2012 ANNUAL GLOBAL TAX COMPETITIVENESS RANKING – A CANADIAN GOOD NEWS STORY

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SUMMARY

Since 2000, Canada has been remarkably successful in building a more competitive corporate tax system, principally by lowering tax rates and broadening the tax base. Canada's marginal effective tax rate (METR) is now the lowest, and hence the most tax-competitive among the G-7, the 20th most tax-competitive in the 34-member OECD, and 57th among the 90 countries surveyed in this paper. The result has been greater investment and improved economic growth despite recessionary pressures. In particular, provincial sales tax harmonization with the GST has heightened Ontario's competitiveness and promises to do the same for PEI, the latest convert to the cause. However, progress has not been uniform. Some provincial governments have lost focus by raising rates or introducing tax preferences that narrow the base, inevitably harming business efficiency. British Columbia's decision to replace the new Harmonized Sales Tax with the old retail sales tax will cost it dearly, especially when it comes to public spending. On the other hand, corporate tax rate reductions of more than 30 percent (since 2000) have, contrary to the critics' cries, failed to make an appreciable dent in tax revenues thanks to multinationals' habit of shifting profits to Canada to take advantage of lower rates. This paper, in providing a candid snapshot of Canadian taxation measured against 89 other nations, serves as an invaluable foundation for understanding how far this country has come, and what its next steps should be.

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COMPÉTITIVITÉ INTERNATIONALE SUR LE PLAN FISCAL EN 2012 – DE BONNES NOUVELLES POUR LE CANADA

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RÉSUMÉ

Depuis l'an 2000, le Canada a été remarquablement efficace dans la constitution d'un régime d'impôt sur le revenu des sociétés plus compétitif, au moyen surtout de baisses de taux de taxation et de l'élargissement de l'assiette fiscale. Le taux effectif marginal d'imposition (TEMI) du Canada est désormais le plus faible et par conséquent le plus concurrentiel de tous les pays du G-7, il se situe au 20e rang des régimes fiscaux les plus concurrentiels parmi les 34 pays membres de l'OCDE et au 57e rang des 90 pays qui font l'objet de cet article. Il en a résulté une croissance de l'investissement et de l'économie malgré les pressions attribuables à la récession. En particulier, l'harmonisation de la taxe de vente provinciale avec la TPS a renforcé la compétitivité de l'Ontario et devrait avoir le même effet dans l'Î.-P.-É., la dernière province à se rallier à la cause. En revanche, le progrès n'a pas été uniforme. Certains gouvernements provinciaux ont fait fausse route en haussant les taux ou en proposant des avantages fiscaux qui restreignent l'assiette fiscale, ce qui a inévitablement pour effet de nuire à l'efficacité des affaires. La décision de la Colombie-Britannique de remplacer la nouvelle taxe de vente harmonisée par l'ancienne taxe de vente au détail lui coûtera très cher, surtout en matière de dépenses publiques. Par ailleurs, malgré les cris d'orfraie des opposants, les réductions de taux d'impôt des sociétés de 30 pour cent (depuis 2000) n'ont pas eu d'effet notable sur les recettes fiscales parce que les entreprises ont l'habitude de transférer leurs profits au Canada pour tirer avantage de taux plus faibles. Cet article donne un aperçu sans fard du régime fiscal canadien par rapport à 89 autres pays et représente de ce fait une base très précieuse pour comprendre tout le chemin parcouru par le Canada, et qu'elles devraient être les prochaines étapes.

INTRODUCTION

2011 was difficult for the global economy because of the sovereign-debt crisis in the Eurozone, slower growth in the emerging economies and stalled recovery in the United States. As a result, Canada — the classic small open economy — also lost the full recovery head of steam that was anticipated early in the year. Along with this global economic setback, the dilemma in directing tax policy continues: while budget shortfalls are a driving force for more tax revenue, the prolonged economic recession or weak recovery calls for fiscal policies to promote growth.

One of the heated debates relevant to our subject — business taxation — is whether the corporate income tax as a policy tool is more critical to generating revenue for fiscal austerity purposes, or to stimulating investment for economic recovery purposes. Other political arguments (e.g., businesses should pay their "fair share" as stated in an Ontario budget) also play a role in this seemingly narrow policy debate. Policymakers with different views in this debate may take contrasting actions in handling their corporate tax rates. Given the long-run planning horizon for investments, however, corporate taxation should not be used as an arbitrary policy tool for fixing short-term budget needs. Instead, it should be designed to support the long-term economic prosperity that helps sustain government finances.

