
Role of Marginal Effective Tax Rates in Canadian Tax Policy

**4th Meeting of WG 3
MENA-OECD Investment Program
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Session Outline

1. Background on Marginal Effective Tax Rates (METRs)
2. Role of METRs in the formation of Canadian tax policy
3. Data and Examples
4. Conclusions – Forward Agenda

Background – METR Concept

- METR assesses tax distortions to investment at the margin,
 - measures percentage of pre-tax return on capital that goes to the government
- Calculation of METR
 - Calculate gross-of-corporate-tax return on investment (R_g)
 - Calculate net-of-corporate-tax return on investment (R_n)
 - $METR = (R_g - R_n) / R_g$

Background - Scope

The METRs presented in this paper capture the following elements of the tax system:

- Statutory income tax rates.
- Interest deductibility
- Investment tax credits
- Capital cost allowances
- Capital taxes.
- Inventory accounting methods.
- Retail sales taxes on capital goods.

Background - Assumptions

Working Assumptions

- Taxable firms;
- METR comparisons across countries or over time use the same economic parameters i.e. only tax parameters vary across jurisdictions;
- Resource and financial sectors and R&D assets are currently excluded from the base model.

***Role of METR model in
Canadian Tax Policy***

1985 Tax Reform – Illustrative Proposal

1985 Tax Reform – Context

- Large differences in tax treatment across sectors (e.g. special provisions for agriculture)
- Large differences in tax treatment across asset classes (e.g. manufacturing and processing)
- Many firms unable to fully utilize tax incentives
- Illustrative proposal for corporate taxation outlined that would address these concerns

1985 Tax Reform – Illustrative Proposal

Use of METR model

- Calculations broken down by asset type (4), industry (8), size of firm (2), and sub-national government i.e. province (10)
- Useful metric to both highlight the impact of tax distortions in existing regime and to measure progress if illustrative proposal were to be implemented

1985 Tax Reform – Illustrative Proposal

Results

- Premise accepted of removing specific tax preferences in order to generate revenues to reduce statutory corporate tax rates
- Initial rate reductions put in place coupled with reductions in investment tax credits in 1986 budget

1987 Tax Reform – White Paper

1987 Tax Reform - Context

- Full fledged tax reform for both individuals and corporations
- More in-depth review of provisions particularly for larger corporations
- Increased taxes generated from corporations used to
 - ✓ Reduce corporate tax rates
 - ✓ Reduce personal tax rates
- Net revenue reduction for persons (CDN\$2.4 B)
- Net revenue increase for corporations (CDN\$1.6 B)
- Large corporate tax increases from financial sector

1987 Tax Reform – White Paper

Use of METR model

- Focus on METR impact on larger corporations (smaller corporations not as affected)
- Highlighted sectors with low METRs (mining) and sectors with high METRs (services)
- Financial sector not represented in model

1987 Tax Reform – White Paper

Results

- Broader tax base with lower tax rates
- Shift in tax mix
 - ✓ increased corporate taxes funded reductions in individual taxes
- Distortions reduced across sectors
 - ✓ Mining METR from -15.1% to 8.7%
 - ✓ Services METR from 33.0% to 29.0%
- Overall neutral impact on METR
 - ✓ Pre-reform 24.6%
 - ✓ Post-reform 24.7%

1997 Technical Committee – Review of Business Taxation

1997 Technical Committee - Context

- In-depth review of business tax structure
- Committee comprised of nine taxation experts from private sector (6) and academia (3), and chaired by Professor Jack Mintz
- Included analysis of both corporate income and capital taxes
- Mandate to develop revenue neutral recommendations
 - ✓ Proposed significant reductions in statutory corporate income tax rates from 43% to 33% (20% federal; 13% provincial)
 - ✓ Reductions to be financed by a mix of base broadening measures and new taxes

1997 Technical Committee – Review of Business Taxation

Use of METR model

- Primary motivation for reform was to address an “unacceptably large variation in effective tax rates”
- Calculations broken down by asset type (6), industry (12), size of firm (2),
- Highlighted low tax sectors (mining and forestry) and high tax sectors (services)
 - ✓ Note that 1987 reforms reduced but did not eliminate differences between these sectors.

