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Tax Competitiveness Program

2007 Tax
Competitiveness
Report:

*A Call for Comprehensive Tax
Reform*

Jack M. Mintz

In this issue...

Canada has made slow but steady progress in improving its tax system, yet the effective tax rate on new business investment remains 11th highest in the world.

The Study in Brief

Canada in recent years has made slow but steady progress in improving its tax system, by shifting taxes away from productivity-enhancing investment and savings. However, many federal and provincial tax measures represent targeted preferences, and some are only temporary, and this risks driving resources away from highly productive ventures and toward politically favoured economic activities.

Comprehensive tax reform would make the tax system more efficient and fair by reducing rates, broadening bases and relying more on consumption and user-pay related taxes, including environmental taxes. Relief from taxes on investment and savings would enhance Canada's economic growth and improve international competitiveness, in a world in which global linkages among multinational businesses are critical to achieving better incomes and jobs for Canadian workers.

We present in this *Commentary* an 80-country ranking of effective tax rates on capital for marginal investment projects, taking into account corporate income taxes, sales taxes on capital purchases and other capital-related taxes. Canada has moved from the 6th highest effective tax rate in 2006 (36.6 percent) to the 11th highest in 2007 (30.9 percent). However, much of the reduction has been in manufacturing's effective tax rates, which at 23.1 percent are 28th highest in the world sample of 80 countries. Canada's service sectors, including construction, transportation, communications, public utilities, trade, business and household services, remain the 6th highest taxed in the world, at 36.4 percent, or at least 4 percentage points above the global-weighted average.

Canada's statutory federal-provincial corporate income tax rate in 2007 is 34.2 percent, the 12th highest in the world. Though Canada is reducing its corporate income tax rate to 30.5 percent by 2011, our evidence suggests that this rate is above the tax-revenue-maximizing rate of 28 percent. This *Commentary* suggests that all businesses should be taxed at a common rate, equivalent to the small business rate — roughly 20 percent. Reductions in the current corporate rate could increase corporate tax revenues, as Canadian and foreign multinationals shifted fewer costs into Canada and fewer profits out of Canada.

The complementary part of a reform program would shift taxes toward consumption. Broadening the existing federal-provincial fuel excise tax base, to include other energy sources, would deliver a low-rate, broad-based, consumption-based environmental tax that put a price on environmental damage. Such an environmental tax would be part of an overall government strategy to deal with carbon dioxide, and with pollutants such as sulphur and nitrogen oxides.

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In this 2007 *Tax Competitiveness Report*, we highlight steady but slow progress made by Canada in improving its tax system, by shifting taxes away from productivity-enhancing investment and savings. However, as discussed in a previous report on federal and provincial 2007 budgets (Chen, Mintz and Tarasov 2007), many federal and provincial tax reductions were directed to targeted preferences, some only temporary, rather than broad-based tax cuts. Targeted tax reductions are not nearly as effective in achieving a better tax system, because they often result in a misallocation of resources from highly productive to politically favoured economic activities.

While governments should always keep an eye to fiscal prudence, so that taxes are only used to support smart spending, it is also important that governments choose the right tax structure that maximizes economic wealth without compromising equal opportunities for Canadians. Canada's tax system is far from optimal.

Comprehensive tax reform is needed in Canada to make the tax system more efficient and fair by reducing rates, broadening bases and relying on consumption and user-pay related taxes, including environmental taxes. Reductions in taxes on investment and savings will enhance Canada's economic growth and improve international competitiveness, in a world in which global linkages among multinational businesses are critical to achieving better incomes and jobs for Canadian workers. Relying on less mobile tax bases will reduce the economic cost of the tax system and the cost of providing government services to Canadians.

Canada continues to apply quite high marginal personal tax rates on labour income and savings, especially for individuals with modest incomes. Progress in alleviating many struggling Canadians from extraordinarily high effective marginal tax rates has been slow. With clawbacks under income-tested programs combined with payroll taxes, personal marginal tax rates on employment and savings (outside of pensions and RRSPs) are in excess of 70 percent, far higher than those faced by the richest Canadians. Major reform is needed to improve the situation, which to this point has only been tentatively addressed by incremental changes to tax policies.

We provide in this report our 80-country ranking of effective tax rates on capital for marginal investment projects, taking into account corporate income taxes, sales taxes on capital purchases and other capital-related taxes. Canada has made progress by moving from the 6th highest effective tax rate in 2006 (36.6 percent) to the 11th highest in 2007 (30.9 percent). However, much of the reduction has been in manufacturing's effective tax rates which, at 23.1 percent, are 28th highest in the world sample of 80 countries. Disappointingly, Canada's service sectors, including construction, transportation, communications, public utilities, trade, business and household services, remain the 6th highest taxed in the world, at 36.4 percent, or at least 4 percentage points above the global-weighted average.

Such high taxes on the service sectors are not going to make Canada's economy competitive. Many business services are traded internationally, and their

* The author wishes to thank Duanjie Chen, Finn Poschmann and Andrey Tarasov for assistance in developing the most critical parts of this report. The author also appreciates the many comments provided by members of the Tax Competitiveness Council at the C.D. Howe Institute. Any errors and omissions rest with the author.

costs influence the competitiveness of other industries. Such high taxes on investment discourage capital investment as well as the adoption of new technologies and ultimately adversely effect the income paid to workers. For this reason, Canadian governments should pay attention to broad-based reforms rather than focus on targeted tax relief limited to a few economic activities.

To their credit, federal and provincial governments are eliminating capital taxes (levied on a company's shareholders' equity and qualifying liabilities) by 2011 for non-financial businesses (although not for financial and insurance activities, which are globally traded). However, governments seem reluctant to reduce corporate income tax rates, which remain high. Canada's statutory federal-provincial corporate income tax rate in 2007 is 34.2 percent, the 12th highest in the world. Many countries levy corporate income taxes at rates well below 30 percent and several countries, including France, Germany and the United Kingdom, have indicated that they will be further reducing corporate income tax rates in the next several years. Even with future reductions of its own, Canada will continue to have one of the highest corporate income tax rates in the world.

Corporate income taxes continue to be a major source of inefficiency and unfairness in the Canadian tax system. They result in highly differential effective tax rates on industries and assets. They also discourage domestic investment, which is critical to long-run growth prospects.

Moreover, there is some published evidence — and we shall provide further analysis in this report — that Canada's corporate income tax rate is on the wrong side of the "Laffer curve," the relationship between government tax rates and tax revenue.

Canada's corporate income tax rate is 6 percentage points above the revenue-maximizing corporate income tax that we estimate. As a result, Canada could reduce corporate income tax rates, possibly increasing revenue or at worst losing little. Compared to any other business tax policy, this is a "win-win" proposition — both government and the private sector would be better off.

Reductions in the current corporate rate would increase corporate tax revenues because Canadian and foreign multinationals would shift fewer costs into Canada and fewer profits out of Canada. For example, Ireland's corporate income taxes comprised a 3.4 percent share of GDP in 2005, which is similar to the corporate tax collected in Canada as a share of GDP (3.5 percent), even though Canada has a statutory corporate income tax rate that is almost three times higher than the Irish rate. The US, with one of the highest corporate income tax rates in the world at 38.5 percent, collects only 2.9 percent of GDP in corporate tax revenue, less than in Canada where corporate income tax rates are lower.

Though Canada is reducing its corporate income tax rate to 30.5 percent by 2011, our evidence suggests that this rate is above the tax-revenue-maximizing rate of 28 percent. However, even if Canada were to reduce its corporate income tax rate to the revenue-maximization rate, the rate would still be far too high: the inter-asset and inter-industry distortions induced by corporate taxes suggest that the optimal corporate rate should be set below the revenue-maximizing rate when trading off revenues for economic efficiency and fairness. I suggest that all businesses should be taxed at a common rate that is applied to small businesses —

roughly 20 percent — to reduce distortions as much as possible without requiring substantial change to the tax system.¹

An incremental approach to tax reform is one alternative. Federal and provincial surpluses make it possible for further tax reductions, and Canada's efforts to reduce high marginal tax rates on effort, savings and investment could incrementally improve competitiveness. But rather than a slow-motion approach, governments could entertain major reforms if they were willing to "bite the bullet" and pursue two sequential strategies.

