



Federal-Provincial Business Tax Reforms: A Growth Agenda with Competitive Rates and a Neutral Treatment of Business Activities

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As the federal and provincial governments look to create jobs and attract business investment, productivity-enhanced business tax structures are in high order. Tax structures that combine internationally competitive tax rates on neutral tax bases foster long-term economic growth and generate sustainable tax revenue.

This report examines tax policy in Canada over the past few years, specifically its impact on capital investment, labour and the cost of doing business across provinces and industries. Suggestions for tax reform are provided.

* We wish to thank an anonymous referee and officials from the finance departments of British Columbia, New Brunswick, Ontario, and Canada for detailed comments.

SUMMARY

With a stronger desire among governments to raise more revenue and balance budgets, a productivity-enhancing business tax structure is needed that combines low tax rates on neutral tax bases and provides an economic environment conducive for long-term growth, which, in turn, would help generate sustainable tax revenue.

Economic growth could be improved by reducing corporate and personal taxes on investment and savings in favour of consumption taxes. Recent tax reforms in Ontario and British Columbia, where retail sales taxes, with their heavy burden on business intermediate and capital goods, were replaced with the harmonized sales tax, are milestones for growth prospects in each province.

A 3 percentage point reduction in the federal corporate income tax rate, scheduled for implementation by 2012, will also contribute to growth and jobs. The first 1.5 percent point reduction already is in place as of January 1, 2011 so a further 1.5 percentage point cut is remaining. The final reduction in 2012 would reduce the federal-provincial marginal effective tax rate on capital to 18.3% and, in the long run, would increase Canada's capital stock by \$30.6 billion and employment by about 100,000.

Further gains could be achieved by making the tax system more neutral — removing special preferences that favour some business activities over others. When the tax burden varies across business activities and types of businesses, the allocation of capital is distorted since businesses decisions are not solely based on economic criteria but instead influenced by differences in tax burdens. A more a neutral corporate tax system can boost productivity by shifting capital resources from less productive to more productive business activities.

Reducing the corporate income tax rate would particularly favour the services sector, which is more highly taxed than the forestry or manufacturing sectors. It would also reduce the tax support given to preferentially treated activities through accelerated depreciation. If governments also broadened tax bases by removing accelerated depreciation, investment tax credits, and other tax exemptions that favour certain industries over others, the corporate tax would be more efficient and less distortive of capital allocation decisions, and would better allow businesses to exercise their own judgment about how best to make economic gains from their investments.

INTRODUCTION

The Canadian economy weathered the worldwide financial turmoil and ensuing recession relatively well.¹ As the recovery continues on a bumpy road, Canada is facing new fiscal challenges arising from recession-triggered government deficits, which vary from province to province. With governments now wanting to raise more revenue and balance their budgets, a productivity-enhancing business tax structure would combine low tax rates on neutral tax bases and hence provide an economic environment conducive for long-term growth, which, in turn, would help generate sustainable tax revenue.

Canadians should not be complacent about their tax system. Studies have repeatedly shown that taxes on capital investment riddled with special preferences impose high costs on the Canadian economy. The most cited study, by Baylor and Beauséjour,² suggests that each extra dollar of corporate income tax that is raised by rate increases causes an additional 37 cents in economic costs, excluding the cost of distorting the asset mix of companies. Taxes on the purchase of capital, as under provincial sales tax systems, impose an economic cost equal to \$1.29 for each dollar of tax revenue raised. Personal income taxes on capital income impose an economic cost equal to \$1.30, while payroll taxes impose an economic cost equal to 15 cents on the dollar. Consumption taxes impose the least economic cost, at 13 cents on the dollar. Although tax changes in the past six years undoubtedly have reduced the economic costs of corporate and personal taxes, these are still significant, and added to them are compliance and administrative costs that increase the burden of taxes still more.

These economic cost estimates suggest that economic growth could be improved by reducing corporate and personal taxes on investment and savings in favour of consumption taxes. Sales tax reforms in Ontario and British Columbia — where the retail sales tax, with its heavy burden on business intermediate and capital goods, was replaced by a harmonized sales tax (HST) — are milestones for growth prospects in the two provinces. Reversing this step, as there is growing pressure in British Columbia to undertake, would be investment killing and would cause considerable harm to the British Columbia economy, including losses in employment and hence an erosion of living standards.³

A 3 percentage point reduction in the federal corporate income tax rate, with the first half already in place by January 1, 2011 and the remaining half to be implemented by January 1, 2012, also would contribute to growth and jobs — we estimate the last 1.5 percentage point reduction in corporate tax rate would increase Canada's capital stock by about \$30 billion and employment by about 100,000 jobs in the long run⁴ — and reduce the federal-provincial marginal effective tax rate (METR) to 18.3%.⁵ The revenue loss accompanying a corporate rate reduction would be relatively small if one takes into account the shifting by multinationals of

¹ See Organisation for Economic Co-operation and Development, *Economic Surveys: Canada* (Paris: OECD, September 2010); available online at <http://www.oecd.org/dataoecd/23/38/45950025.pdf>.

² M. Baylor and L. Beauséjour, "Taxation and Economic Efficiency: Results from a Canadian CGE Model," Working Paper 2004-10 (Ottawa: Department of Finance, 2004).

³ See J. Mintz, "British Columbia's Harmonized Sales Tax: A Giant Leap in the Province's Tax Competitiveness," *SPP Briefing Papers* 3 (4, 2010).

⁴ See D. Chen and J. Mintz, "Canada's Tax Competitiveness after a Decade of Reforms: Still an Unfinished Plan," *SPP Briefing Papers* 3 (5, 2010).

⁵ It takes time for capital to adjust to changes in tax policy. Within four years 62% of the adjustment takes place, and within seven years most of the capital adjustment takes place (based on the University of Toronto Focus Model).

profits to low-tax jurisdictions. Studies show that, in countries with relatively high corporate income tax rates — such as Canada, where the combined federal-provincial rate in 2010 is 29.3% — governments lose little revenue when they reduce the corporate income tax rates.⁶

Further gains could be achieved by making the tax system more neutral — that is, by removing special preferences that favour some business activities over others. When tax burdens vary among business activities and types of businesses, capital tends to be allocated to activities that earn lower rates of return on capital due to tax preferences. A more neutral corporate tax system could boost productivity by shifting capital resources from less productive to more productive business activities and by changing the choices businesses make about the allocation of capital.⁷ Studies suggest gains of between 50 and 85 cents per dollar of corporate income tax revenues, which would be in addition to the distortionary losses arising from the discouragement of aggregate investment.⁸ A corporate income tax rate reduction would particularly favour the services sector, which is more highly taxed than the forestry or manufacturing sectors. It would also reduce the tax support given to preferentially treated activities through accelerated depreciation. If governments also broadened tax bases by removing accelerated depreciation, investment tax credits, and other tax exemptions that favour certain business activities, the corporate tax would be more efficient and less distortive of capital allocation decisions, and would better allow businesses to exercise their own judgment about how best to make economic gains from their investments.

In this report, we analyse the impact of tax measures that took effect in 2010 relative to the impact of tax policy over the past two years. We measure this impact by calculating marginal effective tax rates on capital investment, work effort, and the cost of doing business in Canada, by province and by industry. We also provide policy suggestions for future tax reform.

⁶ See, for example, Kimberly Clausing, “Corporate Tax Revenues in OECD Countries,” *International Tax and Public Finance* 14 (2, 2007): 115-134; Jack Mintz, “2007 Tax Competitiveness Report: A Call for Comprehensive Tax Reform,” *C.D. Howe Institute Commentary* 254 (Toronto: C.D. Howe Institute, September 2007); and Alex Brill, “Corporate Tax Rates: Receipts and Distortions,” *Tax Notes*, 22 December, 2008.