1997 Technical Committee – Review of Business Taxation

Results

- Federal government reticent to immediately address concerns raised in the report
- Concerns included
 - ✓ lowering corporate taxation before providing tax relief for individuals
 - ✓ Implementing new taxes
 - ✓ Making certain base adjustments
- Recommended that report be studied by Parliamentary Committee, and input on recommendations requested from interested parties

Budget 2000

Budget 2000 - Context

- Major reductions to both personal and corporate taxes
- Focus on high statutory tax rate on service sector
 - ✓ lower rates already in place for manufacturing and processing (M&P)
 - ✓ Specific tax preferences in place for resource sector
- Reductions to be achieved over a five year time frame with only end point target being specified
- Target corporate statutory rate designed to create an advantage in comparison to United States

Budget 2000

Use of METR model

- Used internally but not referenced in budget documents
- Private sector organizations (C.D. Howe and Jack Mintz) continue to publish international ranking of METRs

Budget 2000

Results

- Sceptical reaction to federal rate target and lack of specificity to reach goal
- Economic Statement and Budget Update in fall 2000 provided a legislated schedule of rate reductions for each year in the five year period
- A year-by-year schedule demonstrated commitment thereby increasing certainty for corporations in their forward planning

Resource Taxation - Budget 2003

Resource Taxation Review - Context

- Statutory tax rate reductions in Budget 2000 did not apply to resource sector as they benefited from a number of targeted tax incentives
- Budget 2003 announced that statutory tax rate for the resource sector would be reduced to the same level as other sectors
- Cost would be financed in part by scaling back their targeted tax measures
- Resource sector taxation brought closer into line with non-resource taxation

Resource Taxation - Budget 2003

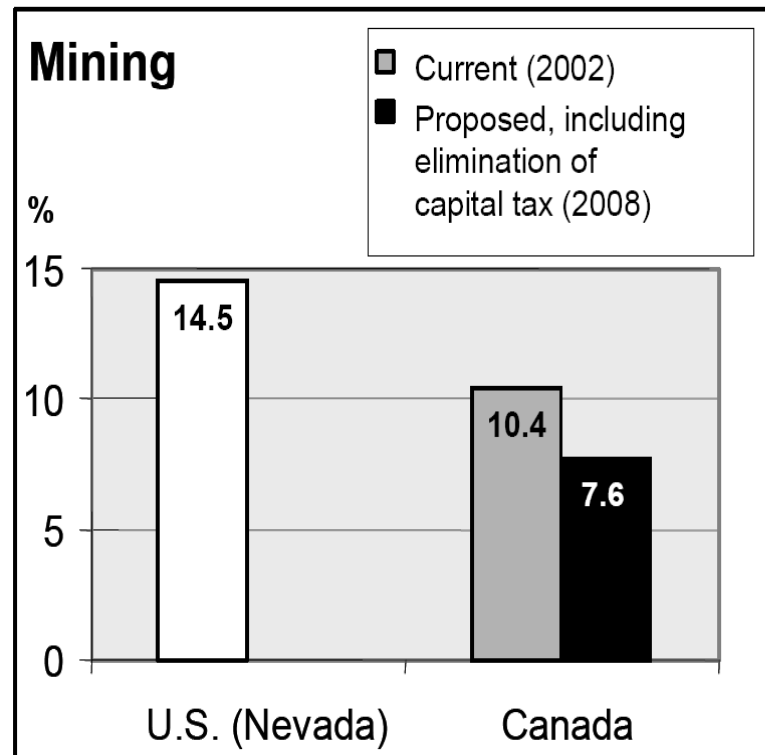
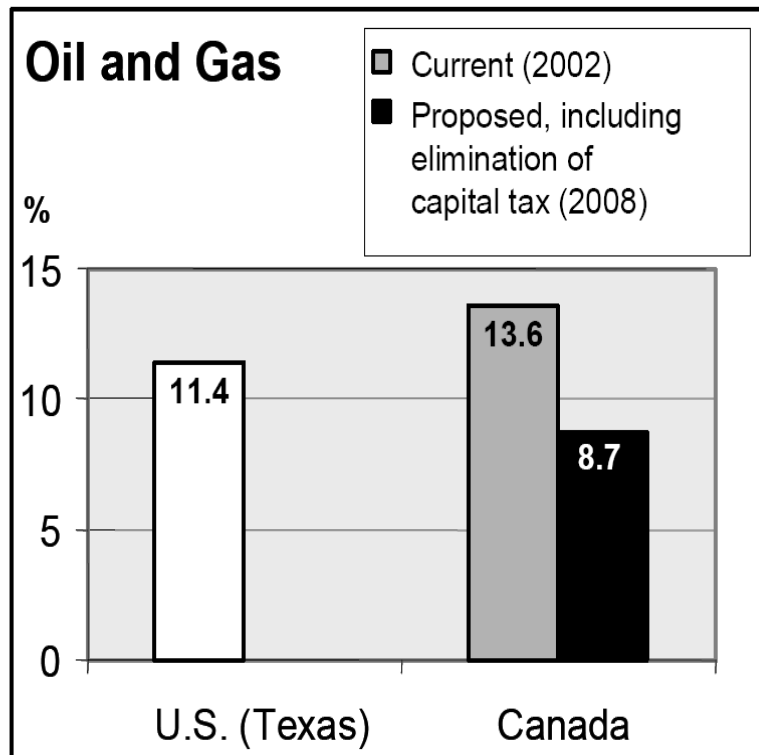
Use of METR model

- Comparison made with resource operations in the United States
- Significant drop in the METR on new projects
- Revenue cost mitigated by phase in strategy

Resource Taxation - Budget 2003

Use of METR model

Canada-U.S. (Federal and Provincial/State) Marginal Effective Tax Rates



Note: Current (Canada) includes all announced changes to provincial tax rates. Calculations have been done by the Department of Finance. Additional information is available on request.