The first would be to substantially reduce personal and corporate income tax rates, with part of the fiscal costs offset by the tax revenues generated from a broader tax base. We will make a number of recommendations to bring down federal-provincial personal tax rates on savings and employment income earned by modest-income taxpayers, combined with proposals to eliminate some ineffective, targeted tax preferences.

The second strategy would be to shift taxes towards consumption. Clearly, one possibility is to increase sales-tax rates. A more intriguing possibility is to shift taxes on "goods" — investment and savings that most affect Canada's productivity — to "bads" by, for example, broadening the existing federal-provincial fuel-excise taxes to include other energy sources. Canada would have a low-rate, broad-based, consumption-based environmental tax to price the cost of environmental damage that affects Canadian lives. An environmental tax would be needed as part of an overall government strategy to deal with carbon and pollutants such as sulphur and nitrogen oxides. Hence, it would need to be coordinated with regulatory and other policies directed at pricing environmental costs. A key aspect of any environmental tax is that it should be broad-based, affecting consumers and businesses regardless of size or region, thereby enhancing the overall efficiency and fairness of the tax system.

Both strategies — sharp reductions in corporate and personal tax rates and a broad-based environmental tax — have been pursued by many OECD countries in recent years. Canada should consider a similar strategy. Overall, a major tax reform like this would sharply reduce taxes on investment, savings and employment, and would enhance Canada's competitiveness.

Our Current Taxing Problems

Governments take a significant share of the economy's resources — 38.7 percent — through taxes and other revenues. On a consolidated basis, Canadian federal, provincial and local governments collect close to \$560 billion in revenues, affecting each and every Canadian when they earn income, buy goods and services or purchase property.²

Of that amount, \$246 billion, or 44 percent, is collected as income taxes comprised of personal income taxes (\$181 billion), corporate income taxes (\$58 billion) and non-resident withholding taxes (\$7 billion). A further \$107 billion, or

1 At a 20 percent corporate income tax rate, little adjustment would be needed to personal taxes on dividends and capital gains.

2 Statistics Canada. 2007, CANSIM 385-0001.

19.1 percent of revenues, is collected as consumption taxes, including general sales taxes (\$69 billion), excise taxes on fuels, alcohol, tobacco and amusements (\$22 billion) and custom duties (\$3.6 billion). Contributions to social security programs add up to \$34 billion (6.1 percent of revenues) and property tax payments are \$44 billion (7.8 percent of revenues). Other revenues including natural resource taxes and royalties, user fees, licenses and earnings from investments account for \$106 billion of government revenues.

The income tax is the largest and most obvious tax borne by Canadians, made especially clear when deducted from their employment paycheque. Income taxes also reduce the return on investments, because interest, dividends and capital gains are subject to personal tax. Corporate taxes reduce the profitability of investment projects, which ultimately affects employment income, consumer prices or investor incomes.

Given that most public corporations raise capital from international markets, much of the corporate income tax is ultimately borne by Canadian workers through lower wages and salaries or higher consumer prices. A recent UK study found that, in the short run, 54 percent of the corporate tax falls on workers by reducing labour income and, in the long run, over 100 percent is borne by workers, including productivity losses from reduced investment (Arulampalam, Devereux and Maffini 2007).³

Broadly speaking, all taxes ultimately affect economic behaviour in some way. Consumption taxes reduce the incentive to work because workers face higher prices for goods and services when using their hard-earned money to purchase them. Some sales taxes, such as provincial retail sales taxes, selective taxes on fuels, insurance premiums and other products, affect not only consumers, but also business competitiveness, as capital and intermediate goods also bear tax. Property taxes, differentially applied across municipalities, affect land use development, and social security contributions can deter effort for some workers.

Below, I review the effect of taxes on economic decisions to work, save and invest. I shall briefly present results, then focus on some connected issues.

Taxes and Work Effort

Taxation discourages effort when workers face a high marginal tax rate, meaning the additional tax paid on income earned from one more hour worked. As demonstrated in last year's Tax Competitiveness Report, with little change for this year, marginal tax rates approach 80 percent for incomes around \$37,000 in Canada, and rarely fall below 60 percent for income ranges between \$28,000 and \$50,000 in Ontario, for example. The reason for such high marginal tax rates is that personal income taxes, payroll tax (EI and CPP) and clawbacks of federal and provincial income-tested programs all reduce income paid by employers.

High marginal tax rates encourage people to reduce their effort in favour of more untaxed leisure or home production, although this is offset by the desire to

3 In the 2006 Tax Competitiveness Report (Mintz 2006), evidence was provided that corporate taxes seem to have little effect on the after-tax return on corporate shares traded on the Toronto Stock Exchange. This is consistent with the results developed in the UK study.

receive more compensation to offset the income lost to taxation. A general conclusion of economic studies is that a 10 percent increase in the after-tax wage rate encourages about a 1 to 2 percent increase in hours worked by men and a 5 percent increase in hours worked by married women (de Mooij, Evers and van Vuuren 2006).

High marginal tax rates also encourage individuals to take on tax-planning activities to avoid tax, or to fail to report income. Recent Canadian analysis on the sensitivity of the reported income⁴ suggest that for employees less than 65 years of age, a 10 percent reduction in marginal tax rates causes only an 8 percent increase in reported income while, for self-employed people, taxable income rises by 13 percent⁵ (Sillamaa and Veall 2001).

High marginal effective tax rates on income also deter people from investing in education to improve their future earnings, counteracting the effect of government subsidies on education (Mintz 2001; Collins and Davies 2005). While governments provide significant subsidies towards education, they undermine their programs with a tax system that takes away some of the benefits from acquiring more knowledge.

Taxing Savings

Canadians wishing to save for their retirement and other contingencies face quite high tax rates on their investments unless they are able to shelter their income from taxation through pension plans or RRSPs. Taxes make it hard for Canadians to accumulate wealth, even by putting aside a regular, fixed amount for savings, simply because they lower the yield that investors receive.

For example, a 40 percent tax rate on a 5 percent return on investment reduces the amount of capital available for retirement, after 20 years, by 33 percent in current dollars or, after adjusting for 2 percent inflation, by close to 55 percent. With inflation and taxes, some investors earn a negative return on saving — a government bond yielding a 4 percent return, subject to a tax rate of 50 percent, provides after-tax nominal yield of only 2 percent, just covering the loss in purchasing power when inflation is 2 percent. Taxes in this case are 100 percent of the inflation-adjusted return to savings.