⁷ Corporate taxes have higher economic costs related to the allocation of capital among assets than among industries; see B. Hamilton, J. Mintz, and J. Whalley, “Decomposing the Welfare Costs of Capital Tax Distortions: The Importance of Risk Assumptions,” NBER Working Paper 3628 (Cambridge, MA: National Bureau of Economic Research, 1991), which finds that the intertemporal distortion caused by taxing aggregate investment is the most significant economic cost in this analysis. “Static” economic costs are also important, however, especially with respect to inter-asset distortions.

⁸ Jack Mintz, “Neutrality and the Effect of Capital Taxation on Economic Efficiency and Growth” (manuscript prepared for Treasury, New Zealand, 2010). The inter-asset, inter-industry, and business organization distortions are not captured in the Baylor-Beauséjour estimates of efficiency costs since their model focuses on intertemporal distortions of capital in only one sector. Since models differ, estimates of the economic costs of taxing aggregate investment will vary.

TAXES ON CAPITAL INVESTMENT

In looking at taxes on capital investment, we calculate the METR as the annualized value of corporate income tax, capital tax, and sales tax paid on capital purchases as a share of the gross rate of return on capital.⁹ We measure the METR on capital for medium and large corporations for each of the ten provinces and in the forestry, manufacturing, construction, transportation, communications, utilities, trade and business and household services sectors.¹⁰

In 2010, the tax burden on capital investment was sharply reduced, with the federal-provincial METR dropping from 28% in 2009 to 20.5% in a single year (see Figure 1a and Table 2a). The main reason for this improvement in tax competitiveness was the implementation in Ontario and British Columbia of the harmonized sales tax (HST). Further income tax reduction already planned by the federal and several provincial governments (summarized in Table 1) will see the national METR on capital drop to 18.4% by 2013 (Table 2b).

TABLE 1: Federal and Provincial Corporate Income Tax Rates, 2010 and 2013

	2010	2013
	(%)	
Canada	18.0	15.0
Newfoundland & Labrador	14.0/5.0*	14.0/5.0*
Prince Edward Island	16.0	16.0
Nova Scotia	16.0	16.0
New Brunswick	11.0	8.0**
Quebec	11.9	11.9
Ontario	12.0/10.0*	10.0
Manitoba	12.0	12.0
Saskatchewan	12.0	12.0/10.0*
Alberta	10.0	10.0
British Columbia	10.5	10.0

* The reduced rate is for manufacturing and processing businesses.

** This is the current legislated rate in New Brunswick; the new government recently indicated it will not reduce the rate below 10%.

Sources: University of Calgary, The School of Public Policy, Tax and Economic Growth Program

⁹ Duanjie Chen 2000. "The Marginal Effective Tax Rate: The Only One that Matters in Capital Allocation". C. D. Howe Institute Backgrounder, August 22, 2000.

¹⁰ We omitted mining and oil and gas as these sectors need updating in the current model; the underlying theory and methodology is reported in J. Mintz, *Most Favoured Nation: Building a Framework for Smart Economic Policy*, Policy Study 36 (Toronto: C.D. Howe Institute, 2001). Note that, in our analysis, we assume that investment tax credits — the Atlantic Investment Tax Credit and similar credits provided by Nova Scotia, Prince Edward Island, Quebec, Manitoba, and Saskatchewan — are fully applied against tax liability in the year at hand. Such preferential tax treatment, however, does not benefit companies that are not paying sufficient taxes to claim the benefit. Such credits, while of little tax benefit to business, distort investment decisions that would otherwise be solely determined by the market.

Federal Actions

The federal government is on track toward implementing a gradual but significant reduction in the corporate income tax rate that began in 2000, when it was 29.12%, and will end in 2012 with the rate at 15%. Ottawa also introduced, in the 2007 budget, a fast write-off for assets used in manufacturing and processing activities. Intended as a temporary measure to help manufacturing and processing sectors compete globally and meant to apply to capital investment in place before 2009, it has been extended twice to include investments made before 2012. Once the rate reduction is fully implemented, and assuming an end to the targeted tax preference for manufacturing and processing, the net effect of these reforms will reduce the overall METR on capital by another percentage point by 2013. The manufacturing sector, however, which is more favourably taxed than other industries, will face an increase in its METR on capital from 11.7% to 13.8% (see Figure 1b and Tables 2a and 2b). Forestry will also be affected since manufactured forest product industries will face a higher METR as well.

FIGURE 1a: The Marginal Effective Tax Rate on Capital Investment, Aggregate and by Province, Canada, 2008-2010 and 2013

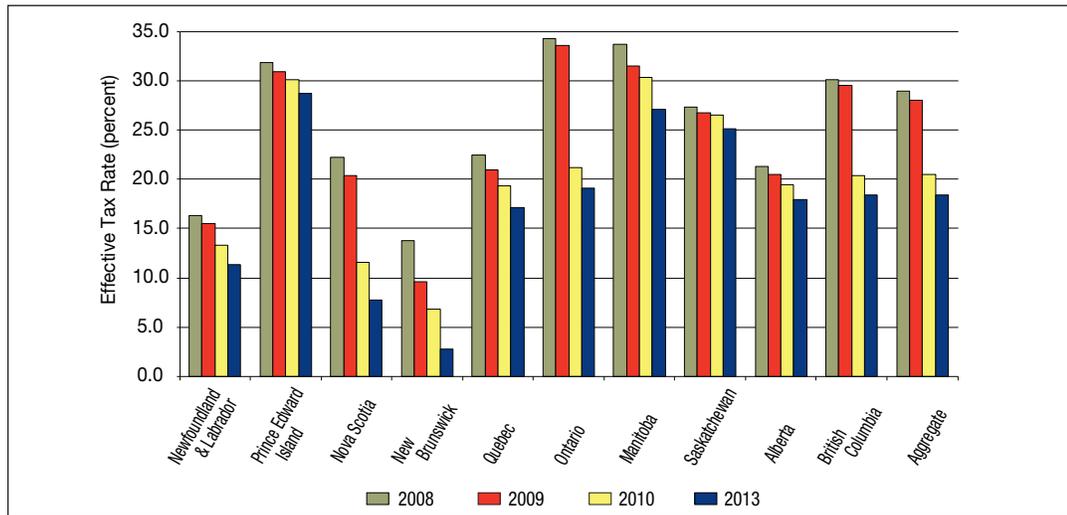
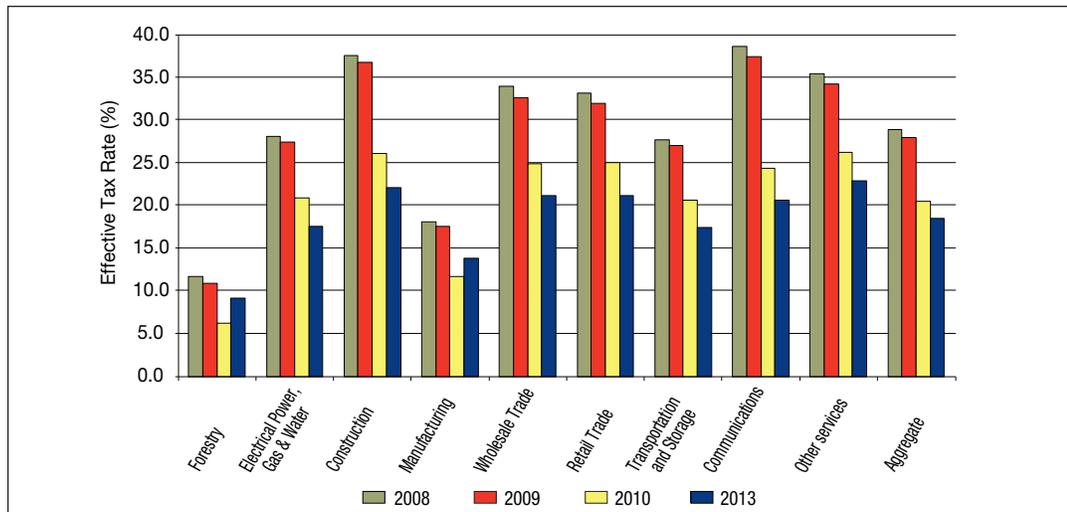