Even with the political rhetoric of "taxing the rich and corporations" adopted by some political parties in various jurisdictions, most countries have either maintained existing corporate income tax rates, or have further reduced their rates in 2012 as part of a pro-growth agenda. The countries reducing their rates include Canada, Japan and the United Kingdom. No doubt one reason for this stance is that rate reductions have not hurt corporate tax revenues for many OECD countries since revenues have typically risen faster than GDP, in part due to profits being shifted into lower-taxed jurisdictions.[1]

This year, we are expanding our cross-country METR comparison from 83 countries to 90. The seven countries added to our list are Estonia, the Philippines, Colombia, Venezuela, Kuwait, Qatar and Saudi Arabia. The addition of Estonia completes our coverage of OECD member countries, while the addition of the Philippines, Colombia and Venezuela completes our coverage of major Asian and Latin American economies. The three GCC (Gulf Cooperation Council) countries add a new category of fiscal regimes to our business tax comparison, given their unique historical image of counting more on oil revenues than general tax revenues, but having undertaken some significant tax reforms in recent years that impact on non-resource sectors.

As in our past cross-border tax comparative studies, we rank countries for their business tax competitiveness as measured by their marginal effective tax rate on capital (METR)[2] in a descending order: the higher the METR as shown in our ranking tables, the lower the associated tax competitiveness. In our 2012 ranking, Canada's METR is the seventh highest and hence the most tax-competitive among the G-7 countries. Similarly, Canada is the 20th most tax-competitive among the 34 OECD countries (with the 15th highest METR) and 57th most competitive among the 90 countries (with the 34th highest METR).

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[1] J. Mintz and A. Weichenrieder, *The Indirect Side of Direct Investment: Multinational Company Finance and Taxation*, MIT Press, 2010, p. 140.

[2] The METR is the portion of capital-related taxes paid as a share of the pre-tax rate of return on capital for marginal investments (on the assumption that businesses invest in capital until the return on capital is equal to the tax-inclusive cost of capital). We include corporate income taxes, sales taxes on capital purchases and other capital-related taxes such as financial transaction taxes and asset-based taxes in our analysis. We do not include property taxes since effective rates are not observable from data across countries. See the Appendix for further explanation.

We are also integrating our annual Canadian business tax review, based on the recently released provincial and federal budgets, into our international cross-border tax comparisons. With this integration, we will be able to evaluate Canadian provincial business tax competitiveness from an international perspective. In a globalized economy, looking beyond borders — both provincial and national — will help broaden our strategic view in an on-going policymaking process.

As in the past, to update our cross-border tax comparison, we not only incorporate the legislated tax changes on an annual basis, but also update the key non-tax parameters by country based on the latest statistics available. One such non-tax parameter is the country-specific inflation rate, which in our current model is the average of annual CPI-based inflation rates over the past six-year period (i.e., 2005-2011). The main purpose of updating the non-tax parameters is to keep our latest estimate of METR — a forward-looking tax indicator — as useful as possible for future investment and policy decisions. Also, we apply these updated non-tax parameters to all the years contained in our latest model (i.e., 2005-2012) so as to keep intact our tracking of annual tax changes by country. Doing so, however, may result in variation in country-specific METRs for previous years between our current and earlier publications. Such variation is understandable given the interaction between tax and non-tax factors.[3]

CANADA'S TAX COMPETITIVENESS HAS IMPROVED REMARKABLY

Lowering rates and achieving a broader, more neutral tax base have been the principles underlying business tax reform in Canada since 2001. Yet, at times, some governments have lost this focus by introducing tax preferences that narrow the base and result in tax distortions, thereby making the business tax structure less efficient and neutral.

The federal government carried through with its last reduction in corporate tax rates from 16.5 percent to 15 percent, January 1, 2012. However, Ontario's planned general corporate tax rate reduction from 11.5 percent to 10 percent, which applied to non-manufacturing and non-resource profits, is stalled until it can be accommodated fiscally. Given the severe state of Ontario's finances, it may well be years before any rate reduction will take place, thereby somewhat offsetting recent gains in the province's tax competitiveness. British Columbia has also mused that it might increase the corporate income tax rate from 10 percent to 11 percent, but only if fiscally necessary. We will discuss below whether these rate increases will have much meaning in terms of revenues. Based on the evidence, we argue that the rate increase changes will have a limited impact on government revenue, but will have a substantial impact on long-run growth prospects.

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[3] The other main non-tax parameter being updated this year is the country- specific GDP share by sector (i.e., manufacturing vs. a broad range of service industries), which is used to aggregate the sector-specific METRs into the overall METR by country. This parameter has no direct interaction with tax parameters but reflects country-specific industrial structures.