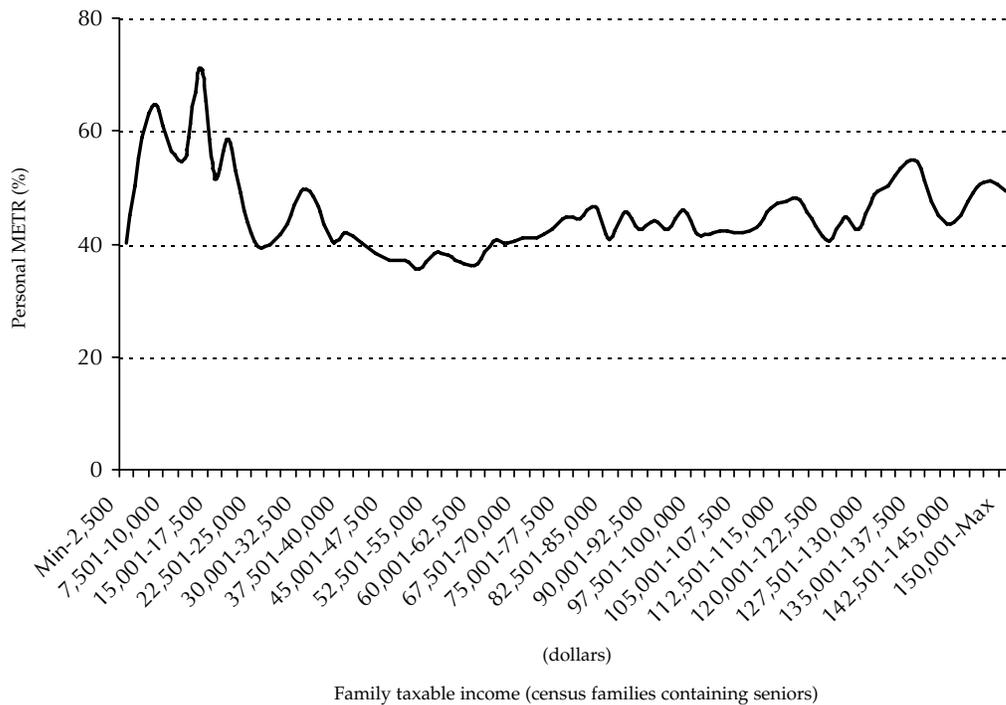
With longer expected life spans, Canadians will be holding assets for a considerable time, even after retirement, to maintain a decent standard of living. For example, in the 2005 taxation year, taxable dividend, investment, rental and capital gain income for those receiving pension income totaled \$6.5 billion, almost 9 percent of their public and private pension income.⁶

Taxes on savings are an unfair consumption tax because they tax future consumption more heavily than current consumption. A tax on savings increases the price of future consumption relative to current consumption, because investors

4 The tax base can increase due to tax cuts reflecting tax avoidance, tax evasion or simply more hours worked or investment.

5 The increased reporting of employment and self-employment income with cuts in marginal tax rates also reflects a shift in the tax base amongst different sources of income.

6 See Income Statistics 2007, taxable returns by income classes, at www.cra.gc.ca.

Figure 1: Average METR on Interest and Other Investment Income

Source: Finn Poschmann, C. D. Howe Institute, via Statistics Canada's Social Policy Simulation Database and Model, Release 14.2.

are rewarded less for their willingness to defer consumption to the future. These taxes also reduce the degree to which businesses are owned by Canadians and therefore force Canadian businesses to rely more heavily on foreign savings to finance investments in Canada.

Marginal tax rates on taxable income from non-pension and non-RRSP saving, totaling \$50 billion in 2005,⁷ are particularly high (Figure 1). Federal and provincial combined marginal tax rates on investment income rarely dip below 40 percent. For those with exceptionally modest incomes — such as seniors with incomes between \$15,000 and \$20,000 — marginal tax rates reach 70 percent. Thus, the highest marginal tax rates on savings are on the poor, not the rich.

When saving through pension plans and RRSPs, Canadians avoid punitive tax rates on their investment income, as they do not pay tax on income accruing within such plans. Although Canadians pay tax on withdrawals of interest and principal, they reduce taxes when contributing to the plans — contributions in 2005 were close to \$40 billion. So long as the tax rates at the time of withdrawal and contribution are the same, the return on savings is untaxed, since the time

7 *Ibid.* Taxable income on saving includes \$22.3 billion in taxable dividends, \$13.7 billion in investment income, \$3.3 billion in rental income and \$15.9 billion in taxable capital gains. Interest and carrying charges and the lifetime capital gains deduction reduced taxable investment income by \$5.6 billion.

value of taxes paid on withdrawals is equal to the tax savings from contributions. Shillington (2003) has demonstrated, however, many low-income seniors suffer high taxes on the returns from their RRSPs and pensions since the clawback of senior benefits, including the Guaranteed Income Supplement, results in much higher taxes paid on withdrawals relative to the tax savings achieved by making contributions to plans prior to retirement.

While Canada has built up a smart system for limiting taxes on the accumulation of wealth, removing the unfavourable taxes levied on savings could substantially improve it.

Taxing Investment

Canada's standard of living continues to lag that of the United States, because we are unable to achieve greater productivity, which refers to the amount of goods and services produced given the resources available to the economy (Statistics Canada 2007). Many factors are at play, but a well-known difference is the lack of capital investment by Canadian businesses on a per-worker basis, which is annually about \$700 per worker less than the OECD countries and \$1,600 per worker less than the US (Banerjee and Robson 2007).

Taxes on capital investments have a powerful effect on Canada's productivity. Without business investment, companies have difficulty improving labour incomes, since less production is forthcoming. Businesses also fail to adopt new innovative technologies if they do not invest in capital. In Table 1, we provide a ranking of 80 developed and developing countries in terms of their effective tax rates applied to the capital investments of multinational corporations.

The effective tax rate is a summary measure indicating the amount of tax paid as a percentage of the pre-tax returns on investment. The measure is based on the assumption that the amount of capital stock invested in an industry is determined by businesses maximizing their stock market values when investing in machines, structures, land and inventory. Investment is determined at the level where the risk-adjusted rate of return on capital is at least equal to the cost of capital (Mintz 1995). For example, if the risk-adjusted rate of return to capital is 10 percent, a 40 percent effective tax rate on capital reduces the rate of return on capital to 6 percent. If businesses require at least a 6 percent rate of return (net of risk) to compensate investors for their willingness to invest in the business, then the company will be willing to undertake a new capital project. If the risk-adjusted return on projects is less than its cost of capital of 6 percent — say, due to taxation — the project will be rejected (Box 1).

Canada has been on the right track for some time in reducing its effective tax rate on capital, but the gains in 2007 have primarily been in manufacturing. Canada's effective tax rate on capital — now 30.9 percent, down by almost six percentage points from 2006, as shown in Table 1 — is 11th highest of 80 countries. While Canada's effective tax rate on capital is slightly below the GDP-weighted average of all 80 countries (the US and other G7 countries tend to have high effective rates), most countries have a more favourable tax regime than in Canada. The simple average that gives each country equal weight is only 20.6 percent, over 10 percentage points less than Canada's.

Box 1: *Calculating the Effective Tax rate*

The effective tax rate is a summary measure indicating the amount of tax paid as a percentage of the pre-tax returns on investment. The measure is based on the assumption that the amount of capital stock invested in an industry is determined by businesses maximizing their stock market values when investing in machines, structures, land and inventory. Investment is determined at the level where the risk-adjusted rate of return on capital is at least equal to the cost of capital (Mintz 1995). For example, if the risk-adjusted rate of return to capital is 10 percent, a 40 percent effective tax rate on capital reduces the rate of return on capital to 6 percent. If businesses require at least a 6 percent rate of return (net of risk) to compensate investors for their willingness to invest in the business, then the company will be willing to undertake a new capital project. If the risk-adjusted return on projects is less than its cost of capital of 6 percent — say, due to taxation — the project will be rejected.

Our calculations take into account corporate income taxes, capital taxes, sales taxes on capital purchases and other capital-related charges like stamp duties, turnover taxes and securities transaction taxes. We assume that businesses must earn a rate of return on capital sufficient to cover an international cost of finance. The latter is based on the typical returns required by G-7 country investors who are indifferent between holding bond and stock assets, after adjusting for risk and personal income taxes. Investments in each country are assumed to have the same structure of assets, leverage ratios, economic depreciation rates and risk-adjusted real rates of return as in Canada. Differences across countries only reflect tax parameters and rates of inflation (that affect nominal interest rates across countries). Estimates for 2007 update data developed in 2006. Any new information that improves estimates for both years has been incorporated in the analysis. Owing to lack of data, we have not included the Congo in our estimates this year.