FIGURE 1b: The Marginal Effective Tax Rate on Capital Investment, Aggregate and by Industry, Canada, 2008-2010 and 2013



Sources: Authors' calculations

TABLE 2a: The Marginal Effective Tax Rate on Capital Investment, by Industry and Province, Canada, 2010

	FORESTRY	ELECTRICAL POWER, GAS & WATER	CONSTRUCTION	MANUFACTURING	WHOLESALE TRADE	RETAIL TRADE	TRANSPORTATION AND STORAGE	COMMUNICATIONS	OTHER SERVICES	AGGREGATE
Canada	6.3	20.9	26.1	11.7	24.9	25.0	20.6	24.4	26.1	20.5
Newfoundland & Labrador	-44.4	NA	26.4	-34.2	23.8	25.4	21.5	24.5	23.4	13.3
Prince Edward Island	-71.6	NA	44.2	-51.1	39.7	38.2	35.7	49.0	43.5	30.1
Nova Scotia	-108.1	25.2	29.9	-88.6	28.8	29.0	24.7	27.8	26.9	11.6
New Brunswick	-36.3	19.8	24.1	-27.3	23.0	23.2	19.0	22.1	21.2	6.9
Quebec	2.4	22.4	26.7	7.3	25.9	26.1	20.9	24.7	27.8	19.4
Ontario	13.7	20.5	24.9	15.5	23.7	24.2	19.9	22.8	26.5	21.1
Manitoba	3.3	28.5	39.3	3.7	34.4	34.0	31.5	42.1	39.1	30.4
Saskatchewan	13.7	24.7	34.0	15.8	30.8	30.1	25.3	37.4	32.7	26.5
Alberta	14.2	19.0	23.2	17.3	22.1	22.4	18.6	21.0	20.4	19.5
British Columbia	14.4	19.5	23.6	16.3	22.8	23.0	18.1	21.4	24.4	20.3

Sources: University of Calgary, The School of Public Policy, Tax and Economic Growth Program

TABLE 2b: The Marginal Effective Tax Rate on Capital Investment, by Industry and Province, Projected for 2013

	FORESTRY	ELECTRICAL POWER, GAS & WATER	CONSTRUCTION	MANUFACTURING	WHOLESALE TRADE	RETAIL TRADE	TRANSPORTATION AND STORAGE	COMMUNICATIONS	OTHER SERVICES	AGGREGATE
Canada	9.2	17.5	22.1	13.8	21.2	21.2	17.4	20.7	22.8	18.4
Newfoundland & Labrador	-39.1	NA	23.7	-30.5	21.2	22.8	19.1	21.9	20.9	11.4
Prince Edward Island	-59.9	NA	42.5	-44.4	37.8	36.2	33.7	47.7	42.0	28.7
Nova Scotia	-99.0	21.4	25.8	-84.6	24.7	25.0	20.8	23.8	23.0	7.7
New Brunswick	-34.6	15.3	18.8	-28.5	17.8	18.1	14.6	17.1	16.4	2.8
Quebec	6.3	18.3	22.2	9.7	21.5	21.7	16.8	20.3	24.0	17.1
Ontario	16.6	16.8	20.5	17.7	19.8	20.1	16.1	18.7	22.9	19.1
Manitoba	6.7	23.8	35.2	6.4	29.8	29.4	27.3	38.6	35.4	27.0
Saskatchewan	16.4	22.5	31.9	17.7	28.7	27.8	23.3	35.7	30.8	25.2
Alberta	16.9	16.7	20.5	18.8	19.5	19.8	16.3	18.5	18.0	18.0
British Columbia	16.5	16.8	20.5	17.9	19.8	20.0	15.5	18.5	21.9	18.4

Sources: University of Calgary, The School of Public Policy, Tax and Economic Growth Program

Provincial Actions

The boldest business tax reform in 2010 came from Ontario, which, on July 1, harmonized its provincial sales tax with the goods and services tax (GST), phased in a corporate income tax reduction, and accelerated the elimination of the provincial capital tax. This tax reform reduced the METR on capital for Ontario by more than 12 percentage points from its 2009 level of 33.6% to 21% (Figure 1a and Table 2a) and contributed 5 percentage points to the drop in the overall METR on capital in Canada from 2009 to 2010.

British Columbia also harmonized its sales tax with the GST. In addition, the province has reduced its corporate income tax rate to 10.5%. As a result, the METR on capital in British Columbia fell by more than 9 percentage points from its 2009 level of 29.5%, contributing a full percentage point to the decline in the Canada-wide METR on capital (see below for further analysis of the province's sales tax harmonization).

By 2018, when both Ontario and British Columbia complete their sales tax harmonization (by phasing out restrictions on certain input tax credits), and factoring in their planned income tax reduction over the next two years, the METR on capital in the two provinces will drop below 18%, which will also be the Canada-wide average by that time, assuming no other tax changes occur beyond current government plans.

Another province that has substantially reformed its corporate income tax recently is New Brunswick. Having reduced its corporate income tax rate from 17% to 13% from 2000 to 2003, New Brunswick initiated another sweeping tax reform plan in 2009, including a planned reduction in its corporate income tax rate by 5 percentage points in four years. New Brunswick has the lowest tax burden on capital investment in the country — taking into account the federal Atlantic Investment Tax Credit (AITC) for manufacturing and processing assets — and its METR on capital is just 7%. As in other Atlantic provinces, manufacturing and forestry industries in New Brunswick benefit substantially from the AITC; in New Brunswick, however, unlike in the other Atlantic provinces, tax competitiveness is mostly self-made. That is, New Brunswick's relatively low corporate income tax rate provides a substantial reduction in the tax burden of the services sector relative to other provinces — indeed, unlike in the other three Atlantic provinces, METRs on capital for the non-manufacturing sectors in New Brunswick are all below the national average. New Brunswick's tax competitiveness will be further reinforced with an already legislated reduction of its corporate income tax rate to 8% — which would be the lowest in the country according to current government plans. We hope New Brunswick's rate reduction proceeds as planned,¹¹ and that federally provided investment tax credits and preferences for manufacturing and processing investments are eliminated in a coordinated manner. Such preferences serve only to harm New Brunswick's productivity and offset gains from its relatively favourable tax burden.

Alberta also has implemented a low-rate, broad-based business tax structure over the past decade, which has given it a significant tax advantage. The province offers few special preferences, although in 2004 it introduced a 10% research and development tax credit targeted at qualifying investments of less than \$4 million. Alberta's tax advantage will disappear by 2013, however, when other provinces will have caught up by eliminating capital taxes on non-financial businesses, lowering corporate income tax rates, and harmonizing their sales taxes, which will virtually eliminate taxes on capital goods purchases.

¹¹ New Brunswick's new government indicated in the November 23, 2010, Speech from the Throne that it might not reduce the corporate rate beyond 10% after 2011.

