,249 (25 percent lower), and Quebec's real GDP per capita has been lower than the rest of Canada's for the entire ten-year period. It has also performed worse than the US over the period, with an average annual difference of \$17,082.¹²

Figure 3
Quebec, rest of Canada, and US real GDP per capita (chained in 2007 CA\$),
2003–2012



Note: US real GDP per capita (chained 2007 dollars) was converted in CA dollars using the the implied PPP rate.

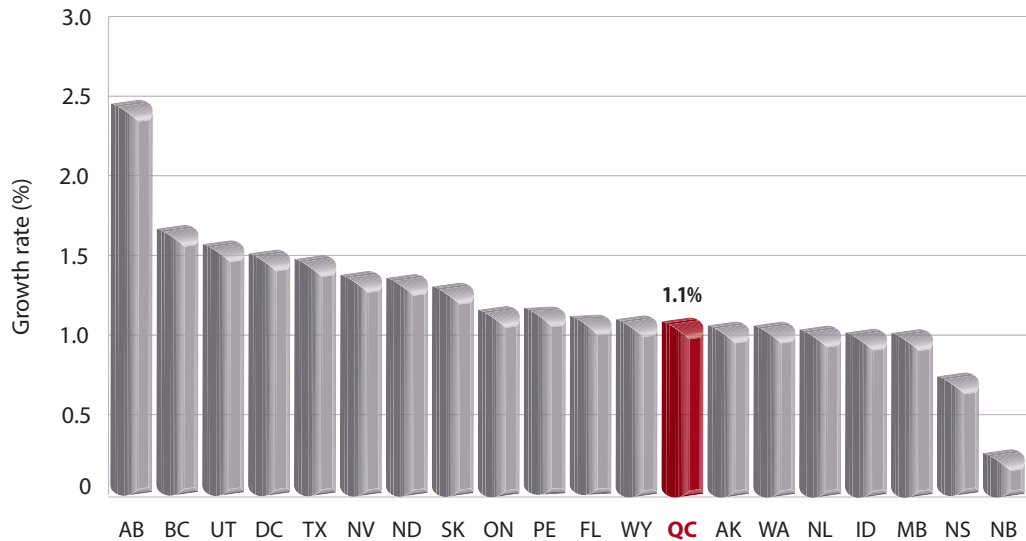
Sources: Statistics Canada, 2014a, 2014d; US Department of Commerce, BEA, 2014; US Census Bureau, 2012; IMF, 2014; calculations by authors.

¹² The authors calculate the US real GDP per capita (chained 2007 dollars) and use the PPP rate to convert US dollars into CA dollars.

A comparison of Quebec's average annual total employment growth

Figure 4 shows that Quebec's average total employment growth over this period also compares poorly with most other Canadian provinces and the top-performing US states. Only New Brunswick, Nova Scotia, Manitoba, and Newfoundland and Labrador performed worse than Quebec among the ten Canadian provinces. Quebec also fared worse than all of the top-performing US states with the exception of Idaho, Washington, and Alaska.¹³

Figure 4
Average annual total employment growth for Canada and top ten US States, 2003–2012



Sources: Statistics Canada, 2014b; US Department of Labor, BLS, various years; calculations by authors.

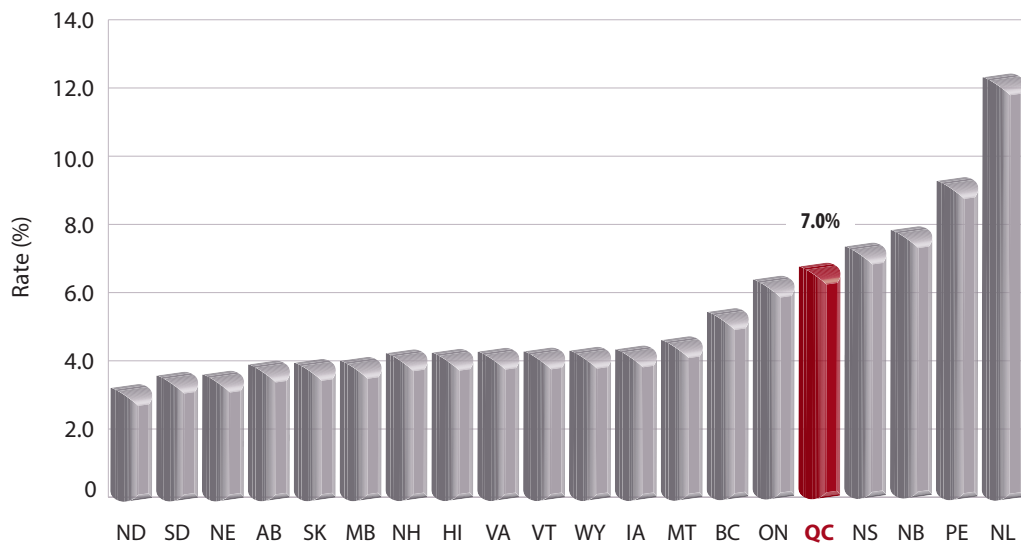
¹³ Accounting for all 50 US states (not just the ten top-performing ones) places Quebec in a better position because several US states have experienced flat or even negative employment growth over this period.

A comparison of Quebec's average unemployment rate

With respect to the unemployment rate, Quebec performed worse than the top-performing US states and a number of Canadian provinces.¹⁴ **Figure 5** uses a comparable measure of the unemployment rate to compare Quebec's average unemployment rate from 2003 to 2012 to the other Canadian provinces and the ten best performing US states.¹⁵ Of the Canadian provinces, only Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland and Labrador—the four Atlantic provinces—experienced a higher average unemployment rate than Quebec (7.0 percent) over this period. Among the twenty jurisdictions, the best performing Canadian province is Alberta, which ranks fourth with an average unemployment rate of 4.0 percent. Newfoundland and Labrador's rate of 12.8 percent is higher than all 50 US states.

Figure 5

Average unemployment rate for Canada and top ten US States, 2003–2012



Sources: Statistics Canada, 2014c; US Department of Labor, BLS, 2014; calculations by authors.

14. Although Quebec does perform relatively well (it ranks among the top 15 jurisdictions) in terms of average employment growth, its average unemployment rate is among the highest. In fact, expanding the comparison to all US states finds that the Atlantic provinces and Quebec are among the bottom 15 jurisdictions with the highest unemployment rates over this period.