The Canadian manufacturing effective tax rate is now 23.1 percent, a reduction of 10 percentage points, reflecting federal and provincial tax credits and some capital tax reductions. Canadian manufacturing is taxed 28th most highly among the 80 countries, well below the weighted-average effective tax rate of 31.3 percent but somewhat more than the simple average of 19.9 percent.

However, for services, the effective tax rate has fallen less from 39.6 percent in 2006 to 36.4 percent in 2007, 6th highest among the 80 countries and well above even the weighted average effective tax rate on services (31.7 percent). The high tax burden on services is important in today's global economy since many services are traded internationally or contribute to the cost of producing Canadian goods and services, including manufactured products.

Canada's effective tax rate on capital would be sharply reduced if sales taxes on capital goods purchases and capital taxes were eliminated.⁸ The effective tax rate would decline by eight percentage points to 22.3 percent, leaving only the corporate income tax rate in place. Canada's effective tax rate on capital would be 35th highest among the 80 countries if only the corporate income tax were levied on businesses.

Economic studies show conclusively that business taxes significantly affect investment in a country. Iowerth and Danforth (2004) suggest that a 10 percent

8 For non-financial companies, provincial capital taxes will be eliminated within five years (the federal capital tax has now been eliminated).

Table 1: *Statutory Corporate Income Rates and Effective Tax Rates on Capital by Country, 2007*

	Statutory Corporate Income Tax Rate	Effective Tax Rates on Capital			
		Manufacturing	Services	2007 Average	2006
		<i>percent</i>			
Argentina	35.0	49.8	47.5	47.9	47.9
China	25.0 (30.0) ^a	48.5	46.8	47.1	49.0
Chad	45.0	45.1	42.7	43.2	43.2
US	38.5	34.7	40.1	37.8	37.8
Brazil	34.0	37.6	36.6	36.6	36.6
Germany	37.0	36.9	35.3	35.7	35.7
Russia	22.0	38.0	34.9	35.7	35.7
France	34.4	33.0	31.7	31.9	31.9
Korea	27.5	32.8	31.0	31.5	31.5
Japan	41.9	35.2	30.4	31.3	31.3
Canada	34.2 (34.4) ^a	23.1	36.4	30.9	36.6
Pakistan	35.0	29.9	31.1	30.8	30.8
Costa Rica	30.0	38.6	30.5	30.7	30.7
India	34.0	28.8	30.1	29.8	29.5
Iran	25.0	31.2	28.8	29.3	29.3
UK	30.0	24.4	29.8	28.8	28.8
New Zealand	33.0	29.9	28.2	28.5	28.5
Indonesia	30.0	30.3	26.9	28.2	28.2
Spain	32.5 (35.0) ^a	29.5	27.4	27.7	30.0
Australia	30.0	27.7	26.6	26.7	26.7
Lesotho	25.0	12.8	30.6	26.7	26.7
Georgia	20.0	27.6	25.5	25.9	25.9
Ethiopia	30.0	30.7	24.8	25.9	25.9
Sierra Leone	35.0	14.0	27.2	25.3	25.3
Botswana	25.0	11.4	25.3	24.4	24.4
Tanzania	30.0	14.8	25.3	23.6	23.6
Norway	28.0	25.8	23.2	23.5	23.5
Italy	37.3	21.8	23.4	23.1	23.1
Jamaica	33.3	14.6	24.4	23.0	23.0
Peru	30.0	27.3	21.9	23.0	23.0
Finland	26.0	22.4	22.9	22.8	22.8
Kazakhstan	30.0	24.6	22.0	22.5	22.5
Bolivia	25.0	26.4	21.2	22.5	22.5
Tunisia	30.0 (35.0) ^a	22.1	22.4	22.3	26.0
Uzbekistan	17.2 (19.0) ^a	23.8	20.4	21.3	22.0
Zambia	35.0	18.9	21.6	21.2	21.2
Turkey	20.0	22.7	20.2	20.8	20.8
Luxembourg	29.6	24.1	20.3	20.6	20.6
Fiji	31.0	22.7	19.7	20.3	20.3
Austria	25.0	21.6	19.5	19.9	19.9
Kenya	30.0	-25.7	27.8	19.6	19.6
Bangladesh	30.0	12.4	21.3	19.4	19.4
Uganda	30.0	11.0	20.5	19.0	19.0
Malaysia	27.0 (28.0) ^a	20.1	18.3	19.0	19.8

Table 1 cont'd on next page

Table 1 (cont'd): *Statutory Corporate Income Rates and Effective Tax Rates on Capital by Country, 2007*

	Statutory Corporate Income Tax Rate	Effective Tax Rates on Capital			
		Manufacturing	Services	2007 Average	2006
			<i>percent</i>		
Vietnam	28.0	24.5	17.0	19.0	19.0
Thailand	30.0	19.8	17.4	18.4	18.4
Ghana	25.0	13.3	19.3	18.2	18.2
Iceland	18.0	19.5	17.6	17.9	17.9
Sweden	28.0	19.3	17.5	17.8	17.8
Jordan	25.0	11.6	19.7	17.6	17.6
Madagascar	30.0	23.4	15.2	17.0	17.0
Morocco	35.0	18.9	16.4	17.0	17.0
Switzerland	21.3	16.6	16.8	16.7	16.7
Trinidad	25.0	3.0	21.5	16.2	20.1
Rwanda	30.0	21.8	15.2	16.1	16.1
Portugal	26.5 (27.5) ^a	14.8	16.1	15.9	16.6
Netherlands	25.5 (29.6) ^a	18.2	15.0	15.5	18.5
South Africa	29.0	15.5	15.4	15.4	15.4
Poland	19.0	14.4	15.0	14.9	14.9
Chile	17.0	14.4	13.8	14.0	14.1
Greece	25.0 (29.0) ^a	18.0	13.2	13.8	16.2
Ecuador	15.0	15.6	12.7	13.4	13.4
Denmark	25.0 (28.0) ^a	16.5	12.7	13.4	15.4
Mauritius	22.5 (25.0) ^a	13.8	13.2	13.3	15.2
Mexico	28.0 (29.0) ^a	17.1	12.1	13.1	13.7
Hungary	16.0	12.9	12.0	12.2	12.2
Slovak Republic	19.0	13.3	11.7	12.0	12.0
Ireland	12.5	12.7	11.7	12.0	12.0
Egypt	20.0	10.6	12.4	11.9	11.9
Czech Rep	24.0	13.2	10.4	11.2	11.2
Romania	16.0	10.7	9.4	9.8	9.8
Singapore	18.0 (20.0) ^a	6.4	11.6	9.3	10.6
Croatia	22.0	10.7	8.5	9.2	9.2
Ukraine	25.0	14.4	6.0	8.2	8.2
Hong Kong SAR	17.5	3.6	6.2	5.6	5.6
Latvia	15.0	6.5	5.4	5.6	5.6
Nigeria	32.0	7.6	4.5	4.9	4.9
Bulgaria	10.0 (15.0) ^a	5.0	4.9	4.9	7.8
Belgium	34.0	-6.0	-4.1	-4.5	-4.5
Serbia	10.0	-12.5	-3.0	-5.8	-5.8
Weighted Average^b					
All 80 countries	34.9	31.3	32.4	31.7	32.1
OECD members	36.3	30.9	32.3	31.5	31.8
Simple Average					
All 80 countries	26.8	19.9	20.8	20.6	21.0
OECD members	27.6	21.5	20.8	20.8	21.3