In other provinces, however, tax reforms have been more timid. More specifically:

- Manitoba and Saskatchewan by 2013 will be much less competitive with respect to taxes on capital investment compared to all provinces except Prince Edward Island. Manitoba and Saskatchewan had, in recent years, reduced their general corporate income tax rates from 17% to the current 12%. While Saskatchewan has a reduced tax rate of 10% for manufacturing and processing businesses, it has no plans to reduce its general tax rate; Manitoba has made further reductions in its tax rate contingent on a balanced budget. Furthermore, both provinces so far have rejected the idea of harmonizing their sales tax with the federal GST on the grounds that doing so would increase the tax burden on consumers. While Manitoba's rejection sounded somewhat more tentative, Saskatchewan's opposition is more forceful, and leaves little likelihood of future action.¹² Saskatchewan's METR on capital is a little lower than Manitoba's since Manitoba has a higher retail sales tax rate (7% versus 5% in Saskatchewan).
- Newfoundland and Labrador, Nova Scotia, and Prince Edward Island all maintain relatively high corporate income tax rates for large and medium-sized companies, ranging from 14% to 16%. Although the AITC substantially subsidizes manufacturing and forestry industries in these provinces, as indicated by *negative* METRs for these sectors,¹³ almost all the services sectors in all three provinces bear higher tax burdens than the national average (see Table 2a). Moreover, Nova Scotia's new 10% investment tax credit for eligible manufacturing and processing investment further worsens the tax distortion between the manufacturing and service sectors in that province and, by extension, the Canada-wide inter-industry tax distortion.
- Quebec has one of the lower tax burdens on capital among the provinces, but also an inefficient tax structure with an endless list of narrowly targeted tax preferences. These include exemptions for qualifying companies in targeted sectors, tax credits and preferential deductions and credits for manufacturing, processing investments in specified regions and various activities (such as pig manure farming), and tax-preferred zones and holidays. In recent years, Quebec has eliminated capital taxes but increased its corporate income tax rate, while further extending the list of tax incentives. In 2009, the province enhanced existing manufacturing and processing investment tax credits with a higher credit and/or refundability based on conditions such as investment in specified regions (the general credit rate remains 5%). According to our simulation, given its relatively high corporate income tax rate of 11.9%, Quebec could eliminate just its 5% manufacturing investment tax credit to achieve a 4 percentage point reduction in its corporate income tax rate without affecting its overall METR on capital. Such a move could also preserve Quebec's tax competitiveness in manufacturing and processing relative to most provinces, including Ontario.

¹² Based on information drawn from the following two government websites: <http://news.gov.mb.ca/> and <http://www.gov.sk.ca/>.

¹³ A negative METR implies that investments in marginal projects generate tax losses and credits that would shelter non-marginal investments from tax. If losses and credits cannot be used fully by being applied to other income, the negative rate approaches zero (only zero if companies are not expected to pay taxes during the capital good's useful life).

THE CHANGING LANDSCAPE OF PROVINCIAL TAX COMPETITIVENESS

The tax reforms undertaken by New Brunswick, Ontario, and British Columbia have changed significantly the landscape of tax competitiveness among the ten provinces. Until 2009, the provinces could be divided about equally into those with high tax burdens on capital and those with substantially lower burdens. With British Columbia and Ontario moving to the low-burden camp in 2010, the low-tax provinces now account for more than 90% of the Canadian economy, leaving only Manitoba (with a METR on capital of 30%), Prince Edward Island (30%), and Saskatchewan (27%) in a far less tax-competitive position, not only within Canada but also globally — even with planned reductions the corporate tax burden, Canada’s METR on capital by 2013 will only be similar to the average of member countries of the Organisation for Economic Co-operation and Development (OECD), at roughly 18%.

Prince Edward Island provides the worst example. It holds fast to the highest corporate income tax rate of all the provinces for large and medium companies (16%) and the highest sales tax rate (10%),¹⁴ both of which also burden the province’s manufacturing and processing industries; moreover, the sales tax on capital inputs also hurts small business. On the other hand, Prince Edward Island provides its own investment tax credit for manufacturing and processing industries. Our simulation indicates, however, that if the province were to reduce its income tax rate to 10%, harmonize its sales tax with the GST, and eliminate its investment tax credit, business would benefit more substantially than it does from the combined AITC and provincial investment tax credits. The METR on capital in Prince Edward Island would drop below 20%, or less than two-thirds of its current level.

Lingering Cross-industry Tax Distortions

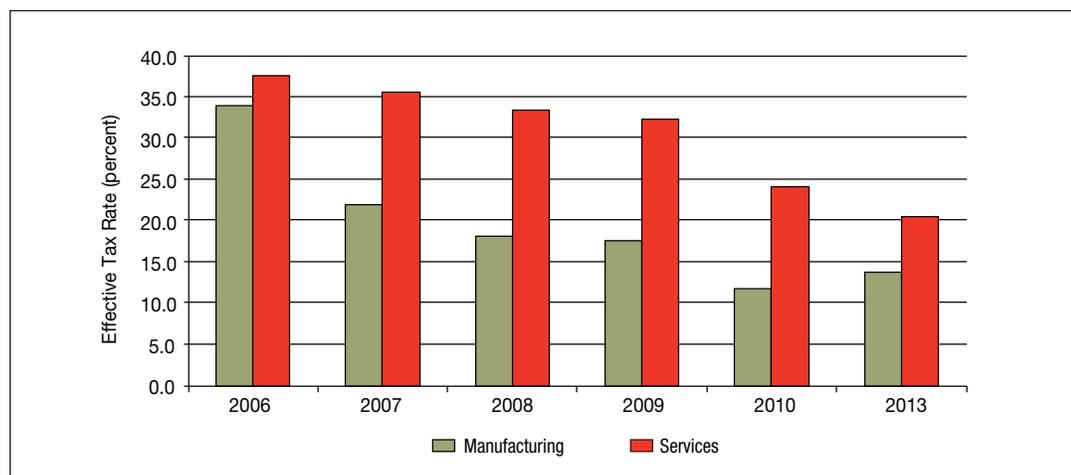
Most fiscal economists have long agreed that “having low tax rates on broad bases is preferable for minimizing distortions than the contrary.”¹⁵ The contrary case is a combination of high tax rates on narrow tax bases that are full of targeted preferential tax treatments such as investment tax credits and fast write-offs. In recent years, despite most Canadian governments’ persistent rate reduction, fast write-offs and investment tax credits for assisting only manufacturing and processing businesses prevail. The approach of using tax measures to serve industrial policy has evidently worsened inter-industry tax distortions. Our cross-industry comparison of METRs on capital shows that the manufacturing (and forestry) industry is consistently taxed less than other industries mainly owing to the preferential tax treatment extended to manufacturing assets. The reduced income tax rate for manufacturing activities in several provinces, including Ontario before 2013, also contributes to inter-industry tax distortions.

¹⁴ Prince Edward Island applies its sales tax on prices after including the GST of 5%, making the effective sales tax rate 10.5%.

¹⁵ OECD, *Economic Surveys: Canada*, p. 8.

Figure 2 illustrates how the METR on capital for manufacturing compares with that for a broad range of services, including public utilities, construction, wholesale and retail trade, transportation, communications, and other services. In 2006, the METR gap between manufacturing and the services sector was only a little more than 3 percentage points, partly helped by unification of the previous two-tier federal corporate income tax rates in the early 2000s. This gap widened suddenly in 2007 to more than 13 percentage points due to Ottawa's introduction of an accelerated depreciation rate for manufacturing and processing assets, matched by provincial governments. (Also helping to lower the METR for manufacturing were adjustments to capital cost allowances to better match economic depreciation rates, which in our view were appropriate measures.) The gap widened again in 2008 with Quebec's 5% investment tax credit. Although the gap closed considerably in 2010, Nova Scotia's 10% investment tax credit, which took effect that year, offset the closing by more than half a percentage point.

FIGURE 2: The Marginal Effective Tax Rate on Capital Investment, Manufacturing and Services Sectors, Canada, 2006-2010 and 2013



Source: Authors' calculations.

The significant shrinking of the gap in 2010 was mainly the result of the sales tax harmonization in Ontario and British Columbia, where the elimination of provincial sales taxes on capital goods helped services industries more than manufacturing. For example, the communications industry had long been the highest taxed among all industries before 2010. Mainly owing to the sales tax harmonization in Ontario and British Columbia, the METR on capital for the communications industry dropped 13 percentage points from 37.4% in 2009 to 24.4% in 2010 (Figure 1b). In contrast, the METR on capital for manufacturing dropped just 6 percentage points from 17.5% to 11.7% over the same period (Figures 1b and 2). In the absence of harmonization, provincial tax administrations often provide more sales tax exemptions for manufacturing and processing assets — another illustration that Canadian governments often favour manufacturing industries more than a broad range of service industries.