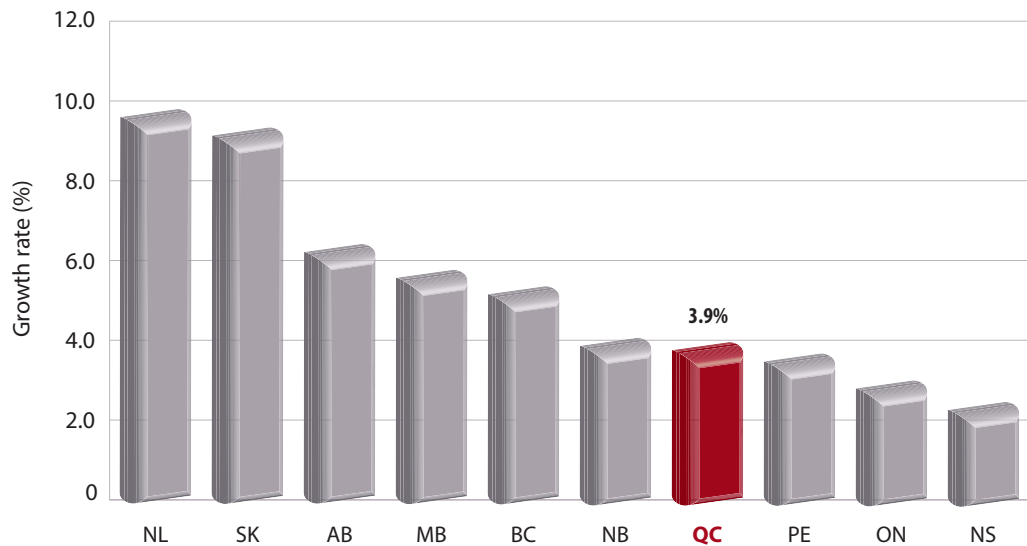
15. The primary difference in the methodology for calculating the unemployment rate in Canada and the US is the treatment of unemployed individuals who are not searching for employment. The US methodology excludes those who are pursuing “active measures” (activities that on their own could lead to a job offer) to find employment. The Canadian methodology accounts for individuals not actively pursuing employment. Statistics Canada produces both the official unemployment rate and the rate using the US methodology in order to allow for comparisons.

A comparison of Quebec's average annual gross fixed capital formation growth

Another measure of economic performance is the growth of business investment or what is technically referred to as gross fixed capital formation, which measures the value of new additions to productive assets such as buildings, machinery, and equipment. Business investment is among the most important factors contributing to long-term economic growth and higher productivity. As shown in **figure 6**, Quebec is the fourth worst performing province between 2003 and 2012, with an average capital formation growth rate of 3.9 percent. Newfoundland and Labrador has had the highest rate of growth among the ten provinces at 10.0 percent—153.3 percent higher than average growth rate in Quebec.¹⁶

Figure 6

Average gross fixed capital formation growth, Canada, 2003–2012



Sources: Statistics Canada, 2014a; calculations by authors.

¹⁶ The reason the US states are not included in this comparison is due to the lack of gross fixed capital formation data at the state level.

Summary and next steps

As shown in this section, Quebec's economic performance over the past ten years does not compare favourably to most Canadian provinces or the best performing US states. Across a range of different economic indicators, it is apparent that Quebec has lagged behind many North American jurisdictions.

Yet despite its relatively poor performance the Quebec government continues to maintain a set of uncompetitive tax policies. An evaluation of Quebec's 2014 tax rates finds that the province's tax competitiveness is a serious policy issue (particularly with respect to its personal income tax system)—especially in light of its relatively weak economic performance over the past decade.

In the next section, we will examine the Quebec tax regime in 2014 and compare its personal and corporate tax rates to those in other Canadian provinces and a number of US states. We also investigate Quebec payroll tax rates and compare them to the rest of Canada.

A comparison of Quebec's tax regime

One of the reasons that Quebec has experienced relatively poor economic outcomes is its uncompetitive tax regime, particularly with respect to personal income taxes and the income thresholds at which they apply. This is to be expected, given that the literature shows that tax rates and the structure of the tax system—the mix of taxes levied by governments on physical capital, income wages, and consumption—are important factors in personal and business decisions with respect to work, investment, savings, and entrepreneurial activities.

This section seeks to measure Quebec's tax competitiveness by comparing it to Canadian provinces and US states on personal and corporate income taxes and payroll taxes in 2014. Personal and corporate income taxes and payroll taxes are assessed because they are among the most economically damaging taxes levied by government.¹⁷

Personal income taxes

Canadians pay personal income taxes to both the federal and provincial governments. Canada's personal income tax system is progressive, with tax rates increasing with income. In this subsection, we present a comparison of marginal personal income tax rates between Quebec, the other Canadian provinces, and some selected US jurisdictions, accounting for both the provincial and state tax rates as well as combined federal-provincial/state level. We compare the personal marginal tax rates at three different levels of income—\$50,000,

¹⁷ Quebec's provincial sales tax rate of 9.975 percent is the second highest in Canada. The comparisons exclude sales tax rates because, of the different forms of taxation, consumption-based taxes are found to be the most efficient in terms of their economic cost. Research conducted by Baylor and Beausejoir for the federal Department of Finance (2004) finds that a \$1 decrease in personal income taxes on capital produces \$1.30 in economic benefits, while a \$1 decrease in consumption taxes only produces \$0.10. For more on the efficiency costs of different forms of taxation, see Clemens, Veldhuis, and Palacios (2007).

\$75,000, and \$150,000¹⁸—in order to account for the fact that each jurisdiction applies its tax rates at different income thresholds.¹⁹ The US states presented are the least competitive ones (that is, these are the states with the highest marginal tax rates) at the three different income levels.²⁰ That the analysis uses the US states with the highest tax rates reinforces Quebec's relative uncompetitiveness. It compares poorly relative to the highest-taxed states. It would of course compare even worse relative to the US states with the lowest tax rates.

Provincial and state level personal income tax rates

Table 2 presents the 2014 provincial marginal personal income tax rates at the three different income levels for the ten Canadian provinces.

As shown in the table, within Canada Quebec imposes the highest marginal personal income tax rate of 16.37 percent at the \$50,000 income level, the fourth highest marginal personal income tax rate of 16.37 percent at \$75,000, and the second highest marginal personal income tax rate of 20.97 percent at \$150,000. This shows that Quebec's personal income tax rates are among the least competitive in the Canadian context across the income scale.

It is also useful to compare Quebec's personal income tax rates to a number of US states, because labour and capital are mobile and therefore uncompetitive rates can cause people and capital to move, especially given our proximity to the US. We compare the provincial marginal personal income tax rates at each of the three income levels for all US states, and present the ten US states with highest marginal tax rates in **table 3**.

Table 3 shows that, at the \$50,000 and \$75,000 income levels, all Canadian provinces have higher marginal personal income tax rates than the ten highest US states, with the exception of British Columbia. At the \$150,000 income level, all Canadian provinces have higher tax rates than the ten least competitive US states.

18. These three levels of income were selected because they are generally applied to highly skilled workers that are most mobile and likely to relocate based on the economic environment and tax incentives in a jurisdiction. See Lammam et al. (2010) for a more detailed explanation.

19. Personal income tax rates include surtaxes where applicable. Quebec's tax rates are adjusted for the federal abatement. The number of brackets includes surtaxes. The presentation does not account for the different basic personal exemptions provided for in the various jurisdictions. It also does not account for the different number of tax brackets among the provinces. This is important because some provinces have multiple brackets and rates applying at lower income thresholds than others. The number of brackets ranges from 1 in Alberta to 7 in Quebec (including the abatement). Multiple tax brackets add complexity to the system and are ultimately part of tax competitiveness.