Resource Taxation - Budget 2003

Results

- Accepted by industry
- Federal regime subsequently taken into account by Alberta in their review of royalties

Budget – Economic Statement 2005

Budget 2005 - Context

- Reaction to three percentage point tax rate reduction on manufacturing income in United States
- Federal corporate tax rates on all income lowered by two percentage points and corporate surtax eliminated (equivalent to another percentage point reduction)

Economic Statement 2005 - Context

- Focus on the an “overall tax advantage” based on the METR and not just a statutory rate

Budget – Economic Statement 2005

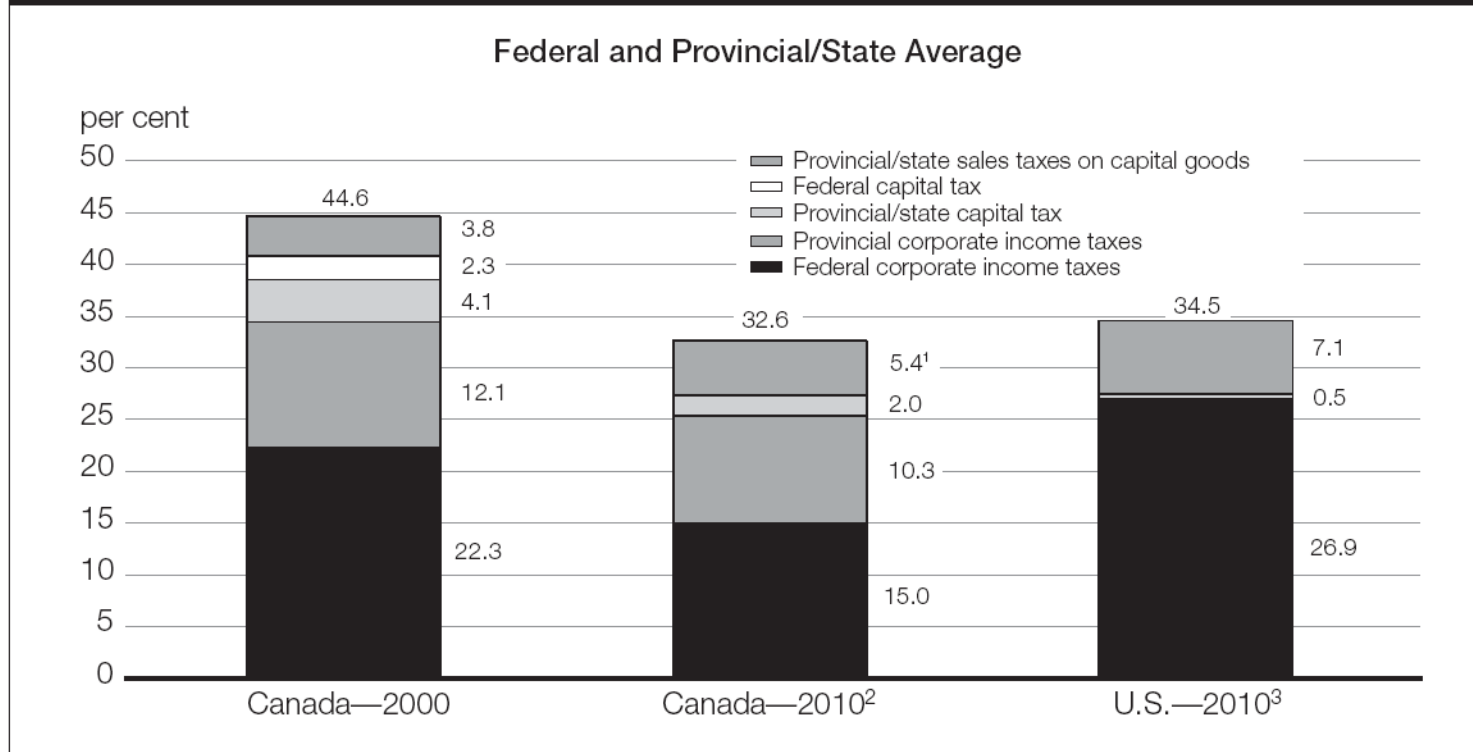
Use of METR model

- Economic Statement marks a watershed where METR becomes the key metric for determining Canada's tax competitiveness
- METR now decomposed by both type of tax and level of government
- Detailed technical paper on the use and impact of METRs published as part of the 2005 Tax Expenditure Account

http://www.fin.gc.ca/taxexp-depfisc/2005/taxexp05_4-eng.asp

Budget – Economic Statement 2005

Establishing a METR Advantage: Overall Tax Burden on New Business Investment in 2010



¹ Since no substantial changes to provincial retail sales taxes on capital goods are expected over the 2000–2010 period, they become a larger share of the total tax burden.