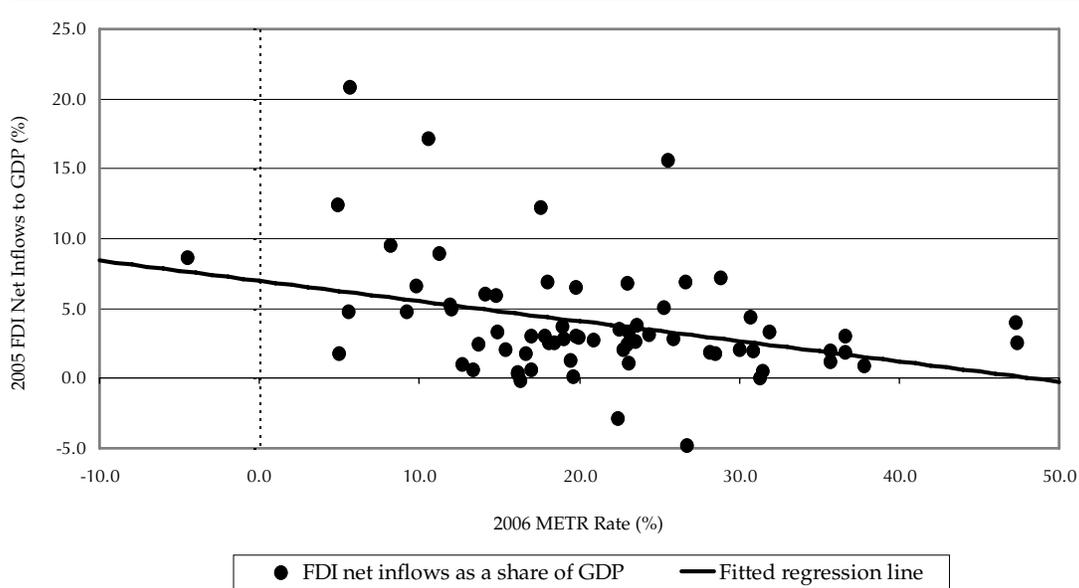
Notes: Effective tax rates on capital investments incorporate corporate income taxes, sales taxes on capital purchases and other capital-related taxes including asset and net worth taxes, stamp duties on securities, taxes on contributions to equity. Property taxes are not included due to lack of data.

^a Countries with a corporate income tax rate reduction for 2007 have their 2006 corporate income tax rates shown in parentheses.

^b Weighted by GDP in constant 2000 US dollars for the period 2000-2005.

Source: Calculations by Duanjie Chen with corporate income tax rates adopted from Ernst and Young, 2007 Worldwide Corporate Tax Guide, International Bureau for Fiscal Documentation, various country chapters; Tax Notes International, various issues in 2007; and certain government websites.

Figure 2: *The Relationship Between 2005 FDI-Inflow-to-GDP Ratio and 2006 Capital METR Rates, 69 countries*



Source: International Monetary Fund; calculations by Andrey Tarasov.

reduction in the cost of capital can increase investment in machinery and equipment by 10 percent in Canada. More powerful results have been obtained by studies on foreign direct investment (FDI), showing that a 1 percent reduction in the effective tax rate on capital can increase foreign direct capital stock by about 3.3 percent (de Mooij and Enderveen 2003).

We analyze the impact of effective tax rates on foreign direct investment as a share of GDP in 2005 (for 69 countries), taking into account the anticipated 2006 effective tax rates, 2004 real growth in GDP, and 2005 inflation.⁹ The fitted line for marginal effective tax rates and foreign direct inflows is shown in Figure 2, indicating a negative relationship between foreign direct inflows and effective tax rates.¹⁰

Canada's position has improved relative to a number of other countries but the country still has one of most uncompetitive business tax regimes in the world. While other determinants of capital investment, such as the size of the economy, infrastructure, the quality of the labour force, regulatory practice and a strong rule of law also substantially affect investment, taxation plays a significant role. We found in other work that a one-percentage-point increase in foreign direct investment inflows to GDP raises the economic growth rate by 0.2 percentage points (Mintz and Tarasov 2007). Thus, high effective tax rates on capital result in less foreign direct investment and therefore less economic growth.

9 Various equations were estimated allowing for other variables such as statutory corporate income tax rates (insignificant) and for alternative non-linear formulations. The reported result is the "best" statistical fit.

10 The estimated elasticity is 0.76 implying that a one percentage point increase in the effective tax rate would reduce foreign direct investment inflows as a share of GDP by 0.76 percent.

Table 2: *Corporate Income Tax Reductions Scheduled or Indicated for Future Years*

	Statutory Corporate Income Tax Rate (%)				
	2007	2008	2009	2010	2011
Canada	34.2	32.6	32.1	31.1	30.6
Czech Republic	24.0	21.0	20.0	19.0	
France	34.4	Uncertain*			
Germany	37.0	30.0			
Japan	41.9	Uncertain			
UK	30.0	28.0			
US	38.5			38.1	
New Zealand	33.0	30.0			
Mauritius	22.5	20.0	17.5	15.0	
Malaysia	27.0	26.0	25.0		

Note * The French President has proposed a 25 percent corporate rate.

Source: Tax Notes International, various issues.

Canada is reducing its corporate income tax rate by 2011 to 30.6 percent which, along with other measures, will reduce its effective tax rate on capital to 27.8 percent. However, several other countries have already indicated further cuts to corporate income tax rates, as shown in Table 2.

The inference is clear. Canada still has some way to go to become competitive, never mind creating a distinct advantage relative to most other countries.

Path to Competitiveness: Comprehensive Tax Reform

Canada should be considering comprehensive tax reform by shifting taxes away from savings and investments, by reducing high marginal rates, and by making the tax system more neutral. Some of the fiscal costs of reforms can be offset by using budgetary surpluses generated by a growing economy and disciplined spending. However, this would not be enough to achieve neutrality or pay for large rate reductions. Tax rate reductions could also be funded by (i) broadening tax bases to make the system more efficient and fair; and (ii) by relying on less distortionary revenue sources, such as increased taxes on consumption. A more intriguing policy would be to change the existing fuel taxes into a broad-based energy tax for environmental purposes that would improve efficiency and fairness by pricing the economic costs of pollution.

In this *Commentary*, we focus on a major obstacle to Canada's competitiveness. Canada's corporate income tax rate is far too high, at 34.2 percent, or 11th highest among 80 countries surveyed. That rate needs to be adjusted downwards to improve competitiveness without imposing a fiscal cost on governments. A central recommendation is that Canada should take much greater action to reduce corporate income tax rates, which as argued below, will have little impact on revenues if the reduction is sufficiently large. Corporate rate reductions should be the first order of business.

Cutting Canada's Existing Corporate Tax Rate Would Increase Revenue

Some attention in recent years has been paid to the question of whether some taxes are set at rates so high that their reduction would increase, rather than decrease, tax revenues. The Laffer curve (Laffer 1979) is based on the premise that a revenue-maximizing tax rate lies somewhere between zero and 100 percent, where at the extreme points no revenue would be raised. Laffer argued that tax rate reductions could increase revenues as a result of expanded economic activity induced by the tax reform. In other words, the tax rate may be higher than a revenue-maximizing rate. If that is the case, tax rates should certainly be reduced to, at most, the revenue-maximizing rate. This would increase revenues and reduce the economic cost of raising taxes. Further reductions below the revenue-maximizing tax rates would need to trade off, on one hand, the benefits of raising taxes to fund public services and, on the other hand, the benefits of reducing economic distortions caused by the corporate tax system. As public finance theory has concluded, the optimal tax rate is less than the revenue-maximizing tax rate, with the objective being to achieve the highest economic gain.

In recent years, economists have paid much more attention to the possibility that some countries with very high corporate income tax rates might be on the "wrong side" of the Laffer curve. In other words, reductions in corporate income tax rates may lead to greater revenues. The suspicion is that a high corporate income tax could cost governments revenue if the tax base is substantially eroded. This occurs when multinationals shift income from high-tax to low-tax jurisdictions using financial transactions and transfer pricing, or by allocating more investment capital to a low-tax country.