20. The three income levels are converted into Canadian dollars. The exchange rate is 1 US dollar equaling to 1.09 Canadian dollars. The exchange rate used is as of June 10, 2014 from the Bank of Canada.

Table 2
Canadian provincial marginal personal income tax rates, 2014

	Marginal tax rate at CAD\$50,000	Marginal tax rate at CAD\$75,000	Marginal tax rate at CAD\$150,000
British Columbia	7.70	7.70	16.80
Alberta	10.00	10.00	10.00
Saskatchewan	13.00	13.00	15.00
Manitoba	12.75	17.40	17.40
Ontario	9.15	10.98	18.97
Quebec	16.37	16.37	20.97
New Brunswick	14.82	14.82	17.84
Nova Scotia	14.95	16.67	21.00
Prince Edward Island	13.80	16.70	18.37
Newfoundland & Labrador	12.50	13.30	13.30

Notes: (i) Personal income tax rates include surtaxes where applicable. Quebec's tax rates are adjusted for the federal abatement.

(ii) The number of tax brackets includes surtaxes.

Sources: Provincial Budgets, 2014; calculations by authors.

Table 3
Canadian and ten US States provincial/state marginal personal income tax rates, 2014

Provinces and states	Marginal tax rate at CAD\$50,000	Provinces and states	Marginal tax rate at CAD\$75,000	Provinces and states	Marginal tax rate at CAD\$150,000
Arkansas	7.00	Arkansas	7.00	South Carolina	7.00
South Carolina	7.00	South Carolina	7.00	Idaho	7.40
Minnesota	7.05	Minnesota	7.05	Vermont	7.80
Idaho	7.40	Idaho	7.40	Minnesota	7.85
British Columbia	7.70	British Columbia	7.70	Maine	7.95
Hawaii	7.90	Maine	7.95	Hawaii	8.25
Iowa	7.92	Hawaii	8.25	Washington D. C.	8.50
Maine	7.95	Washington D. C.	8.50	Iowa	8.98
California	8.00	Iowa	8.98	California	9.30
Washington D.C.	8.50	Oregon	9.00	Oregon	9.90
Oregon	9.00	California	9.30	Alberta	10.00
Ontario	9.15	Alberta	10.00	Newfoundland & Labrador	13.30
Alberta	10.00	Ontario	10.98	Saskatchewan	15.00
Newfoundland & Labrador	12.50	Saskatchewan	13.00	British Columbia	16.80
Manitoba	12.75	Newfoundland & Labrador	13.30	Manitoba	17.40
Saskatchewan	13.00	New Brunswick	14.82	New Brunswick	17.84
Prince Edward Island	13.80	Quebec	16.37	Prince Edward Island	18.37
New Brunswick	14.82	Nova Scotia	16.67	Ontario	18.97
Nova Scotia	14.95	Prince Edward Island	16.70	Quebec	20.97
Quebec	16.37	Manitoba	17.40	Nova Scotia	21.00

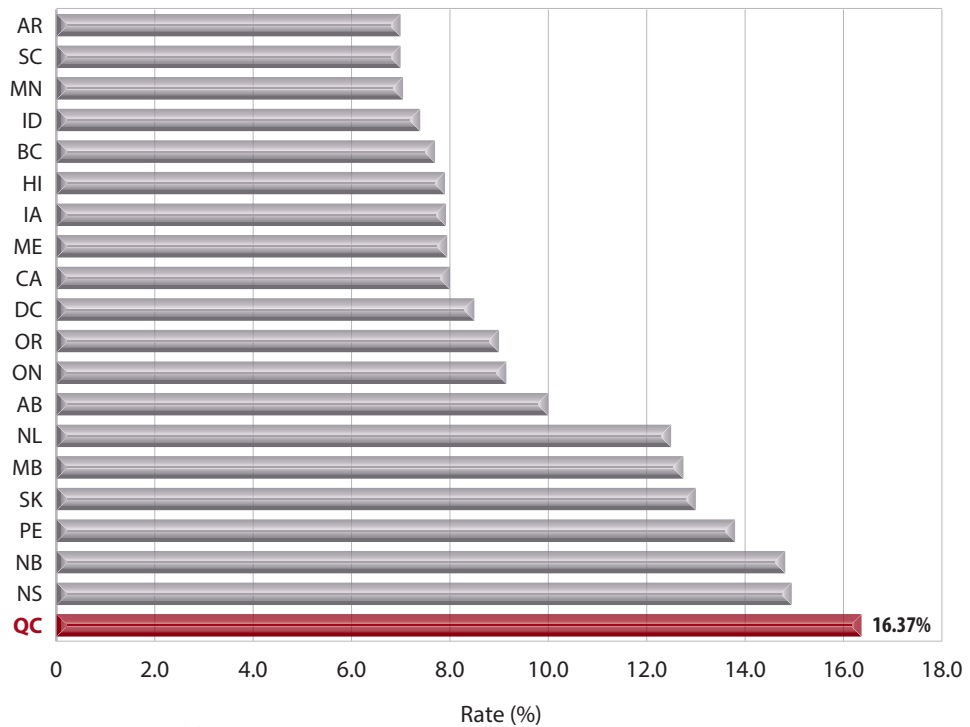
Notes: (i) For US states, local income taxes are excluded.

(ii) 1 US dollar = 1.09 Canadian dollars. CA\$50,000 is equivalent to US\$ 45,872; CA\$75,000 is equivalent to US\$68,807; CA\$150,000 is equivalent to US\$137,615.

Sources: Tax Foundation, 2013a; Bank of Canada, 2014; see Table 2.

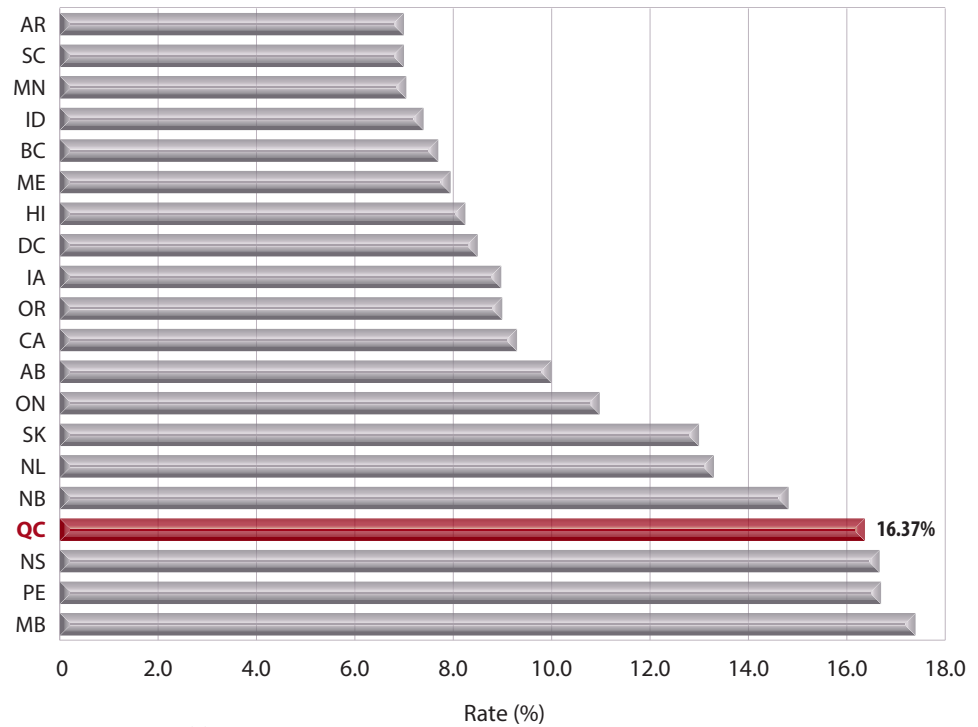
Figure 7 illustrates Quebec's ranking among the twenty jurisdictions in terms of its tax competitiveness at \$50,000 in income. Quebec ranks at the bottom of twenty provinces and states, meaning that it imposes the highest provincial/state personal income tax rate in North America. At 16.37 percent, its tax rate is 7.37 percentage points higher than Oregon, which has the highest state-level income tax rate among all US states. Meanwhile, Quebec's tax rate is more than double the tax rate of the most competitive US state (7 percent in South Carolina) among the 10 compared in the figure.