² Includes proposed Budget 2005 tax reductions.

³ For the U.S., federal corporate income taxes include state corporate income taxes.

Source: Department of Finance Canada calculations.

Budget – Economic Statement 2005

Results

- Signals a new approach to examining corporate taxation based on developing an overall tax advantage
- METRs now highlight relative impact of income taxes, capital taxes and sales taxes on business inputs
- Decomposition helpful in determining which taxes have the most deleterious impact on investment
- Breaking out impact of federal versus provincial taxation starts helps kickstart reform at the provincial level

Advantage Canada - 2006

Advantage Canada - Context

- Forward planning document designed to create five advantages for Canada including a tax advantage
- Focus on provincial taxation as a major component of the taxes paid by corporations and the important role that provinces play in improving Canada's tax structure

Advantage Canada - 2006

Use of METR model

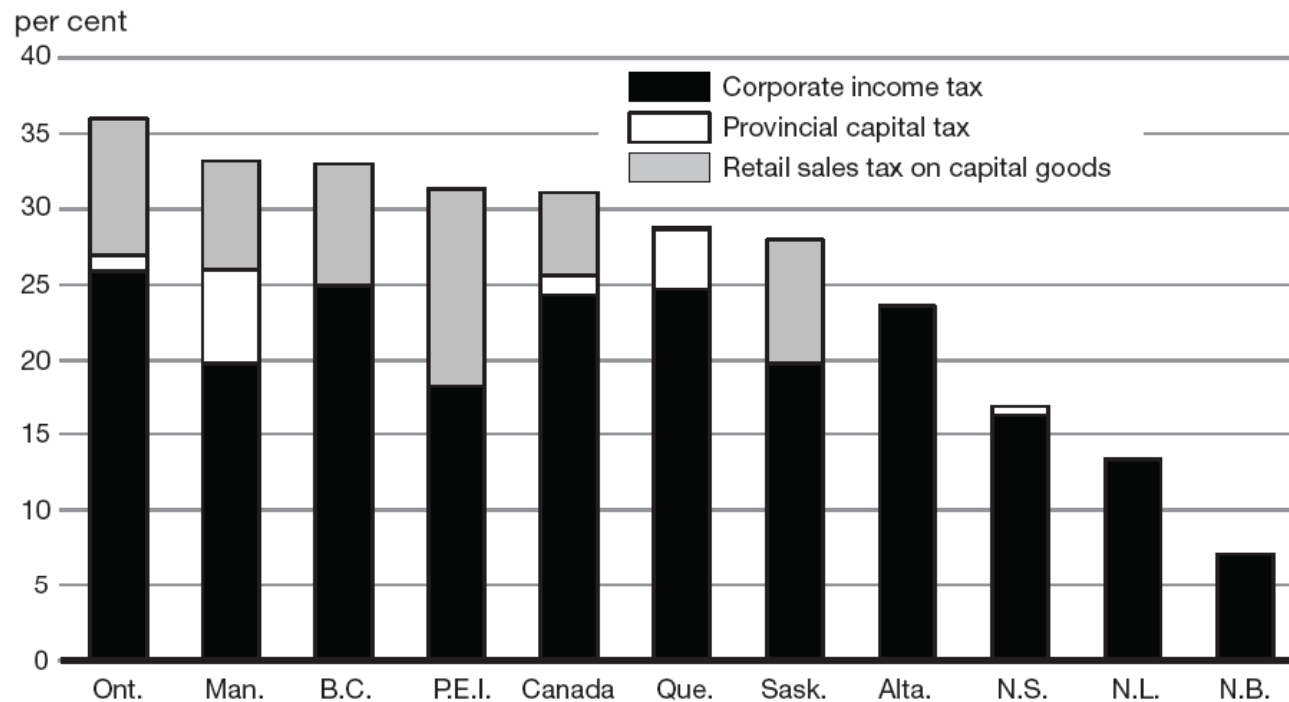
- Key metric for a Canadian tax advantage is to have the lowest tax rate on business investment in the G7 as measured by METRs
- METR calculations provided for each of the provinces
- Two provincial reform measures singled out
 - ✓ Elimination of capital taxes
 - ✓ Elimination of retail sales taxes on business inputs

Advantage Canada - 2006

Chart 5.2

Harmonizing With the GST and Eliminating Capital Taxes Would Substantially Reduce Taxes on Investment in Many Provinces

Overall Tax Burden on Business Investment in 2011
(METR, by Component and Province)