For many policy analysts, the Irish experience has been particularly important in this regard. Ireland has reduced its corporate income tax rate by more than 40 percent from the late 1980s to 12.5 percent today. Corporate income taxes as a share of GDP have grown from about 2.5 to 3.5 percent of GDP in 20 years. As shown in Table 3, Ireland collects more corporate income taxes as a share of GDP than do G-7 countries where corporate rates are well above 30 percent (only the UK collects as much corporate income tax revenue as Ireland relative to its size).

Many factors influence corporate tax collections besides the corporate income tax rate. Countries might collect little revenue as a policy choice if they provide accelerated depreciation, investment tax credits and other preferences that shrink the corporate tax base. If an economy is booming, corporate tax revenues increase as companies use up write-offs reflecting corporate losses accumulated in past years when profitability was low. Further, countries with larger natural resource and financial sectors tend to collect more corporate income tax revenues than others. Economies with high investment rates may also collect more corporate revenues.

One recent study (Clausing 2007), using data for the period 1979 to 2002, found the revenue-maximizing corporate income tax rate to be 33 percent for OECD countries, although the rate would be lower for smaller and more globally integrated economies. Since 2002, however, corporate income tax rates have fallen several percentage points further (Mintz and Weichenrider 2007).

Table 3: *Corporate Tax Revenue and Statutory Corporate Income Tax Rates for Various OECD Countries in 2005*

Country	Corporate Income Tax as Percentage of GDP in 2005	General Corporate Income Tax Rate 2005
Australia	5.2	30.0
Austria	2.3	25.0
Belgium	4.0	34.0
Canada	3.5	34.4
Czech Republic	4.6	26.0
Denmark	3.6	30.0
Finland	3.4	26.0
France	2.8	34.9
Germany	1.8	37.0
Hungary	2.1	16.0
Iceland	2.4	18.0
Ireland	3.4	12.5
Italy	2.8	37.3
Japan	4.1	41.9
Korea	4.1	27.5
Luxembourg	5.5	30.4
Netherlands	3.9	31.5
New Zealand	5.7	33.0
Norway*	12.8	28.0
Slovak Republic	2.4	19.0
Spain	3.9	35.0
Sweden	3.7	28.0
Switzerland	2.5	21.3
Turkey	2.3	30.0
United Kingdom	3.4	30.0
United States	2.9	39.2

Note: * Norway levies a 50 percent corporate income tax rate on oil and gas companies.

Source: OECD. Statistics Database. 2007.

Given the reduction in corporate income tax rates in recent years, we provide our own estimate of the revenue-maximizing corporate income tax rate. Our analysis, as explained in Box 2, suggests that the revenue-maximizing corporate income tax rate for Canada is 28 percent. While this rate is below that estimated in Clausing (2007), we focused on the post-2001 period, when corporate income tax rates were far lower than in earlier years. Several different tests were conducted but, overall, the revenue-maximizing corporate income tax rate tended to lie below 30 percent.

In our recommendations below, we suggest a significant reduction in corporate income tax rates, to a level well below the revenue-maximizing rate. The revenue-maximizing corporate income tax rate is too high, relative to a tax policy that would achieve the highest possible standard of living. A significant reduction would redress the problem of variable effective tax rates on industries and assets which, as discussed in Chen, Mintz and Tarasov (2007), distort the allocation of resources in the economy and result in unfairness.¹¹

11 One could argue that the corporate income tax rate should not be set too low, because Canadian taxes are credited against foreign taxes for certain countries like the US and Japan, and

Box 2: *An Estimate of the Revenue-Maximizing Corporate Income Tax Rate*

To estimate the revenue-maximizing corporate income tax rate, we regressed corporate income taxes as a share of GDP by country for 27 OECD countries and by years for the period 2001-2005 on independent variables as listed in the table below. We would expect that corporate tax revenues would rise and then fall with the corporate income tax rate (to estimate a curve, the square of the rate is included as a variable). Corporate taxes would increase with (i) greater gross fixed-capital formation as a share of GDP; (ii) a higher share of the financial and business services sector to total value-added; (iii) more real GDP growth rate; (iv) greater resource extraction (especially, for example, in Norway); and vary by each year. We estimated other equations, not shown here, using a longer panel data set (1995-2005), a cross-section based on 2001-2005 averaged values, oil and gas production, the effective tax rate on capital, and lagged growth. While results did vary across tests, the maximum corporate income tax rate was generally found to be below 30 percent. In the reported equation below, the estimated maximum rate is 28.3 percent.

<u>Independent variables</u>	<u>Coefficient</u>	<u>Standard Error</u>	<u>Probability of Insignificance</u>
Constant	-6.327	1.219	0.000
CIT rate (%)	0.278	0.066	0.000
Squared CIT rate	-0.005	0.001	0.000
Gross fixed capital formation as a share of GDP (%)	0.103	0.014	0.000
Share of financial and business services sector VA in total VA (%)	0.135	0.025	0.000
Real GDP growth rate, NCU-based (%)	0.091	0.048	0.060
One-year lag of real GDP growth rate, NCU-based (%)	0.127	0.047	0.008
Norway dummy (1 for Norway for all periods)	7.200	0.434	0.000
Year dummy 2001	-0.182	0.262	0.489
Year dummy 2002	0.064	0.256	0.802
Year dummy 2003	-0.107	0.251	0.671
Year dummy 2004	-0.038	0.257	0.883
F-statistic	30.874		
Significance level for F	0.000		
R squared	0.734		
Adjusted R squared	0.710		

Notes: VA = Value Added; NCU = National Currency Unit

Source: Calculations by Andrey Tarasov.

Personal Tax Reforms

As part of a comprehensive tax reform strategy, Canada needs to reduce high marginal personal income tax rates, especially as they apply to Canadians with

(footnote 11 cont'd)

consequently, a reduction in Canadian tax paid might result in a larger payment to a foreign government. However, many foreign-owned multinationals operating in Canada do not pay tax on income repatriated from Canada, including US companies that use tax-planning opportunities to eliminate US tax on repatriations. See Mintz and Weichenrieder (2007), chapter 6.

modest incomes. In the previous tax competitiveness reports (2005 and 2006), we argued for several measures that would reduce personal income tax rates. These included reductions in personal income tax rates for the first bracket, sharp increases in the exemption level and a new approach to clawing back federal and provincial income-tested benefits by pooling the amounts to be clawed back at a single rate to avoid stacking up marginal tax rates.

We will not repeat these recommendations here. However, the existing federal personal income tax rate applied to the first bracket should be reduced from 15.5 percent to 12 percent. Provincial personal tax rates should also be reduced so that the combined personal income tax rate faced by those with modest income is no more than 18 percent.

Tax policies aimed at helping Canadians to fund their future living costs are needed more urgently as the population ages. Two other personal tax measures would have a significant impact on savings, generating more income for Canadians and facilitating saving.

The first is for the introduction of a tax-prepaid savings account (Kesselman and Poschmann (2001), which would enable Canadians to earn tax-free investment income and capital gains. Under this approach, Canadians would be able to contribute up to a limit (such as \$10,000) into an account in addition to contributions made to their pension and Registered Retirement Savings Plans. No deduction would be provided for contributions to plans and no tax would be applied to withdrawals. In contrast to the existing current retirement accounts, those individuals expecting high marginal tax rates after they retire (as shown in Figure 1), would be better able to average their savings withdrawals to avoid excessively high taxes. The federal Conservatives promised a similar scheme in 2004, and a Liberal budget in 2003 indicated that the government would consider its implementation.