Sales tax harmonization has had a dramatic impact on tax competitiveness in the provinces to the east of Manitoba that have adopted value-added taxes to replace their retail sales taxes. It is unfortunate that British Columbia's referendum in 2011 will lead to reversing its sales tax reform by bringing back the retail sales tax to replace its newly adopted Harmonized Sales Tax (HST) (harmonized, that is, with the federal government's GST). This will substantially increase the METR on capital in the province, reduce revenues for a fiscally constrained budget and result in the repayment of the transition grant given by the federal government to promote harmonization with its GST. On the other hand, the HST is well ensconced in Ontario and the most recent news of sales tax reform comes from the province of Prince Edward Island. Its planned sales tax harmonization with the federal GST will cut its METR from 29 percent to 11 percent by 2013, and move up its tax competitiveness ranking among the 100 jurisdictions — the 90 countries and the 10 Canadian provinces — from the 13th least competitive to the 19th most competitive.

With the federal government having completed its tax reduction plan with the final 1.5-percentage-point cut in the corporate income tax rate, the Canadian METR will be higher than its 2011 level (18.2 percent) when the temporary accelerated capital cost allowance for manufacturing and processing assets expires (an action which we strongly endorse) and the reversal of sales tax harmonization in BC is completed (an action we think is regrettable). We therefore use the long-term METR (19.9 percent) for Canada in our current year cross-border comparison. This long-term METR helps provide a more realistic picture of Canadian tax competitiveness despite the fact that it makes our 2012 METR ranking less favourable compared to that for 2011 (Table 1, with further details presented in Tables 2 and 3).

Like the Canadian federal government, many national governments in other countries continued or initiated tax reform plans over the past two years. The most decisive and comprehensive tax reforms that combined tax reduction and base-broadening occurred in Italy, New Zealand and the United Kingdom. Countries that reduced corporate income tax rates without significant base-broadening include India, Japan, Jordan, Ecuador, Fiji, Greece, Madagascar, Thailand and Ukraine. As a result, the average METRs for 2012 among various groups of countries, such as the G-7, the OECD, the emerging economies in the G-20 and the 90 countries as a whole, all dropped compared to their 2010 levels (Table 1).[4]

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[4] Note that we do not include temporary tax relief, such as bonus depreciation in the United States, which tends to change the timing of investment rather than increase investment on a sustained basis. Incorporation of these temporary incentives would further reduce the METR calculations. Also, accelerated depreciation or tax credits that are capped are not included since they do not affect the marginal investment.

	Marginal Effective Tax Rate						Statutory Company Income Tax Rate				
	2012	2011	2010	2009	2008	2005	2012	2011	2005	Change in % points 2005-12[b]	# of countries that cut general corporate tax rates
Canada*	19.9 *	18.2	19.2	27.0	27.8	38.8	26.1	27.6	34.2	- 8.1	n/a
G-7	27.9	28.6	28.8	30.1	30.2	34.2	31.4	32.1	35.7	- 4.3	5c
OECD (34)	19.4	19.5	19.5	19.7	19.9	22.2	25.5	25.5	28.2	- 2.7	19
Emerging G-20** (10)	23.5	23.5	23.6	23.8	27.1	28.7	26.9	26.9	29.3	-2.3	5
Other Non-OECD (52)	16.6	16.8	16.7	17.5	17.9	19.8	24.7	24.8	29.2	-4.5	29
All 90 Countries	18.2	18.3	18.3	18.8	19.5	21.5	25.1	25.2	28.8	-3.7	50
Canada's ranking by level of METR within various groups of countries, in descending order											
G-7	7	7	7	4	4	1					
OECD	15	17	14	7	6	1					
All 90 Countries	34	43	35	16	18	5					

*   *Canada's marginal effective tax rate on capital is for 2014, when the temporary fast write-off for manufacturing and processing assets will end and the reversal of sales tax harmonization in British Columbia will be completed. Without these changes, the METR in 2012 would be below 17 percent. For individual countries, see Table 2 below.*

** *The 10 emerging economies included in the G-20 are the following: Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa and Turkey.*

Notes:

a. *The pre-2012 numbers differ from our previous report mainly because of the expansion of the number of OECD countries (from 30 to 34) and our total country coverage (from 80 to 90 countries). As explained in the text, updating non-tax parameters also made a difference to the calculations.*

b. *Numbers may not add up due to rounding.*

c. *While Japan reduced its CIT rate on April 1, 2012, France raised its rate for large corporations through a surcharge to a level above that in 2005.*

THE GLOBAL PICTURE ON CORPORATE TAXATION

Despite the recent epidemic of budget shortfalls, governments around the world have largely acted on the consensus that taxing corporations should not be undertaken as an arbitrary revenue generator for the short term. With very few exceptions, most of the 90 national tax regimes in our study did not raise tax rates on corporations, and hence avoided disturbing their business tax environment for purposes of economic recovery. Some countries even moved forward to lighten business tax costs by reducing the tax rate and simultaneously improved tax neutrality by broadening the tax base. The very few countries that did raise business tax burdens did so by various means: some through surcharges, some through targeting large firms and one on a temporary basis, all of which seem to be reflective of the international consensus against raising business tax burdens.