Figure 7
 Provincial/State marginal personal income tax rate at CAD\$50,000, 2014



As shown in **figure 8**, at the \$75,000 income level, Quebec remains among the least competitive with only Manitoba, Prince Edward Island, and Nova Scotia imposing higher tax rates. All US states have tax rates lower than 10 percent at this income level.

Figure 8
Provincial/State marginal personal income tax rate at CAD\$75,000, 2014

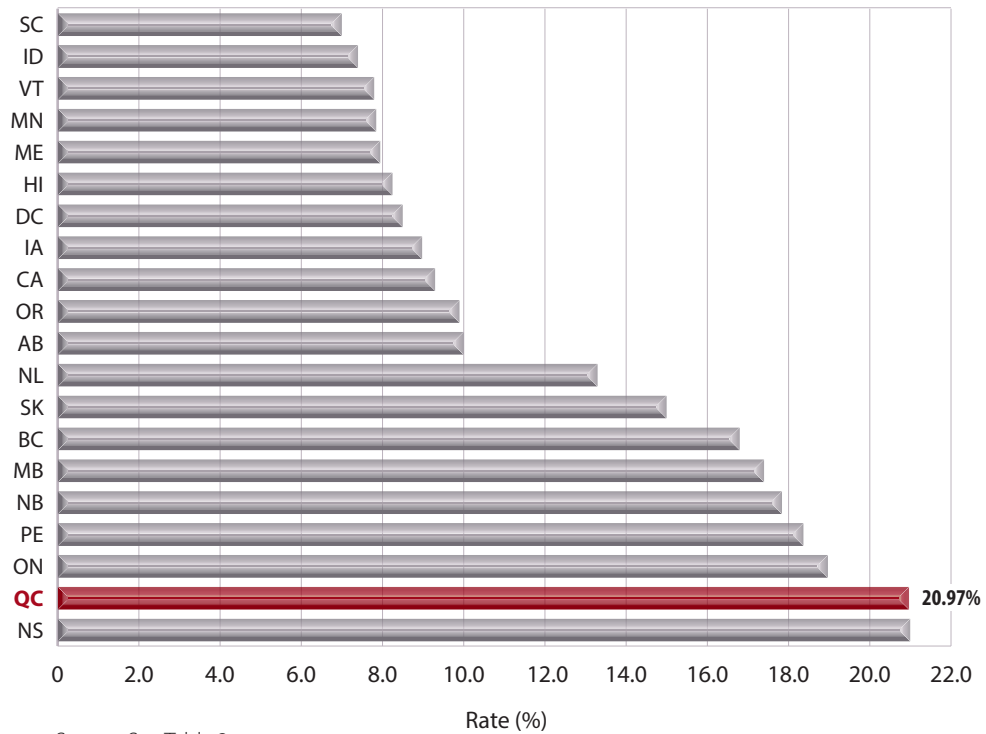


Source: See Table 3.

Marginal personal income tax rates at \$150,000 are presented in **figure 9**. The differences between tax rates at \$75,000 and \$150,000 are relatively small for the US states, but there are substantial changes for Canadian provincial tax rates. Part of this difference is due to the fact that the top tax rates in the Canadian provinces come into effect at much lower levels of income relative to the United States. For instance, Quebec's tax rate jumps by 4.6 percentage points from 16.37 percent at \$75,000 to 20.97 percent at \$150,000 (second highest among the twenty jurisdictions); British Columbia's tax rate is 9.1 percentage points higher at \$150,000 than the tax rate at the \$75,000 income level.

Figure 9

Provincial/State marginal personal income tax rate at CAD\$150,000, 2014



Source: See Table 3.

Combined federal-provincial and state level personal income tax rates

It is also useful to compare the combined federal-provincial and federal-state tax rates to understand the full personal income tax burden in each North American jurisdiction.²¹ **Table 4** shows the combined federal and provincial marginal personal income tax rates at the same three income levels. In Canada, the federal marginal personal income tax rate is 22.0 percent at both the \$50,000 and \$75,000 income levels and 29.0 percent at \$150,000. For the US, the federal marginal personal income tax rate at \$50,000 and \$75,000 is 25.0 percent. The US federal rate at \$150,000 is 28.0 percent.²²

Table 4
Canadian combined federal and provincial marginal personal income tax rates, 2014

	Marginal tax rate at CAD\$50,000	Marginal tax rate at CAD\$75,000	Marginal tax rate at CAD\$150,000
British Columbia	29.70	29.70	45.80
Alberta	32.00	32.00	39.00
Saskatchewan	35.00	35.00	44.00
Manitoba	34.75	39.40	46.40
Ontario	31.15	32.98	47.97
Quebec	38.37	38.37	49.97
New Brunswick	36.82	36.82	46.84
Nova Scotia	36.95	38.67	50.00
Prince Edward Island	35.80	38.70	47.37
Newfoundland & Labrador	34.50	35.30	42.30

Note: Canadian federal marginal tax rate is 22.0 percent at CA\$50,000, 22.0 percent at CA\$75,000, and 29.0 percent at CA\$150,000.

Sources: Canada, CRA, 2014a; Provincial Budgets, 2014; calculations by authors.

21. The distribution of income taxes among levels of government in Canada is less tilted in favour of the federal government than in other countries in its peer group. Canadians tend to pay a lower share of their total income taxes to the federal government, and a greater share to provincial governments, relative to citizens in other federal states. This is an important distinction, because it means that one must look at the combined federal-provincial income tax burden when assessing Canada's tax competitiveness and total tax burden. For more on Canada's decentralized taxation, see Dziobek, Gutierrez Mangas, and Kufa (2011).

22. There are three higher federal personal income tax rates in the US: 33.0 percent (from US\$186,351 to US\$405,100), 35.0 percent (from US\$405,101 to US\$406,750) and 39.6 percent (for incomes of US\$406,751 and over).