The second measure would be to introduce a refundable dividend tax credit for pension and other retirement savings plans. (At present, only equity investments held outside such retirement plans are eligible for the dividend tax credit.) This new measure would offset corporate taxes that have been deducted from distributions made to these plans. It would also make equities much more attractive as an investment for retirement accounts, thereby increasing Canadian ownership of businesses. Mechanisms would be needed to match refunds to the corporate tax actually deducted from distributions. One such mechanism would be a corporate distribution tax that would be credited against corporate tax payments (see the Technical Committee on Business Taxation 1998; and Mintz and Richardson 2006).

Business Tax Reforms

In recent years, Canadian governments have reduced corporate income tax rates, which stood at 43 percent in 2003, to a more competitive level of 34.2 percent in 2007. Further cuts are planned by 2011, bringing the corporate rate closer to 30 percent. Governments are also eliminating capital taxes on non-financial companies and, in some provinces, financial companies as well. Retail sales taxes on business intermediate and capital purchases have also received more attention,

with sales tax reductions on capital purchases in British Columbia and a general rate reduction in Saskatchewan and the adoption of a tax similar to the GST in Quebec and three Atlantic Provinces (New Brunswick, Newfoundland and Labrador and Nova Scotia). All these are welcome changes and further sales tax reform would help reduce effective tax rates in Canada.

However, as detailed above, Canada's corporate income tax rate remains a significant impediment to Canada's competitiveness. Not only does the corporate income tax contribute to a high effective tax rate on capital, but evidence is accumulating that governments are shooting themselves in the foot by levying a corporate income tax rate in excess of a revenue-maximizing corporate rate. A substantial cut to the corporate rate would potentially increase government revenues as it would alter substantially the incentive for business to shift profits out of Canada or by loading debt in Canadian businesses to avoid Canadian tax.

A corporate rate of 28 percent could simply maximize revenues. However, even at this level, the corporate rate would be too high, because corporate taxes cause economic distortions that hurt Canada's competitiveness, by reducing investment in high-taxed assets and driving a misallocation of capital resources among competing businesses. Further, tax policy makes Canada less attractive for Canadian or foreign-controlled businesses to locate their plants where a small population and cold weather create regional natural disadvantages.

A sharp reduction in Canada's corporate income tax rate, to a level such as 20 percent, would be unlikely to have a significant fiscal cost, given that the current corporate tax rate is well above the revenue maximizing rate. There would be several advantages for Canada if corporate rates were reduced:

- A low corporate income tax rate would increase the incentive for businesses to locate in Canada. As discussed above, the ultimate gains would accrue to workers as the corporate tax falls most on labour incomes.
 - The elimination of the differential between large and small business rates would help remove the tax penalty imposed on small companies that grow in size.
 - Lower corporate income tax rates would reduce differentials in effective tax rates across assets and industries, thereby lessening distortions that affect the allocation of capital across businesses. The services sector would especially benefit from a lower corporate income tax.
 - The elimination of different corporate income tax rates across business incomes would significantly simplify the tax system. A single dividend tax credit could be applied, because all corporate income would be subject to a single rate. There would be no need to impose complex rules to differentiate among different sources of income such as manufacturing and non-manufacturing income, as in Ontario.
 - With an exceptionally low corporate income tax, governments could easily scale back tax preferences related to accelerated depreciation and investment tax credits, because businesses would have significant incentive to invest in Canada without special treatment.
 - Rules applying to the taxation of inbound and outbound investments could be simpler to apply. With a very low effective tax rate on capital and
-

statutory tax rate, Canadian governments would be able to more easily protect the Canadian tax base since less pressure would ensue from multinationals engaged in income- shifting tax planning.

A brave reform would be to bring the general corporate income tax rate to the small business rate and levy only a single corporate income tax rate on all business regardless of industry or size. The federal and provincial corporate income tax rate could be levied at a rate of 20 percent — a federal rate of 12 percent (by 2011) and an average provincial rate of roughly 8 percent. This reform would not require changes to personal taxes on capital gains and dividends eligible for the low tax credit since the combined corporate and personal tax rate on dividends and capital gains would be the same as the top personal tax rate on other income.

With a 20 percent corporate income tax rate, Canada would be in the same league as 13 other countries including Hong Kong, Iceland, Ireland and Switzerland in terms of tax competitiveness.

Base Broadening

While it is appropriate to reduce corporate rates, it would also be important to make the business tax system more neutral. The tax system should not distort investment decisions that are best left to the private sector to choose when pursuing profits. Neutral business tax policies make the tax system more efficient, fair and simple. Achieving a neutral tax system means scaling back excessively high capital cost deductions, such as federal and provincial accelerated depreciation and investment tax credits, and increasing allowed deductions in cases when the existing tax relief is insufficient to offset the economic cost of investments.

With a substantial reduction in the corporate income tax, the need for targeted tax reductions would be lessened; general rate relief would be better for the broader economy than special preferences for only some activities.

Capital cost allowances have been altered in recent years, with increased rates to reflect economic depreciation, recently for manufacturing plant and non-residential buildings. Further adjustments are needed when economic depreciation rates do not match capital cost allowance rates used for tax purposes. Further, with inflation, some correction is in order to boost capital cost allowances based on the historical price of assets (Chen and Mintz 2005 provide an exact calculation, which depends on the degree to which investment is financed by debt).

A tax system should also be neutral amongst different forms of business organization (corporations, publicly traded trusts and limited partnerships) and sources of finance (debt, equity and retained earnings). It should not provide some taxpayers advantages compared to others in acquiring companies. While the federal government appropriately removed the incentive for corporations to be converted into trusts and limited partnerships this past year, it is also important to remove tax incentives for debt financing. As it is, interest is deductible from corporate profits while distributions are not. Thus, it is critical to avoid excessive taxation of shareholder income, which in the present case applies to pension plans

and RRSPs, whose beneficiaries are currently better off holding bonds rather than dividend-paying securities. The recommendation to refund corporate tax (refundable dividend tax credit) for low-income and tax-exempt entities would improve neutrality among different forms of business organization, financial structures and players in acquisition markets.

A more complex challenge is presented by international taxation, since neutrality is impossible to achieve when countries pursue their independent corporate tax policies (see Mintz and Weichenreider 2007). The current Canadian tax system imposes higher taxes on domestic investments compared to outbound investments by Canadian corporations. But increasing taxes on outbound investment would create another problem. Given that other countries also provide favourable treatment to outbound investment, higher taxes on foreign direct investment by companies based in Canada could impair their competitiveness relative to competing multinationals resident in other countries.

Thus, corporate tax policies that reduce taxes on domestic investments help achieve a more neutral taxation of domestic and foreign investments. However, even in the presence of lower taxes on domestic investment, Canada would need to protect its own tax base when companies shift debt into Canada as part of international tax planning arrangements. Tighter rules related to interest deductibility such as a generalized thin-cap rule limiting related and third-party debt to 75 percent of domestic assets, similar to Australia, would be appropriate even if the corporate tax rate is reduced to 20 percent (see Lanthier and Mintz 2007).

In some cases, tax policies should support or penalize investments in the presence of “spillovers,” which arise when actions by a producer benefit or hurt the economy. A subsidy is justified in the case of research and development, because businesses often do not fully capture the returns from investments when others copy the innovation at little or no cost. As discussed below, a tax penalty could improve efficiency and fairness in the case of environmental damage, as well as reduce spillovers arising from producer decisions that harm the environment.

Whether public policies should be implemented by spending programs, tax support or regulations is an issue that would need careful analysis. It would be best not to pollute the tax system with complex measures if more effective policies can be achieved with public spending or regulation. Tax policies can be ineffective, and at high revenue cost, if those policies do not alter much economic behavior or are directed at activities that would have taken place without the tax support.

Various credits could be justifiably eliminated, as economic studies tend to find little support for their effectiveness or rationale. These include accelerated depreciation for resource and manufacturing investments both at the federal and provincial level, labour-sponsored venture capital credits, provincial stock savings plans and the lifetime capital gains exemption for private company shares, farm and fishing property.