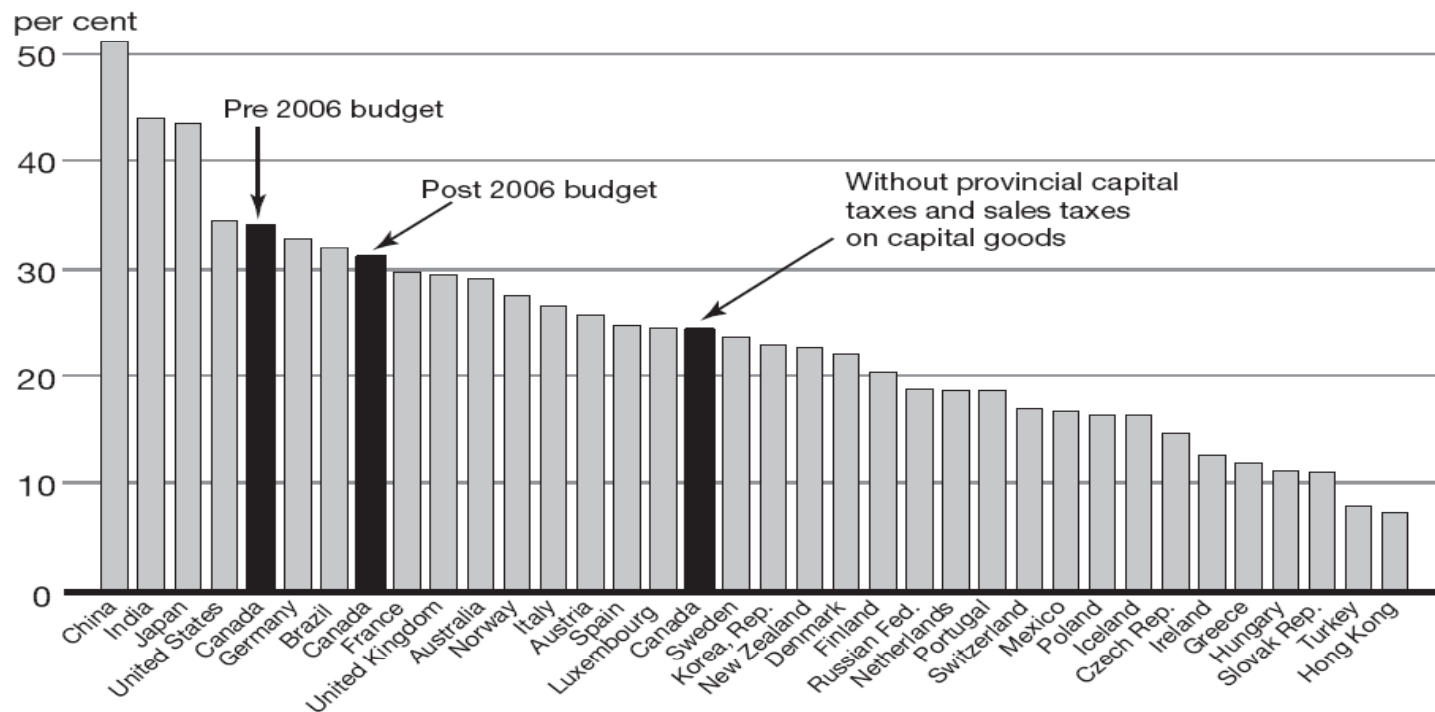


Advantage Canada - 2006

Chart 5.3

Provincial Tax Reform Has the Potential to Significantly Reduce Taxation of Investment

Overall Tax Rate on New Business Investment (METRs) in 2011¹



¹ Includes all announced policy initiatives that will be effective by 2011. Excludes resource and financial sectors and R&D assets.

Source: Department of Finance calculations.