The extent to which the business tax structure currently distorts capital allocation decisions across industries and assets can be measured by a so-called dispersion index.¹⁶ This measure provides an indication as to how much the tax system impedes productivity as resources are shifted to tax-favoured business activities that will earn a pre-tax rate of return to capital that is lower than that earned by other sectors that tend to be more highly taxed. As effective tax rates decline in aggregate, as in recent years, the differential treatment across industry and assets is accentuated, since the variation in effective tax rates has an even greater impact on the allocation of capital to the most productive uses.¹⁷ Our simulation shows that inter-asset distortions matter more than inter-industry distortions (see Table 3), a result not inconsistent with those of other economic studies.¹⁸ Overall, the index of dispersion has increased in recent years, driven in part by the preferential treatment given to some business activities. In 2010, the dispersion index again rose, but largely due to the decline of the average tax rate that year. By 2013, the dispersion index should have declined due to the expiration of certain fast write-offs for capital as well as federal and provincial corporate tax reductions.

TABLE 3: Dispersion Index (Coefficient of Variation) for Marginal Effective Tax Rates on Capital Investment, Canada, 2006-2013

	2006	2007	2008	2009	2010	2013
	(%)					
Inter-industry	15.4	25.6	32.0	32.7	43.7	27.9
Inter-asset	27.8	36.4	45.6	46.8	51.4	35.4
Overall	26.6	39.1	48.2	49.3	59.6	40.8

Source: Authors' calculations.

TAXES ON LABOUR

When workers put in extra hours of effort, the taxes that are deducted from their paycheques have a significant effect on their incentive to work. Taxes that affect labour markets include personal income, employer and employee payroll (net of benefits), sales, and excise taxes. Empirical studies of labour taxes focus on both the incentive to work extra hours and participation in the labour force. Taxes discourage people from working by making untaxed leisure more attractive than money income. The most significant effects of taxes on workers' incomes are on the labour decisions of secondary workers in the household (especially those with children who become of school age) and on retirement decisions.¹⁹ Such taxes also affect decisions by those who can make more flexible working arrangements, as in the case of the self-employed, as well as the decision to invest in education by reducing the higher income that a worker would otherwise receive by acquiring skills.

¹⁶ The dispersion index is the coefficient of variation, which is the standard deviation of METRs divided by the average METR.

¹⁷ For an analysis of the relationship of the coefficient of variation and the incremental economic cost of taxation per dollar of revenue, see Mintz, "Neutrality and the Effect of Capital Taxation on Economic Efficiency and Growth."

¹⁸ Hamilton, Mintz, and Whalley ("Decomposing the Welfare Costs of Capital Tax Distortions") report the same findings, in part due to the substitution of different inputs used in production.

¹⁹ See Institute of Fiscal Studies and James Mirrlees, *Tax by Design* (Oxford: Oxford University Press, 2010).

In our analysis, the METR on labour income is the tax paid as a percentage of the pre-tax wage paid by employers on the last hour of work, taking into account personal income, payroll, and sales taxes that reduce employment income received by the worker.²⁰ We use distributions of earnings across industries to compute the average marginal tax rates and then aggregate the total effect of all taxes on the last hour of work. This tax measure emphasizes the effect of taxes on the decision to work extra hours as opposed to joining the workforce (the latter takes into account the effect of the average tax rate on the decision to work).

Taxes also affect employment decisions to the extent that workers bargain for higher wages to make up for lost income in the presence of taxation. Differential taxes across industries lead to higher wage costs for businesses since companies must attract workers who could otherwise work for better after-tax wages in other industries; studies suggest that 20-30% of labour taxes are shifted forward.²¹ As well, taxes affect interprovincial migration: the decision to move from one jurisdiction to another depends on a comparison of taxes paid on total income earned (the average tax rate) as well as the benefits of government spending and the lifestyle amenities available in each jurisdiction.²² Our measure of the METR is less relevant to the migration decision for this reason.

To the extent that the tax system is progressive — that is, where average tax rates are higher on upper-income households than on low-income households — interprovincial migration is affected. All else being the same and given a fixed supply of jobs, a province with a more progressive tax system will encourage lower-income workers to migrate to it and high-income workers to move to a lower-tax province.²³ Migration then causes skilled wage levels to rise and unskilled wages to fall in a province with more progressive income taxes. Provincial policies that redistribute income through more progressive tax structures therefore can be undone by migration to the extent that workers receive the same after-tax income across provinces. In Canada, interprovincial migration is sensitive to taxes and subsidies, although much less so with respect to the francophone population, which has a strong attachment to Quebec.²⁴

The year 2010 was less eventful than 2009 in terms of tax reductions for labour. In 2009, the federal government reduced the personal income tax burden by raising the basic personal amount and the bottom two personal tax brackets by 7.5%. In 2010, few changes were made to personal income taxes except in Newfoundland and Labrador, New Brunswick, and Ontario,²⁵ where they were reduced. British Columbia also raised the basic personal amount substantially, to the benefit of all its taxpayers. On the other hand, Nova Scotia added a fifth personal income tax bracket with an added higher top tax rate (21%), replacing the previous surtax for high-income earners. Nova Scotia also raised the harmonized sales tax by 2 percentage points, which, in turn, raised the METR on labour by increasing prices of goods and services, reducing the purchasing power of income.

²⁰ Again, for the underlying theory and methodology, see Mintz, *Most Favoured Nation*.

²¹ Ibid.

²² Similarly, provincial labour taxes can be shifted forward more strongly if workers are willing to move from one province to another to avoid paying higher taxes.

²³ Alternatively, a skills-intensive firm might move from a province with higher taxes on high-income workers, thereby bidding down their wages in the province to levels elsewhere, while an unskilled labour-intensive business might move to a province with lower taxes on unskilled labour, thereby bidding up their wage levels. A more progressive rate structure therefore might reduce pre-tax income differentials but at the cost of substituting low-paid for high-paid jobs, thus reducing average incomes.

²⁴ See K. Day, "Interprovincial Migration and Local Public Goods," *Canadian Journal of Economics* 25 (1, 1992): 123-144.

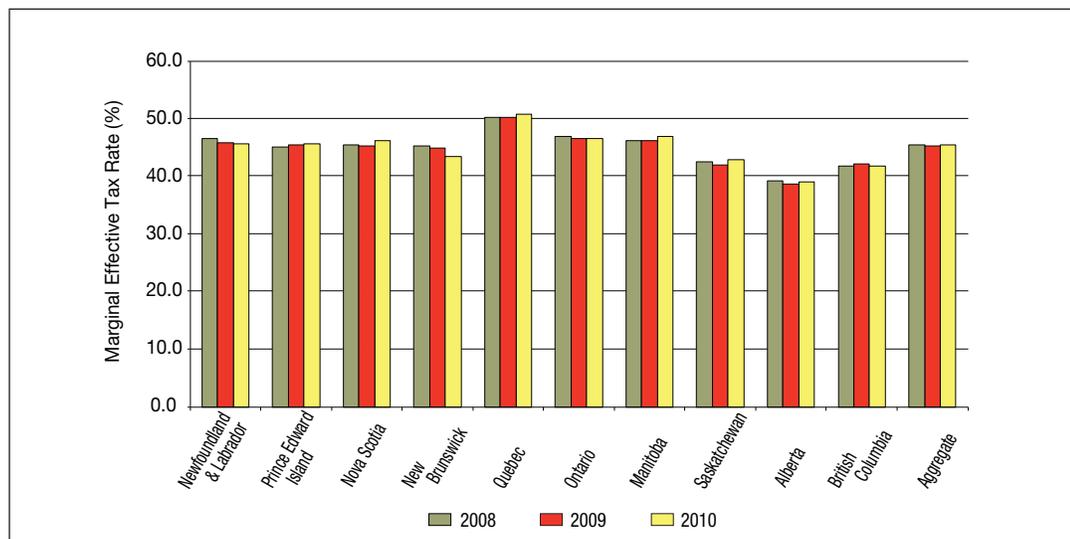
²⁵ Ontario reduced the low personal tax rate from 6.05% to 5.05% as part of its 2009 tax reform that included the adoption of the HST.