As table 4 shows, within Canada Quebec's ranking in terms of its tax competitiveness is unchanged after accounting for the combined federal and provincial rates. But it is important to note that the combined federal-provincial marginal tax rate is nearly half (49.97 percent) at the \$150,000 income level, and even Quebecers who earn \$50,000 a year pay a combined personal income tax rate of 38.37 percent (the highest among Canadian provinces).

Table 5
Canadian and ten US States combined federal and provincial/state marginal personal income tax rates, 2014

Provinces and states	Marginal tax rate at CAD\$50,000	Provinces and states	Marginal tax rate at CAD\$75,000	Provinces and states	Marginal tax rate at CAD\$150,000
British Columbia	29.70	British Columbia	29.70	South Carolina	35.00
Ontario	31.15	Alberta	32.00	Idaho	35.40
Alberta	32.00	Arkansas	32.00	Vermont	35.80
Arkansas	32.00	South Carolina	32.00	Minnesota	35.85
South Carolina	32.00	Minnesota	32.05	Maine	35.95
Minnesota	32.05	Idaho	32.40	Hawaii	36.25
Idaho	32.40	Maine	32.95	Washington D.C.	36.50
Hawaii	32.90	Ontario	32.98	Iowa	36.98
Iowa	32.92	Hawaii	33.25	California	37.30
Maine	32.95	Washington D.C.	33.50	Oregon	37.90
California	33.00	Iowa	33.98	Alberta	39.00
Washington D.C.	33.50	Oregon	34.00	Newfoundland & Labrador	42.30
Oregon	34.00	California	34.30	Saskatchewan	44.00
Newfoundland & Labrador	34.50	Saskatchewan	35.00	British Columbia	45.80
Manitoba	34.75	Newfoundland & Labrador	35.30	Manitoba	46.40
Saskatchewan	35.00	New Brunswick	36.82	New Brunswick	46.84
Prince Edward Island	35.80	Quebec	38.37	Prince Edward Island	47.37
New Brunswick	36.82	Nova Scotia	38.67	Ontario	47.97
Nova Scotia	36.95	Prince Edward Island	38.70	Quebec	49.97
Quebec	38.37	Manitoba	39.40	Nova Scotia	50.00

Notes:

(i) The federal income tax rates used in this table are for single individuals.

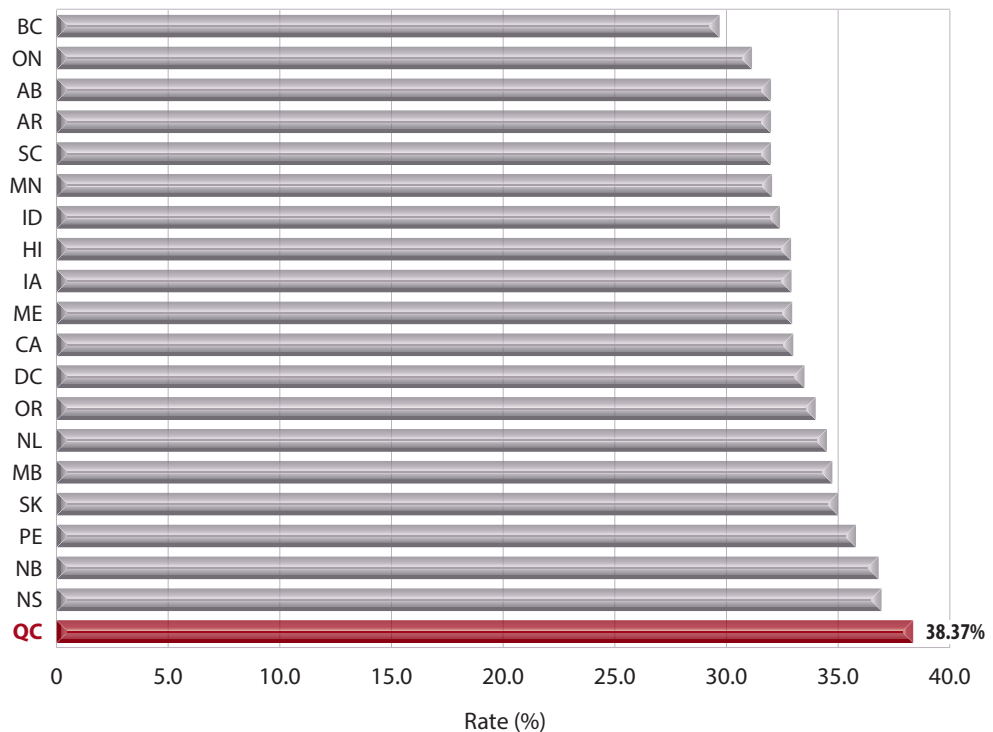
(ii) US federal marginal tax rate is 25.0 percent at CA\$50,000, 25.0 percent at CA\$75,000, and 28.0 percent at CA\$150,000.

Sources: Tax Foundation, 2013a; Bank of Canada, 2014; see Table 4.

Table 5 demonstrates that after combining the federal and provincial marginal personal income tax rate, British Columbia, Ontario, and Alberta rank top three at the \$50,000 level and BC and Alberta rank first and second at the \$75,000 income level with the lowest combined federal and provincial/state marginal tax rates. It is important to remember though that this is among the 10 US states with the highest tax rates. All Canadian provinces fare relatively poorly at the \$150,000 level. At this income level, the combined federal and provincial tax rate in every Canadian province is higher than the combined rates in all 50 US states. Among the US states, Oregon is the least competitive with a combined tax rate 37.9 percent at the \$150,000 income level, which is still 12.07 percentage points or about one-third lower than Quebec's rate of 49.97 percent.