Advantage Canada - 2006

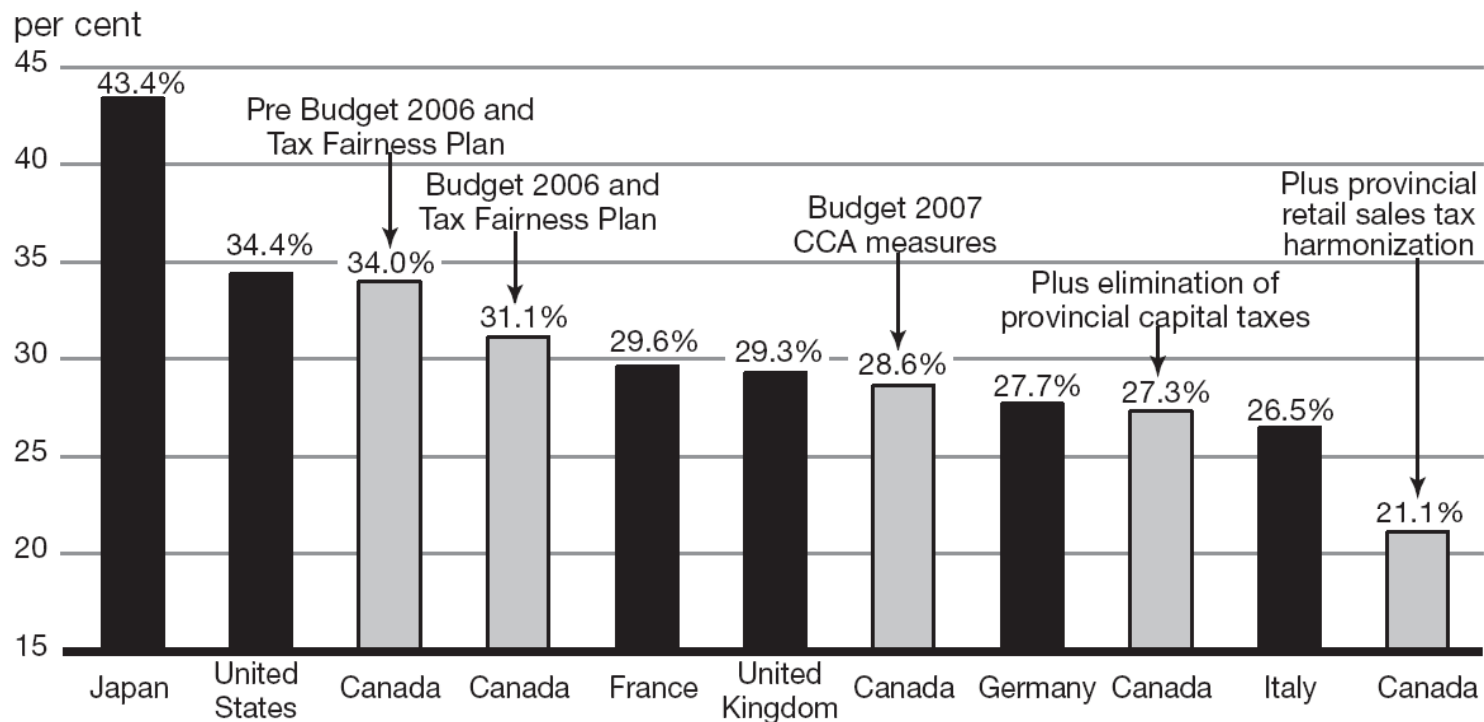
Results

- Goals set out in Advantage Canada become the anchor for successive budgets and economic statements
- METRs are now the key metric for measuring progress in tax competitiveness for both
 - Intra-country comparisons of provincial tax structures and,
 - Inter-country comparisons

Use of METRs in Budget 2007

Chart 5.3

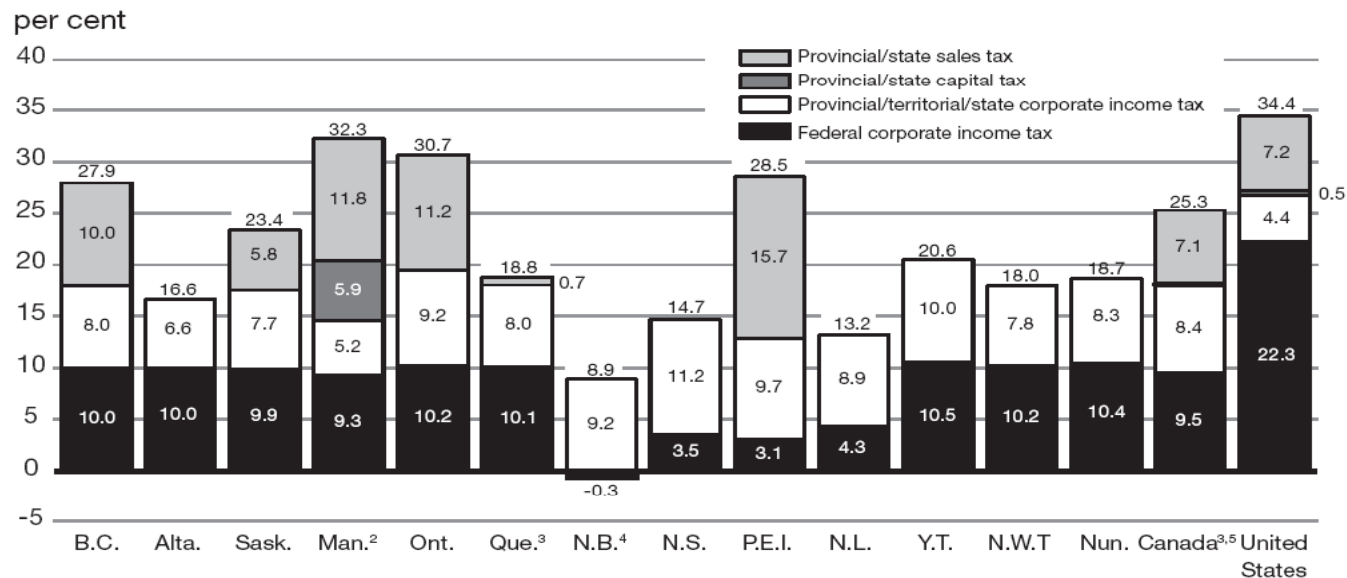
Overall Tax Burden on New Investment (METR) in 2011¹



¹ Includes all legislated policy initiatives that will be effective by 2011 and, in the case of Germany, also includes recently proposed changes. Excludes resource and financial sectors and research and development assets.