Overall, the main adjustment most government made to labour taxes was to index personal income tax brackets to account for inflation. Note that personal income tax burdens still increase with indexation if wages and salaries rise faster than inflation – taxpayers move up tax brackets even with indexation – this is known as “bracket creep”. At an extreme, Prince Edward Island did not provide indexation for inflation.

MARGINAL EFFECTIVE TAX RATES ON LABOUR BY PROVINCE

At the provincial level, the most significant change in the tax burden on labour in 2010 occurred in New Brunswick (see Figure 3), which is in the process of implementing a four-year plan of tax relief and restructuring, begun in 2009, that by 2013 will shift from four progressive tax rates ranging from 10.12% to 17.95% to a simpler structure with two rates, 9% and 12%. Moreover, New Brunswick was the only province to index its tax brackets and most personal tax credits by 2% for 2010, matching the estimated annual increase in non-farm employee earnings. As a result, the METR on labour in New Brunswick dropped by 1.4 percentage points from 2009 to 2010, indicating a rapidly shrinking gap between New Brunswick’s tax on labour and that in the least-taxed provinces of Alberta, British Columbia, and Saskatchewan. New Brunswick’s new government has indicated that it will not implement further tax reductions after 2010 for 1300 individuals in the province who earn more than \$450,000.

FIGURE 3: The Marginal Effective Tax Rate on Labour, by Province, 2008-2010



Source: Authors' calculations.

Newfoundland and Labrador has also reduced its personal income tax rate as part of a multi-year plan. Following consecutive tax reductions over the past two years, in 2010 the province again cut both the middle and top personal income tax rates by 0.3 and 2.2 percentage points, respectively. By 2012, when the legislated tax reduction is completed, the three-tier personal income tax rates will be reduced from 9.6, 15, and 17.3% in 2007 to 7.7, 12.5, and 13.3% — a much flatter personal income tax structure that should attract more highly skilled employment to the province.

British Columbia also increased the basic personal amount significantly, from \$9,373 in 2009 to \$11,000 in 2010, equivalent to a more than 17% increase in the basic tax credit for every personal income taxpayer. This increase is a part of transitional package for harmonizing the provincial sales tax with the GST.²⁶ The province recognized that sales tax harmonization would increase the net sales tax for consumers, and therefore it provided some personal tax relief as compensation.²⁷ The net effect of the sales tax harmonization, including the increase in the basic personal amount, has been a 0.4 percentage point reduction in the METR on labour in British Columbia.

As mentioned, Ontario reduced the marginal tax rate for the lowest income bracket, but given the growth in earnings, its overall METR on labour is little changed.

Except for the indexation of tax brackets and credits, no initiatives were taken in the other provinces in 2010. Again, because general tax indexation is less than the increase in earnings — a process known as “bracket creep” as people jump into higher tax brackets — the tax cost for labour increased in most provinces, particularly in Saskatchewan and Alberta, where average earnings increased around 4% annually. The exceptions are New Brunswick, British Columbia, Ontario, and, to a lesser degree, Newfoundland and Labrador, all of which introduced tax relief for labour in 2010. At the other end of the spectrum, Nova Scotia, owing to its added top tax rate and increased sales tax rate, saw a 1 percentage point jump in its marginal tax rate on labour, the most significant such increase among all the provinces.

Overall, the provincial rankings of the METR on labour did not change from 2009 to 2010. Alberta, with its rate of 39%, continued to have the lowest marginal tax burden on labour of all the provinces. Uniquely, Alberta has had a flat tax of 10% on personal income since 2001, and has a generous basic allowance (\$16,825 in 2010) before applying the tax. Closely following Alberta in terms of their METR on labour were British Columbia (42%), Saskatchewan (42%), and New Brunswick (43%). In contrast, Quebec continued to be the highest-taxed province for labour, with an METR of 51%, followed by Ontario (47%), Manitoba (47%), and the remaining three Atlantic provinces.

Marginal Effective Tax Rates on Labour by Industry

In a progressive tax structure, labour taxes are higher for skilled-intensive industries and lower for industries that tend to hire less-skilled workers. Taxes therefore can affect the allocation of employment among industries by reducing the demand for certain types of workers (who bid up wages to compensate for tax burdens) or exacerbating labour shortages if certain types of workers are hard to find.

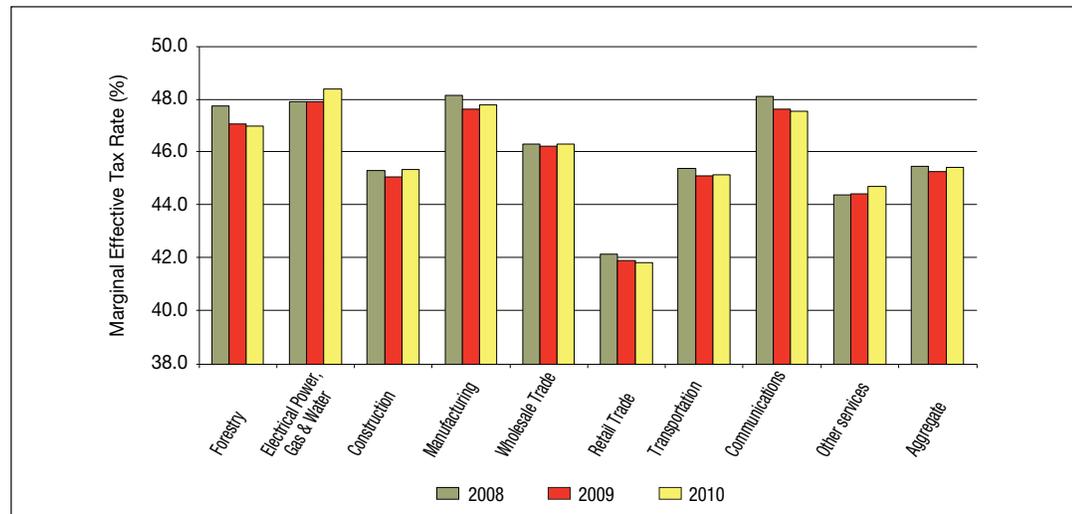
Because we measure the tax burden on labour by the METR, a cross-industry comparison is affected by three factors: industrial variation in labour income, provincial variation in labour taxation, and the provincial distribution of employment among industries. That is, for a given industry, the lower the average labour earnings, the lower the METR on labour due to the progressivity of the personal income tax structure; the higher the industry’s share in a province that taxes labour relatively lightly, the lower the METR on labour for the industry, and vice versa.

²⁶ See British Columbia, Ministry of Finance and Corporate Relations, *Budget and Fiscal Plan, 2010/11–2012/13* (Victoria, 2010); available online at http://www.bcbudget.gov.bc.ca/2010/bfp/2010_Budget_Fiscal_Plan.pdf.

²⁷ The provincial sales tax has been expanded from goods to services thereby increasing prices. However, this be offset by price reduction induced by the elimination of sales taxes on business inputs in face of competition.

The positive relationship between earnings and the METR appears to be most striking for the public utility industry and the retail sector, as shown in Figure 4. The public utility sector ranks among the highest in labour earnings, which might explain its having the highest METR on labour of all industries. In contrast, the retail sector ranks the lowest in average earnings, followed by “other services” and transportation. Not surprisingly, these three sectors, in the order of their ranking by earnings, are the lowest taxed among all industries.

FIGURE 4: The Marginal Effective Tax Rate on Labour, by Industry, Canada, 2008-2010



Source: Authors' calculations.