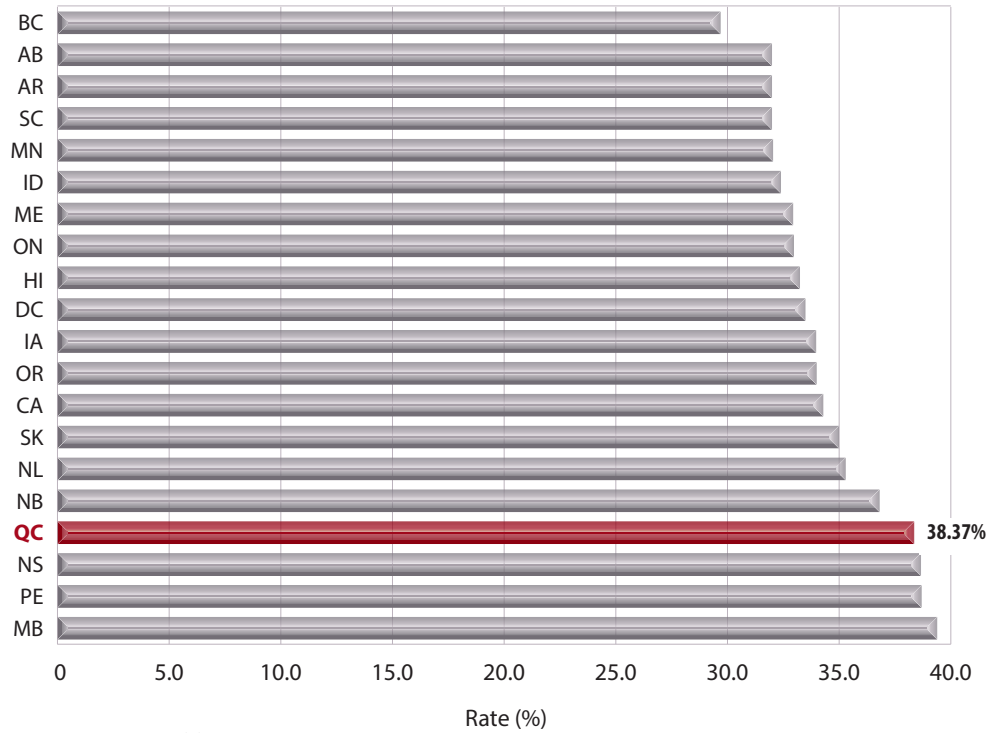
Figure 10 shows that Quebec's combined personal income tax rate at \$50,000 is approaching 40 percent, making it the least competitive at this income level in North America. Indeed, it is currently 8.67 percentage points higher than British Columbia's (29.7 percent) and 6.37 percentage points higher than Arkansas's and South Carolina's (32.0 percent), which are the two most competitive jurisdictions at this income level in the respective countries among the twenty compared in the figure.

Figure 10
Canadian and ten US States combined federal and provincial/state marginal personal income tax rate at CAD\$50,000, 2014



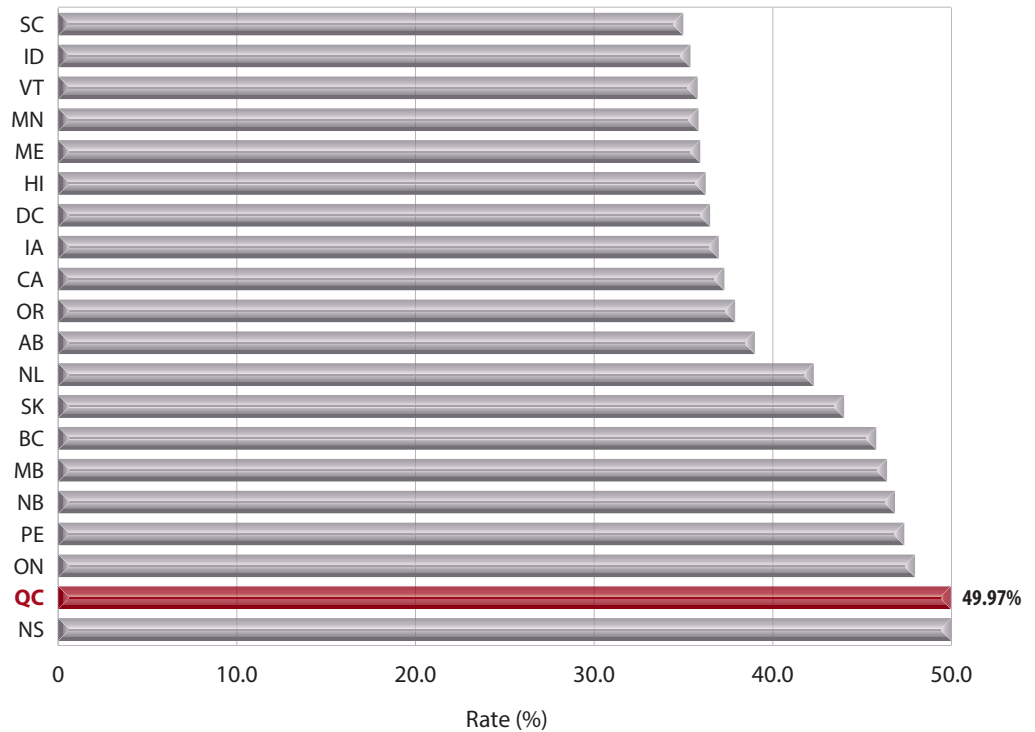
Quebec, Nova Scotia, Prince Edward Island, and Manitoba impose the highest tax rates in North America at the \$75,000 income level, with combined federal and provincial marginal tax rates of 38.37 percent, 38.67 percent, 38.7 percent and 39.4 percent respectively (figure 11).

Figure 11
Canadian and ten US States combined federal and provincial/state marginal personal income tax rate at CAD\$75,000, 2014



Finally, **figure 12** shows that Quebeckers and Nova Scotians experience the highest combined personal income tax rates of nearly 50 percent at the \$150,000 income level. It is worth noting that at this income level even the most competitive province (Alberta) still has a higher combined rate than all 50 US states. As mentioned earlier, this is because in Canada the top marginal tax rates apply at relatively lower income thresholds.

Figure 12
Canadian and ten US States combined federal and provincial/state marginal personal income tax rate at CAD\$150,000, 2014



Source: See Table 5.

Corporate income taxes

As discussed, the literature finds that tax competitiveness with respect to corporate income taxation is also an important contributor to economic performance. High corporate tax rates diminish a jurisdiction's appeal as a destination for business investment, and can hurt its ability to compete with other jurisdictions for investment and ultimately job creation.

Corporate income tax rates in Canada

Table 6 illustrates the provincial general corporate income tax rates and the combined federal-provincial corporate income tax rates for the ten Canadian provinces. It is important to note that the general corporate tax rates kick in at different corporate income levels in the various provinces.²³ The table shows that Alberta has the lowest provincial general corporate income tax rate (10.0 percent), while Prince Edward Island and Nova Scotia have the highest at 16.0 percent. Quebec ranks fourth out of the ten provinces with general corporate income tax rate of 11.9 percent.²⁴ The federal corporate income tax rate is 15.0 percent.

Table 6

Canadian general corporate income tax rates, 2014

	Provincial general corporate income tax rates	Combined federal and provincial general corporate income tax rates
British Columbia	11.0	26.0
Alberta	10.0	25.0
Saskatchewan	12.0	27.0
Manitoba	12.0	27.0
Ontario	11.5	26.5
Quebec	11.9	26.9
New Brunswick	12.0	27.0
Nova Scotia	16.0	31.0
Prince Edward Island	16.0	31.0
Newfoundland & Labrador	14.0	29.0

Sources: Canada, CRA, 2014b; Provincial Budgets, 2014.

23. All provinces have small business tax rates with thresholds ranging from \$350,000 (Nova Scotia) to \$500,000 (multiple provinces).

24. Quebec's income tax rate is 8.0 percent for small businesses with income less than \$500,000. This is the highest small-business tax rate among all the Canadian provinces by nearly double.

Provincial and state level corporate income tax rates

A comparison of the ten Canadian provincial general corporate income tax rates with the ten US states with the highest general corporate income tax rates is set out in **table 7**. Even though the comparison involves the ten states with the highest tax rates, all of them impose a lower rate than Canadian provinces except for Iowa, whose rate of 12.0 percent is higher than three provinces.