METRs - Economic Statement - 2007

Chart 3.2
**METRs¹ on New Business Investment,
 by Component, in 2012**



¹ Excludes resource and financial sectors and tax provisions related to research and development.

² Manitoba's 2007 budget announced the elimination of the general Corporate Capital Tax, except for Crown corporations, as of December 31, 2010, subject to budget balancing requirements.

³ Quebec's value-added tax contributes to its METR, as well as Canada's, because some tax is still imposed on some capital inputs.

⁴ The federal corporate income tax METR component is negative due to the Atlantic investment tax credit and a high share of eligible sectors in New Brunswick compared to other Atlantic provinces.

⁵ The provincial capital tax component represents 0.2 percentage points of the Canadian METR.

Source: Department of Finance.

Data and Examples

Data - Cost of Finance

Cost of Finance (R_f)

- Debt/Equity Shares – Economy-wide average
 - Statistics Canada Quarterly Financial Statistics
- Risk free interest rate – 5.8%
 - 10-year average of 10 year Canadian government bond rate.
- Risk free equity return – 4.7%
 - Arbitrage condition between debt and equity: $r = (1-t_d)i / (1-t_e)$
- Inflation rate – 2%
 - Bank of Canada mid-range inflation target

Data - Tax Parameters

Information for Tax Parameters

- Sources: International Bureau of Fiscal Documentation and OECD
- Statutory Tax Rates
- Capital Cost Allowances –classes mapped into industry/asset matrix
- Retail Sales Tax
 - M&E : mapped into industry/asset matrix
 - Structures: share of the structure taxable.

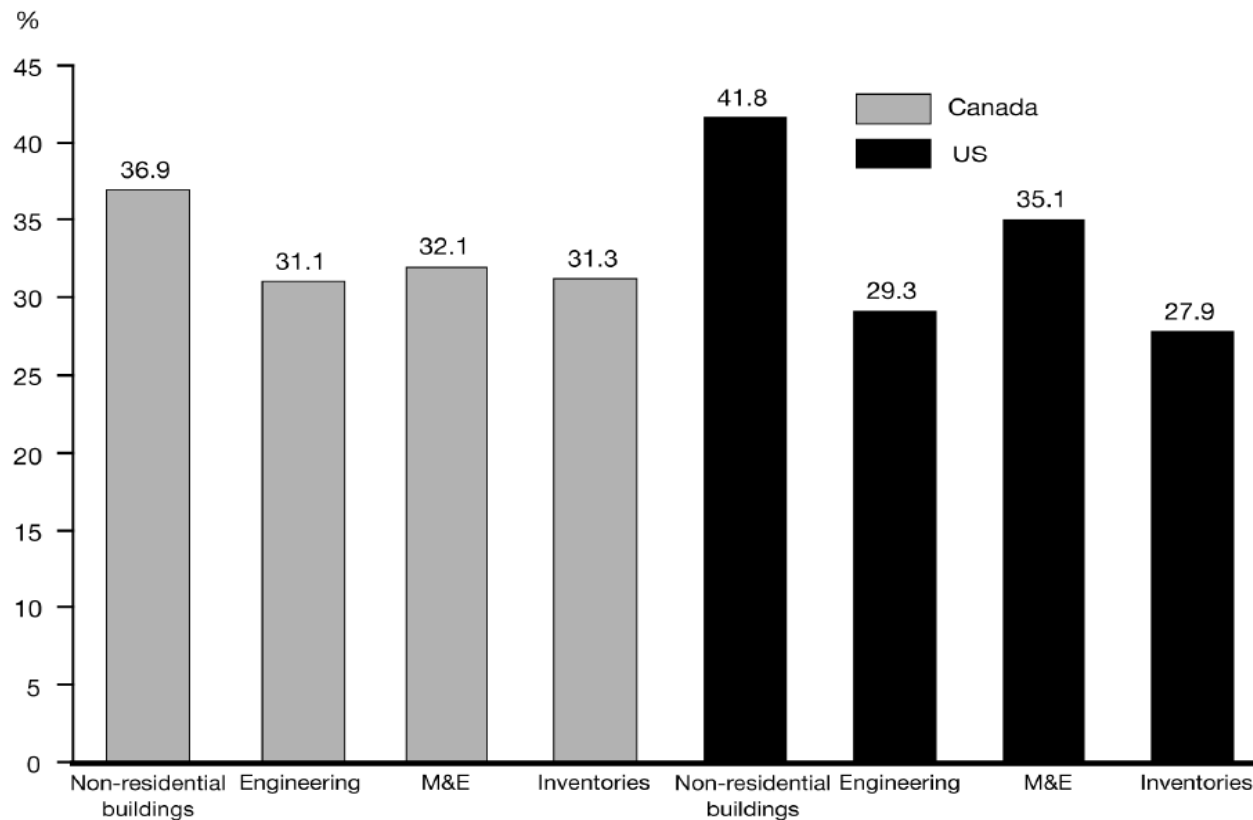
Source: Input/Output Tables.