But this straightforward link between the METR on labour and average earnings does not appear to hold for many other industries. For example, the average of earnings in manufacturing is only the fifth highest among the nine industries but its METR on labour of 47.8% is the second highest. This is because Quebec and Ontario, the two highest-taxed provinces for labour, respectively account for 24% and 53% of manufacturing industry, as measured by the provincial distribution of total labour earnings within the manufacturing industry. That is, the heavy shares of manufacturing in the two most highly taxed provinces for labour result in a higher tax burden on labour for manufacturing than for other industries. A similar case also occurs, albeit to a lesser degree, in the forestry industry, which is relatively heavily concentrated in Quebec and Ontario. An opposite example can be found in the construction industry, where average earnings are the second highest while the tax burden (45.3%) is the fourth lowest among all industries. This is because Alberta and British Columbia, the two lowest-taxed provinces for labour, respectively account for 38% and 9% of the construction industry, so that their joint impact is more than sufficient to offset the combined impact of Quebec and Ontario (41%), which brings the METR for construction below the national average.

Overall, the public utility sector is the highest taxed for labour among all industries, followed by manufacturing, communications, forestry, and wholesale trade. At the other end of the scale, the retail sector's labour is taxed lowest (largely due to much lower average earnings by workers), followed by “other services,” transportation, and construction.

THE TAX BURDEN AND THE COST OF DOING BUSINESS

Taxes on labour and capital increase the cost of doing business. We estimate, by industry, marginal effective tax rates on the cost of doing business for large companies by aggregating the individual effective tax rates on capital and labour according to the relative shares of capital and labour in the sector's value added. We assume that taxes on capital fully increase cost, since businesses cannot shift the burden of such taxes onto owners of capital who are able to invest in international markets with better after-tax rates of return. Taxes on labour increase business costs to the extent that such taxes are shifted forward in the form of higher wages — the portion shifted forward is assumed to be 30%.

The tax burden on the cost of doing business in Canada has fallen consistently over the past four years, from 24.8% in 2007 to 20.1% in 2010 (Figures 5a and 5b). This largely reflects the reduction in the effective tax rate on capital over the period, especially in 2010. The nearly 3 percentage point drop from 2009 (22.9%) to 2010 (20.1%) in the national average METR on the cost of doing business is mainly a result of sharp reductions in the tax burden on capital in both Ontario and British Columbia. Among all provinces, only Saskatchewan saw its METR rise slightly, due to a higher tax on labour (with little change in taxes on capital investments).

FIGURE 5a: The Marginal Effective Tax Rate on Business Costs, by Province, 2007-2010

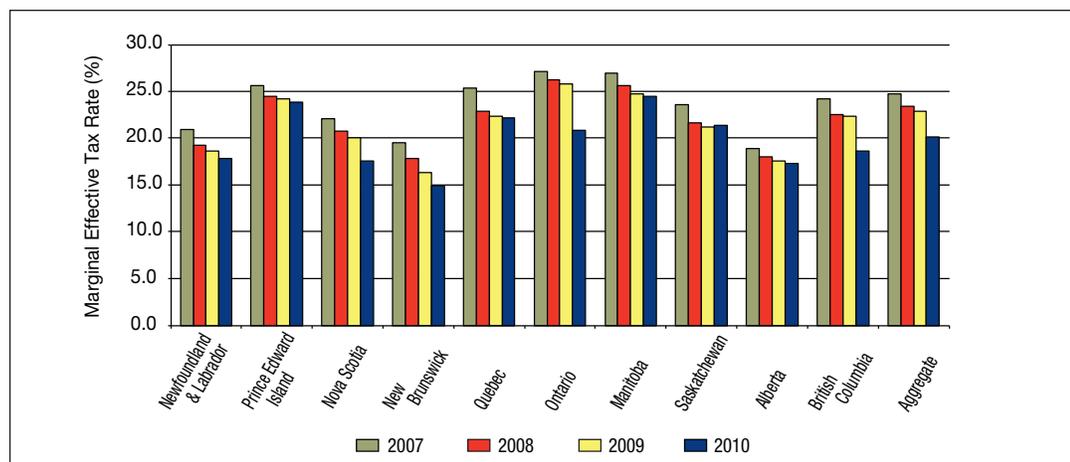
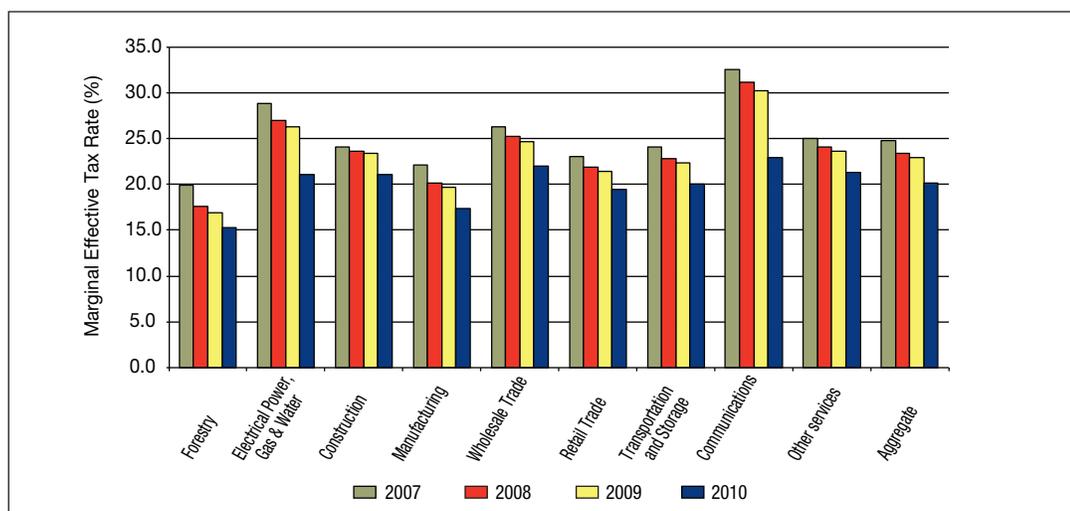


FIGURE 5b: The Marginal Effective Tax Rate on Business Costs, by Industry, Canada, 2007-2010



Source: Authors' calculations.

The ranking of METRs on the cost of doing business by industry is a subtle combination of the METR on capital (Table 2b) and that on labour (Figure 4). Our simulation shows that the communications industry bears the highest combined tax burden as a share of its cost of doing business, followed by the wholesale trade and “other services” sectors. At the other end of the scale, the forestry and manufacturing industries are the lowest-taxed industries, mainly owing to their very low METR on capital investment.

A PROMISING PATH FOR TAX REFORM

The 2010 budgetary changes indicated a new stage in the future of tax reform in Canada. The federal government still needs to reduce its corporate income tax rate to 15%, a critical measure that we discuss in more detail below. Importantly, the largest and the third-largest provincial economies, Ontario and British Columbia implemented corporate tax reductions and sales tax harmonization that will improve their, and Canada’s, international competitiveness. Unfortunately, Manitoba, Prince Edward Island, and Saskatchewan maintain a high tax burden on capital as a result of their high provincial corporate income tax rates and their sales taxes on capital purchases. Nova Scotia and Quebec also have relatively high corporate income tax rates. We therefore support the federal government’s proposal that all provinces reduce their corporate income tax rates to 10% by 2013.