Table 7

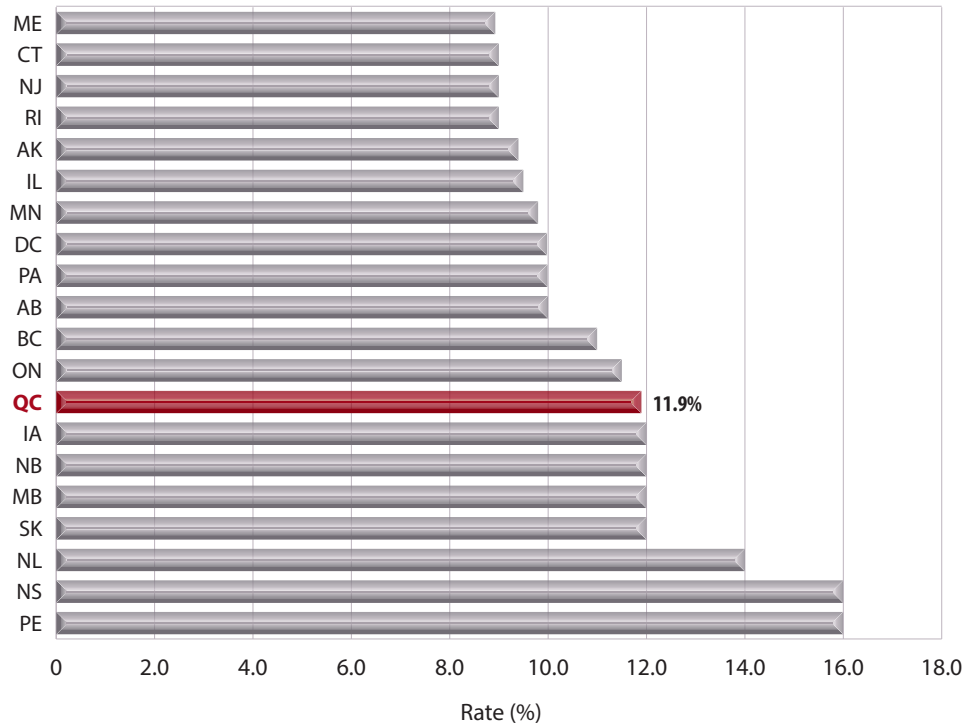
Canadian and ten US States top provincial/state corporate income tax rates, 2014

	Rate (%)
Maine	8.93
Connecticut	9.00
New Jersey	9.00
Rhode Island	9.00
Alaska	9.40
Illinois	9.50
Minnesota	9.80
Washington D.C.	9.98
Pennsylvania	9.99
Alberta	10.00
British Columbia	11.00
Ontario	11.50
Quebec	11.90
Iowa	12.00
Manitoba	12.00
New Brunswick	12.00
Saskatchewan	12.00
Newfoundland & Labrador	14.00
Nova Scotia	16.00
Prince Edward Island	16.00

Sources: Tax Foundation, 2013b; see Table 6.

As shown in **figure 13**, Quebec's provincial corporate income tax rate is slightly (0.1 percentage point) lower than Iowa's top corporate income tax rate, which is the highest state-level rate in the entire US. Otherwise, Quebec's general corporate tax rate is higher than those found in the other 49 US states. Within Canada, Quebec's rate is the fourth most competitive behind Alberta, British Columbia, and Ontario.

Figure 13
Canadian and ten US States top provincial/state corporate income tax rate, 2014



Combined federal-provincial and state level corporate income tax rates

However, with respect to combined federal-provincial and federal-state corporate income tax rates (**table 8**), the US states fare poorly compared to the Canadian provinces due to the relatively high corporate income tax rates imposed by the US federal government.²⁵ The table shows the Canadian provinces and the 10 states with the lowest combined rates (rather than the ones with the highest rates as in the previous section). This is to highlight how high federal rates in the US affect state-level tax competitiveness. After accounting for the combined rates, even the US state with the lowest rate is less competitive than all the Canadian provinces, because the top US corporate income tax rate is 35 percent (or 20 percentage points higher than Canada) at the federal level.

Table 8
Canadian and ten US States top combined federal and provincial/state corporate income tax rates, 2014

	Rate (%)
Alberta	25.00
British Columbia	26.00
Ontario	26.50
Quebec	26.90
Saskatchewan	27.00
Manitoba	27.00
New Brunswick	27.00
Newfoundland & Labrador	29.00
Nova Scotia	31.00
Prince Edward Island	31.00
North Dakota	39.53
Colorado	39.63
Mississippi	40.00
South Carolina	40.00
Utah	40.00
Florida	40.50
Georgia	41.00
Kentucky	41.00
North Carolina	41.00
Oklahoma	41.00

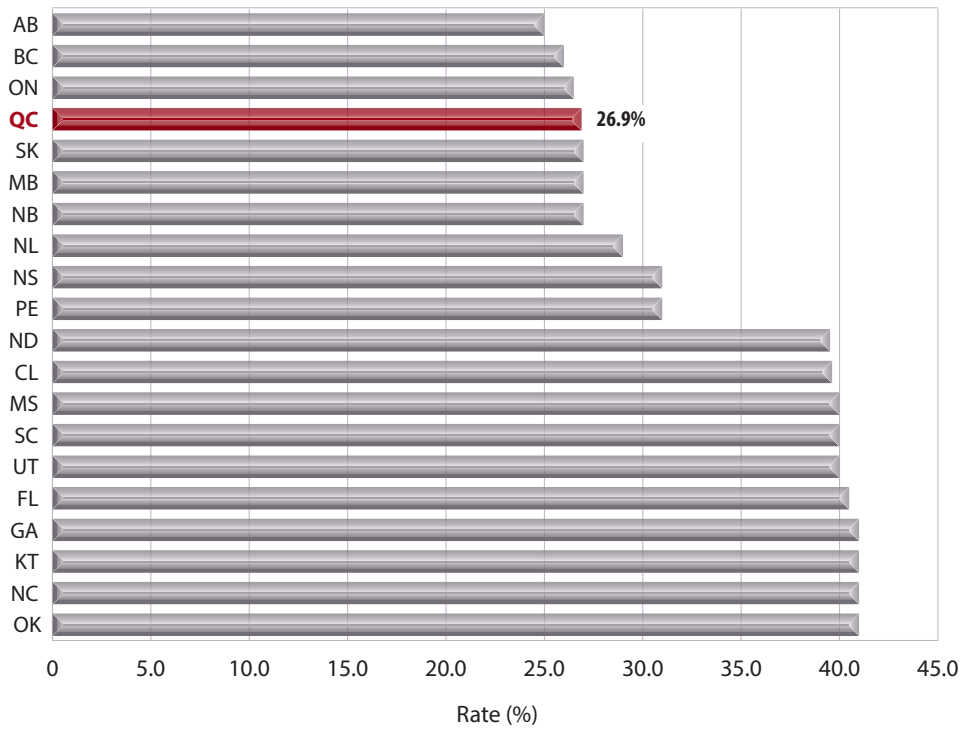
Note: The US Federal top corporate tax is 35 percent.