- Investment Tax Credits – mapped into the industry/asset matrix

METRs by Asset Type

(2005 Tax Expenditure Paper on METRs)

Chart 4
Canadian and US METRs by Asset in 2010*

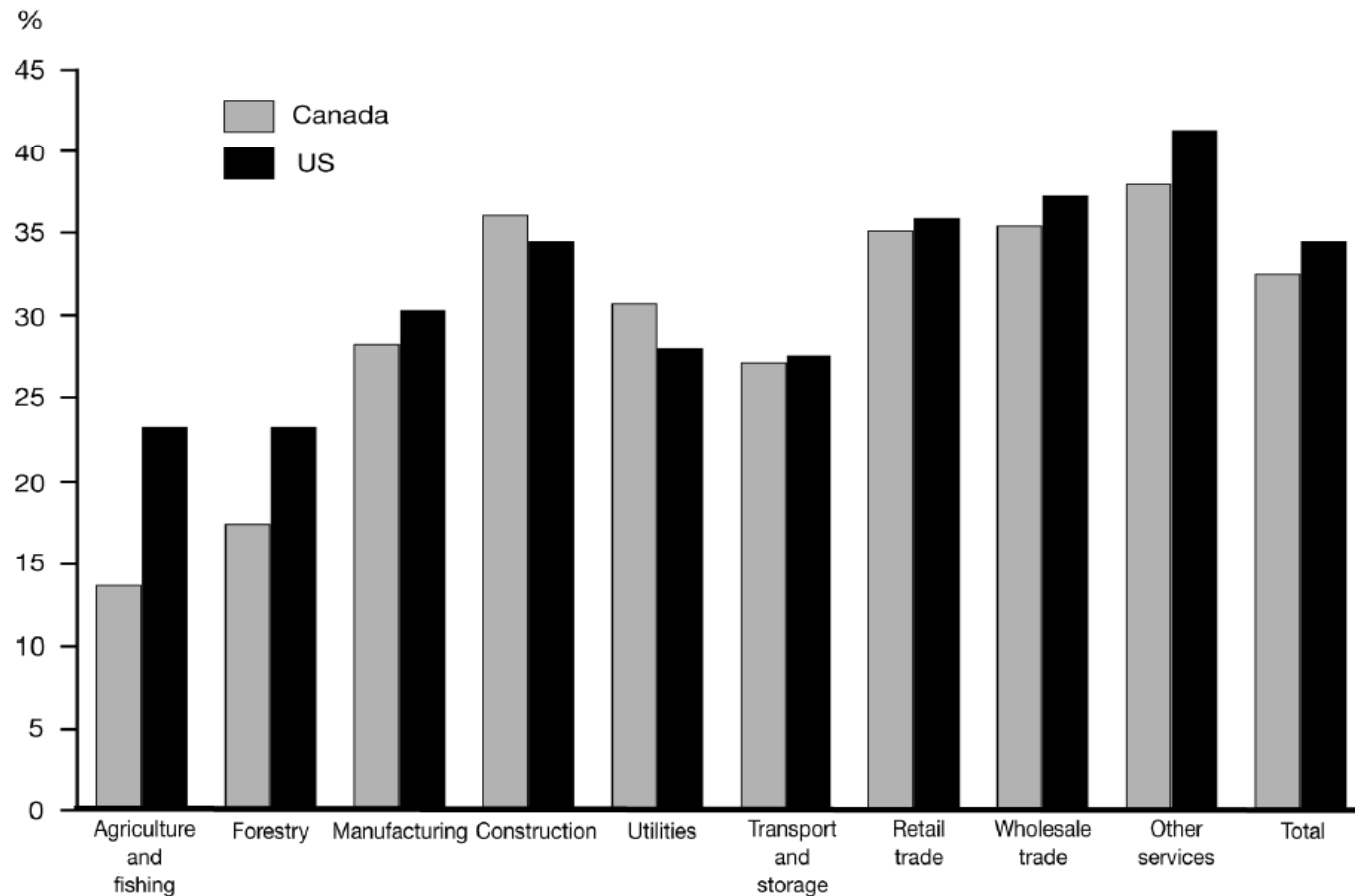


* Excluding resource industries and financial institutions.

METRs by Sector

(2005 Tax Expenditure Paper on METRs)

Chart 5
Canadian and US METRs by Industry in 2010*



* Excluding resource industries, financial institutions and R&D assets.

Conclusion

- **Concluding remarks**

- **Research program - Canada**
 - METR for investments in research and development;
 - METR for resource sector – Oil & Gas / Mining;
 - METR for the financial sector.

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