On the other hand, Ontario and British Columbia continue to impose a higher tax burden on workers, particularly skilled labour, than does Alberta. Indeed, both Ottawa and the provinces need to pay more attention to the effect of tax reforms on labour markets. Among the smaller provinces, New Brunswick has done more than most to simplify and reduce taxes on work effort. Ottawa also should look at reforms that would reduce marginal tax rates, especially for the most flexible parts of the labour market. Tax reductions for modest- and middle-income Canadians would enable people to cope more easily with daily demands and a softer economy. We also think a flatter rate structure for personal income taxation, as Alberta and New Brunswick are implementing, is an approach that other provinces might follow, since they are less able to redistribute income (due to migration) than is the federal government. As fiscal economists widely believe, “taxes on income are usually worse for growth and employment than taxes on consumption or property.”²⁸

By 2013, Canada’s profile of marginal effective tax rates, based on the legislative intentions of governments, will be 18.4% on capital, 45.2% on labour, and 19.4% on the cost of doing business (Table 4). The inter-industry and inter-asset tax distortions for capital investment will also decrease as the federal government ends the current fast write-off of manufacturing and processing assets. In support of such change, we provide some further policy suggestions, based on our simulations, aimed at producing an even more competitive tax system, one with fewer tax distortions that lead to misallocation of capital among industries. Our simulations include:

- harmonizing the provincial sales tax with the GST in all provinces, to eliminate any indirect tax on intermediate and capital goods and to reduce variability in the effective sales tax on consumer goods;
- eliminating targeted tax incentives such as the AITC and similar provincial investment tax credits, to broaden the tax base for possible further tax rate reductions; and
- reducing all provincial corporate income tax rates to 10%.

²⁸ OECD, *Economic Surveys: Canada*, p. 8.

We find that the combined result of these changes to business taxation would be to reduce our current projection for the METR on capital in 2013 by another 0.5 of a percentage point, and to reduce inter-industry and inter-asset tax distortions by 60%. If all the provinces were to adopt a flat 10% personal income tax rate, the METR on labour would fall from 45% to 42%. Implementing all of these proposed tax changes would reduce the METR on the cost of doing business from 19.4% to 18.0%.

TABLE 4: Policy Simulations for 2013

	METR	METR DISPERSION
	(%)	
I. METR on capital		
2006	36.2	26.6
2007	31.6	39.1
2008	28.9	48.2
2009	28.0	49.3*
2010	20.5	59.6*
Tax changes by 2013: announced		
Federal corporate income tax reduction by 3 points	18.2	64.7*
Ending fast write-off for manufacturing and processing equipment and computers	19.4	40.0
Provincial corporate income tax reduction and capital tax elimination	18.4	40.8*
Tax changes by 2013: assumed		
Case A: Nationwide sales tax harmonization	16.7	42.4*
Case B = A + Elimination of all investment tax credits	18.4	22.5
Case C = B + 10 percent corporate rate in all provinces	17.9	22.6*
II. METR on labour		
The current estimation for 2013	45.2	
Case D: 10 percent flat provincial personal income tax rate	42.4	
III. METR on cost		
The current estimation for 2013	19.4	
Case E = Case C + Case D	18.0	

* The increase in the METR dispersion index compared to the previous case is primarily attributable to the lower average METR rather than the standard deviation, which is lower than the previous case.

The Economic Effect of the Federal Corporate Income Tax Rate

Tax reforms that encompass lower rates and a more neutral treatment of business activities generate higher incomes or jobs. The recent improvement in Canada's investment climate is due in part to corporate tax reforms over the past decade that have led to lower METRs on capital.²⁹ As part of those reforms, the federal government has legislated a reduction in federal rates by a further 3 percentage points by 2012 — half of this reduction took effect on January 1, 2011. The opposition parties object to this rate reduction, arguing that the revenues should be used for other priorities. We noted above, however, that the revenue cost of rate

²⁹ See Mark Parsons, "The Effect of Corporate Taxes on Canadian Investment: An Empirical Investigation," Working Paper 2008-01 (Ottawa: Department of Finance, 2008).

reductions is relatively small when a country's corporate income tax rates are relatively high, which is still the case in Canada — the 2010 federal-provincial rate of 29.3% was almost four points higher than the OECD average.³⁰ Multinational corporations will shift profits from a country with a high corporate income tax rate to jurisdictions with lower tax rates using such tax-planning techniques as transfer pricing and debt loading. Adding to these income-shifting effects on revenues are personal and corporate tax revenue increases associated with investment and employment gains. Overall, the 3 percentage point corporate rate reduction has little, if any, revenue cost in the long run.

While the budgetary cost of the rate reduction is negligible, we find that the resulting increase in capital investment and employment could be significant. Table 5 presents our estimates of the effect of the remaining 1.5 percentage point reduction in the federal corporate rate from 16.5% to 15% to take place January 1, 2012 on capital investment and jobs by province and aggregated for Canada.³¹ We estimate that such a reduction in the federal corporate income tax rate would increase capital stock by about \$30 billion after a full adjustment takes place (at least seven years) and that employment would increase by about 100,000. These estimates do not take into account the productivity gains arising from having a more neutral corporate tax system. Given the relatively insignificant anticipated revenue loss from a corporate rate reduction, it is clear that the investment and employment benefits make a strong case in favour of pursuing this reform.

TABLE 5: Estimated Effect of a Reduction in the Federal Corporate Income Tax Rate from 16.5% to 15% on Capital Investment and New Employment

	CAPITAL INVESTMENT	NEW EMPLOYMENT
	(\$ billions)	(hiring in '000s)
Canada	30.6	102.5
Newfoundland & Labrador	0.6	1.4
Prince Edward Island	0.1	0.4
Nova Scotia	0.8	3.3
New Brunswick	0.6	2.3
Quebec	5.5	24.0
Ontario	9.0	39.3
Manitoba	0.9	3.1
Saskatchewan	1.3	2.8
Alberta	8.3	12.2
British Columbia	3.4	13.7

Sources: Authors' estimates based on Statistics Canada, CANSIM database, table 310002 for capital stock at the year-end (2005-2009) and table 2820089 for monthly employment data (January 2009 to October 2010).

³⁰ Op cit supra note 6.

³¹ The estimates assume that a 10% reduction in the cost of capital increases capital stock by 7%. This is consistent with conclusions reached by Parsons ("The Effect of Corporate Taxes on Canadian Investment"). It is further assumed that employment demand will increase after taking into account some substitution of capital for employment (according to a Cobb-Douglas production function with about 25% of the share of value added accruing to capital). We have allowed for differing capital-employment ratios by province.

CONCLUSIONS

Uninterrupted efforts by the federal and most provincial governments to enhance tax competitiveness to attract capital investment have borne good results: Canada's marginal effective tax rate on capital dropped nearly 16 percentage points over the past five years. In contrast, the marginal effective tax rate on labour during the same period hardly budged, dropping by only 1 percentage point, and has hovered above 45% since 2008.

Taxes continue to be a significant part of the cost of doing business: about 20% of additional costs in 2010. Preferential treatment of capital costs for some forms of business activity has sustained rather high inter-industry and inter-asset allocation distortions, thereby impairing Canada's productivity.

Future tax reforms, therefore, should focus on lightening the tax burden on labour and correcting inter-industry distortions in capital taxation, in addition to continuing the unfinished business of reducing tax costs for capital investment. Given the revenue needs of governments, tax reforms that shift from income to consumption should be a major objective without impairing the fiscal performance of deficit-plagued governments.

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The James S. & Barbara A. Palmer Chair in Public Policy

Jack M. Mintz was appointed the Palmer Chair in Public Policy at the University of Calgary in January 2008.

Widely published in the field of public economics, he was touted in a 2004 UK magazine publication as one of the world's most influential tax experts. He serves as an Associate Editor of *International Tax and Public Finance* and the *Canadian Tax Journal*, and is a research fellow of CESifo, Munich, Germany, and the Centre for Business Taxation Institute, Oxford University. He is a regular contributor to *Canadian Business* and the *National Post*, and has frequently published articles in other print media.

Dr. Mintz presently serves on several boards including Brookfield Asset Management, Imperial Oil Limited, Morneau Sobeco, and Royal Ontario Museum. He was also appointed by the Federal Minister of Finance to the Economic Advisory Council to advise on economic planning and served as research director for the Federal-Provincial Minister's Working Group on Retirement Income Research.

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In 2002, Dr. Mintz's book, *Most Favored Nation: A Framework for Smart Economic Policy*, was winner of the Purvis Prize for best book in economic policy and runner-up for Donner Prize for best book in public policy.

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