Sources: Tax Foundation, 2013b; KNV Chartered Accountants LLP, 2014.

25. There is a growing consensus in the US that the federal government needs to reform its corporate tax regime, including lowering its statutory rates in the name of tax competitiveness. For more specific research on its lack of corporate tax competitiveness, see Mintz and Chen (2014), Miller and Kim (2008), and Toder and Viard (2014).

Figure 14 shows the combined federal and provincial and federal and state top corporate income tax rates among the 10 Canadian provinces and the 10 US states with the lowest combined rates. North Dakota has the lowest combined federal and state-level top corporate income tax rate among all US states, but is still 12.63 percentage points or 47 percent higher than Quebec's tax rate (26.9 percent at the combined level).

Figure 14
Canadian and ten US States top combined federal and provincial/state corporate income tax rate, 2014



Payroll taxes

Payroll taxes are taxes imposed on employers and/or employees and are usually based on a percentage of the salaries that employers pay their workers up to a maximum insurable proportion of their earnings. In Canada, payroll taxes include Employment Insurance, Canada Pension Plan (Quebec Pension Plan) contributions and health premiums, and post-secondary education taxes in certain provinces.²⁶ Given that the literature finds that high payroll tax rates can discourage employment growth, it is useful to examine Quebec's competitiveness on payroll tax rates relative to other Canadian provinces.

It is difficult to compare Canadian provinces to US states on payroll taxes (and rates) because of differences in the types of payroll taxes that are imposed. In the US, payroll taxes include the taxes paid for social security and Medicare (employer and employee share the taxes together).

The Canada Pension Plan (CPP) is a mandatory contributory pension plan that functions in Canada outside of Quebec.²⁷ Quebec opted out of the CPP and established the Quebec Pension Plan (QPP) in 1966. The pensions are funded by mandatory contributions from employers and employees.

As **table 9** shows, Quebecers face higher contribution rates than those imposed on the rest of Canadians. The CPP's combined contribution rate (for employers and employees) is 9.9 percent. The Quebec Pension Plan's combined contribution rate is 10.35 percent with the same income threshold. The Quebec government has announced that QPP contributions will increase gradually to 10.8 percent in 2017.

Table 9

Contribution rates for the Canada and Quebec Pension Plans, 2014

Canada Pension Plan		Quebec Pension Plan	
Threshold	Rate	Threshold	Rate
\$0-\$3,500	0.00%	\$0-\$3,500	0.00%
\$3,501-	9.90%	\$3,501-	10.35%

Sources: Quebec, Régie Des Rentes Du Quebec, 2010; Service Canada, 2014a.

26. Employment Insurance premiums for employees are \$1.88 per \$100 and 1.4 times for employers. The employee's maximum insurable earnings are \$48,600 for 2014.

27. The maximum pensionable earnings for CPP and QPP are both \$52,500 for 2014.

The reason Quebec imposes a higher contribution rate for the QPP is that the fund's financial position is weaker than the CPP. This is partly the result of its older population and poorer investment returns.²⁸

In addition, four provinces—Quebec, Ontario, Manitoba, and Newfoundland and Labrador—have employer-paid payroll taxes for health care and/or post-secondary education. Quebec, Ontario, and British Columbia impose employee-paid payroll taxes for health care and/or post-secondary education. **Table 10** shows that Quebec and Ontario are unique for imposing these taxes on both employers and employees.

Table 10
Provinces with payroll taxes for health and/or post-secondary education

Health (and post-secondary education) taxes	
Employer-paid payroll tax	Employee-paid payroll tax
Quebec	Quebec
Ontario	Ontario
Manitoba	British Columbia
Newfoundland & Labrador	

Sources: Quebec, Revenu Quebec, 2012; Ontario, Ministry of Finance, 2014b; Newfoundland & Labrador, Ministry of Finance, 2014b; Manitoba, Ministry of Finance, 2011; British Columbia, Ministry of Health, 2014.

Quebec is the only province that levies payroll taxes with no threshold for businesses with small payrolls (Cruz and Nat, 2013: 10). Its top employer-paid payroll tax rate is 4.26 percent, which is the highest in the country—nearly 2 percentage points higher than Ontario and Newfoundland and Labrador's top employer-paid payroll tax rates.²⁹

Summary

As these comparisons show, Quebeckers face some of the highest tax rates in North America. While the provincial government has made some progress on corporate income taxes and a harmonized sales tax, personal income tax rates remain decidedly uncompetitive. The result is that combined marginal tax rates are now approaching nearly 50 percent for Quebeckers earning \$136,270 and over.

²⁸. For more on the QPP's solvency, see Cross (2014) and Quebec, Régie Des Rentes Du Quebec (2010).

²⁹. The top employer-paid payroll tax rate in Ontario is 1.95 percent and the top employer-paid payroll tax rate in Newfoundland and Labrador is 2 percent.

Conclusion

Empirical research and history provide evidence that high marginal tax rates and uncompetitive tax policies can hurt a jurisdiction's economic performance. This is because individuals and businesses respond by working, saving, and investing less, and by not hiring or expanding their activities. High personal and corporate income tax rates can also cause workers and capital to move to other jurisdictions with lower tax rates.

Quebec's tax system—particularly with respect to personal income taxes—is decidedly uncompetitive within Canada and more broadly North America. This has contributed to its relatively poor economic performance across a range of indicators, including one of the lowest levels of real GDP per capita growth among the ten provinces over the past ten years.

The Quebec government has recently created the Quebec Taxation Review Committee to evaluate the provincial tax system and make recommendations on how to improve its competitiveness. The recommendations are expected in advance of the 2015 budget.

If the government wants to improve Quebec's economic prospects, it should move ahead with changes to its tax system focused on increasing its competitiveness. The province's personal income tax rates and the income thresholds at which they apply ought to be a top priority.

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About the authors

Sean Speer

Sean Speer is Associate Director of the Fraser Institute's Centre for Fiscal Studies. He previously served in different roles for the federal government including senior economic advisor to the Prime Minister and director of policy to the Minister of Finance. He has been cited by *The Hill Times* as one of the most influential people in government and by *Embassy Magazine* as one of the top-80 people influencing Canadian foreign policy. Sean holds an MA in History from Carleton University and has studied economic history as a PhD candidate at Queen's University.

Milagros Palacios

Milagros Palacios is a Senior Research Economist at the Fraser Institute. Since joining the Institute, Ms. Palacios has authored or coauthored over 40 research studies and over 60 commentaries on a wide range of public policy issues including taxation, government finances, investment, productivity, labour markets, and charitable giving, among others. Her recent commentaries have appeared in major Canadian newspapers such as the *National Post*, *Toronto Sun*, *Windsor Star*, and *Vancouver Sun*. Ms. Palacios holds a BA in Industrial Engineering from the Pontifical Catholic University of Peru and an MSc in Economics from the University of Concepcion, Chile.

Feixue Ren

Feixue Ren is a research intern at the Fraser Institute in 2014. She holds a Masters Degree in Economics from Lakehead University and a BA in Statistics from Hunan Normal University in China.

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