Support can be justified for research and development on the basis articulated above. However, the level of support seems excessive. The combined federal-provincial credits amount to roughly 30 percent of the cost of investment for large companies and about 40 percent for smaller ones. As the Technical Committee on

Business Taxation (1998) argued, research and development tax credits could be scaled back somewhat to reflect spillovers and eliminate the differential between the large and small business tax credit rates. For companies that do not pay taxes, partial refundability could be provided, similar to that for small businesses, to enable companies to use the credit rather than wait years until they earn income and pay corporate income tax. (Investment tax credits can be carried forward to reduce tax payments for a limited number of years.) Given that about 80 percent of research and development expenditures are related to scientific salaries, it would be consistent to allow the credit to be applied in part against Employment Insurance premiums paid by employers and employees, especially when the premiums paid to EI are in excess of the true layoff experience of the employer.

Environmental Taxation as a form of Consumption Taxation

Similar to many countries throughout the world such as Australia and Germany, Canada should increase its reliance on consumption taxes to fund public services.

One possible measure is to increase the federal GST rate to fund reductions in distorting taxes on investment and savings. Neither the existing government nor the opposition parties are considering this form of tax reform. The Conservatives promise to reduce the GST rate by another percentage point to 5 percent, while other parties look at reducing personal income tax rates or increasing tax credits to support low-income Canadians, rather than address the level of taxes on investment, savings and work effort.

Perhaps a more promising alternative is for governments to rely more heavily on user-pay related taxes, rather than taxes on investment, savings and work. An important example of a user-pay tax is an environmental tax, connected to the use of clean air, water and the environment.

Canadians are increasingly concerned about the environment, and discussions over global warming have turned governments' attention to policies that would reduce greenhouse gas and other emissions related to energy use. Recently, the Alberta government has announced a policy to reduce energy intensity, with a carbon tax that would be rebated to the extent that Alberta companies spend the funds on carbon-reducing technologies. The federal government has proposed in the next several years to implement a similar scheme.

Generally, OECD economies have been developing a set of voluntary compliance, regulatory and tax policies to implement ecological reforms (OECD 2006). No single set of instruments to curb emissions has been adopted.

By enabling companies to buy emission permits from a market, regulations controlling an aggregate emissions level provide greater flexibility than does regulating technologies to reduce carbon emissions. Permit trading thus "prices" carbon emissions and, if priced sufficiently high, will create incentives for businesses to adopt at a cost those technologies that would reduce emissions. However, trading schemes affect only large producers. Small businesses and the general population are not directly included in carbon trading schemes, although the effect of permit-trading schemes on energy prices could reduce household and small business energy consumption.

Economists have argued that taxation could help successfully achieve environmental objectives and provide incentives to businesses to adopt technologies to reduce emissions. Taxes do provide a stable pricing of emissions, although the effectiveness of a tax in changing behaviour will depend on the size of the tax and the method by which it is implemented. For example, the UK has a fuel excise tax that varies by sulphur content — this provides greater incentive to reduce sulphur emissions.

Typically, 80 percent of environmental taxes among OECD countries are applied to motor vehicles and fuels with substantially lower tax rates on diesel (OECD 2006). A few countries have levied taxes on natural gas and electricity. Substantial exemptions from energy taxes are provided for industries that are sensitive to international trade, such as in agriculture, manufacturing and public administration and defense. In some cases, the tax exemption is provided alongside other policies.

Canada's environmental taxes tend to be narrowly applied to certain products. Federal excise taxes on fuels, levied to encourage energy self-sufficiency, are applied at a rate of 10 cents per litre for aviation fuel and unleaded gasoline (11 cents for leaded) and 4 cents per litre for diesel. Provincial gasoline taxes, arguably intended to fund roads and highways, vary with the highest rates applying to gasoline and clear diesel and lowest applying to coloured or dyed propane, butane, aviation fuel and marine and locomotive fuel.

As the Technical Committee on Business Taxation (1998) recommended, Canada could consider converting the existing fuel excise taxes into broad-based environmental taxes on various energy sources (natural gas, coal, electricity and nuclear) and toxins with rates varying according to environmental damage. A number of basic principles should apply:

- *Neutrality*: An environmental tax should be broadly applied to affect consumers and large and small business emitters rather than being applied narrowly to some sectors of the economy. All Canadians must be involved with strategies to reduce environmental damage.
- *Policy harmonization*: An environmental tax could complement other policies used to control emissions to provide some incentive for better environmental practices. The application of the tax should be mindful of other environmental policies to avoid the doubling or tripling up of different policies that could significantly harm competitiveness. Federal and provincial governments should avoid imposing heavy burdens on some businesses by independently choosing their own policies without taking into account policies chosen by other levels of government.
- *Minimal transition costs*: Rates should be set sufficiently low at the beginning in order to minimize economic disruption. Given the high tax on gasoline, some taxation should be considered for other sources of energy including diesel, coal, natural gas, nuclear, although only at rates reflecting environmental damage.
- *Taxes on a consumption-basis*: The tax could apply to consumption by exempting exports and taxing energy content in imports, leaving other countries to use public policies to curb harmful environmental practices.

- *Recycle revenues to improve efficiency and fairness in the tax system:* With a broad-based environmental tax, governments would have a new source of revenue to provide offsets to (i) low-income Canadians facing higher energy prices and (ii) those industries that are sensitive to international competitiveness. New revenues should be used to reduce personal taxes on low-income individuals rather than providing energy rebates that shield consumers from higher energy prices. High personal income tax rates should also be reduced more generally to make the tax system more efficient and fair. The revenues could also be used to fund business tax reductions that would help spur investment to would improve competitiveness.

Environmental taxes are unlikely to be effective on their own to reduce emissions to targeted levels. As seen with alcohol, tobacco and gambling levies, the tax rates are often set to achieve revenue targets rather than dissuade people from consuming products. Governments become reliant on the revenue so that other social objectives can be compromised. Nonetheless, we already have in place taxes on some energy sources — broadening the taxes to apply to other energy sources to account for emissions might be policy worth pursuing.

Conclusions

Canada's tax system remains an obstacle to growth and competitiveness with high marginal tax rates on work, savings and investment. Marginal personal tax rates on savings and work effort are far too high, especially on those with incomes below \$35,000. Canada's effective tax rate on capital is 11th highest among 80 countries — for the service sectors, 6th highest.

At 34 percent, the corporate income tax rate is also too high. Even with the planned 3.5 percentage-point reduction, Canada's corporate income tax rate seems above the revenue-maximizing corporate income tax rate of 28 percent. As first order of business, Canadian and provincial governments should reduce corporate income taxes. This study recommends a 20 percent rate, uniformly applied to large and small businesses, to minimize distortions.

Tax reform is needed — not the type that introduces targeted preferences, but reform that substantially lowers tax rates and achieves greater neutrality by eliminating differences in tax burdens among economic activities. Tax preferences should be scaled back. Capital cost allowances should be reformed to reflect better the cost of replacing assets. A refundable dividend tax credit tied to corporate tax payments paid by the company distributing its profits would improve neutrality among businesses and greatly improve returns on pension and other retirement savings.

Lastly, those provinces with retail sales taxes should consider reforms that would remove taxes on business intermediate inputs and capital. A VAT similar to the GST should be adopted in British Columbia, Manitoba, Ontario, Prince Edward Island and Saskatchewan.

The fiscal cost of these reforms is unlikely to be recovered by using surpluses generated by disciplined spending and tax revenues. Instead, opportunities to cut

rates could be funded by the reduction in tax preferences provided when tax rates have been too high. Certainly, the development of a coherent environmental tax that would be broader in application than existing fuel taxes could also be part of a comprehensive tax reform package to make Canada more competitive.

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