The principal business tax reformers, which take a long-term view on corporate taxation and stand fast on pro-growth and pro-competitiveness grounds, include Italy, Japan, New Zealand, the UK, Jordan and Madagascar. Several countries also joined this pro-growth group by reducing their corporate income tax rates to different degrees.

Italy introduced an allowance for corporate equity (ACE) taking effect for 2012 and future years. The rate of return, or notional equity cost, for ACE is set at three percent for the first three years. Italy also simplified its capital depreciation rules to broaden the tax base. The combined result of these changes reduced Italy's METR from 28 percent (2008-2011) to 23 percent (from 2012 onward).

Japan reduced its national corporate income tax (CIT) rate from 30 percent to 25.5 percent effective April 1, 2012. When a temporary surcharge ends by 2015, its combined national and sub-national CIT rate and METR will drop to 34.6 percent and 27.5 percent, respectively, from their pre-2012 levels of 39.5 percent and 32 percent.

New Zealand's tax reform took effect in 2011: A two-percentage-point cut in the CIT rate (from 30 percent to 28 percent) was combined with putting an end to a previously excessive generation depreciation allowance. This reform helped improve tax neutrality in New Zealand while preserving the country's relative tax competitiveness, as measured by the METR of 22 percent.

The UK has taken major steps to reform its CIT tax structure by drastically reducing the CIT rate, while broadening the CIT base through eliminating depreciation allowances for buildings and simplifying and reducing such allowances for non-building assets, which include engineering features of industrial buildings. The company income tax rate has been reduced from 28 percent, first to 26 percent (in 2011) and then to 24 percent (2012). It will be ultimately reduced to 22 percent in 2014. This reform will reduce the UK's METR from 28.8 percent (in 2010) to 24.5 percent (in 2014).

Jordan unified its two-tier CIT rates for non-financial sectors in 2010 and reduced the CIT rate to 14 percent (from previously being 15 percent and 25 percent). This long-awaited tax reform significantly reduced Jordan's METR for non-financial sectors from the previous rate of 18.8 percent to 9.5 percent.

Madagascar has been steadily cutting its CIT rate since 2008 from 30 percent to 22 percent for 2011 and 21 percent for 2012. As a result, its METR dropped steadily from 20 percent in 2007 to 13 percent for 2012.

Fiji reduced its CIT rate from 28 percent to 20 percent, effective in 2012 which reduced its METR from 20 percent (2011) to 14 percent.

Thailand reduced its top CIT rate from 30 percent to 23 percent effective January 1, 2012, and will further reduce it to 20 percent as of January 1, 2013. Its METR has accordingly dropped from the previous level of 17 percent to 12 percent for 2012.

Ukraine reduced its CIT rate successively over 2011-12, by two points per year, from 25 percent to 21 percent. This tax reduction, combined with its existing generous depreciation allowance, yields a very low METR of six percent (vs. eight percent before 2011).

Other countries that reduced their combined CIT rates include **Ecuador** (from 25 percent to 23 percent over 2011-12), **Greece** (from 24 percent to 20 percent for 2011 and onward) and **India** (from 33.99 percent to 32.45 percent).

It is also noteworthy that two of the three GCC countries newly added to our survey — Kuwait, Qatar and Saudi Arabia — have taken significant steps to reform their tax systems. GCC countries generally tax only foreign companies (including the foreign share of joint companies) under their corporate income tax system, with domestic firms being subject to a religious levy (the Zakat). Multi-tiered tax rates with excessively high top rates (e.g., 55 percent in Kuwait) were the norm in the past even for non-resource companies. But Kuwait in 2008 replaced its 11-tier rate structure with a flat rate of 15 percent for non-resource companies. Similarly, Qatar replaced its seven-tier rate structure in 2009 with a 10 percent flat rate for non-resource foreign companies. In Saudi Arabia, the flat rate has been 20 percent for non-resource foreign companies since before 2005.

Among the 10 emerging economies within the G-20, the main tax reformers over the past eight years include China and Turkey. China in 2009 adopted a true value-added tax applicable to business transactions that refunds VAT paid on the purchase of capital goods. The result was a 27-percentage-point drop in its METR from the previous 45.3 percent to the current 18.5 percent. Turkey reduced its corporate income tax rate by 10 percentage points in 2006, which, combined with its generous depreciation allowances, almost halved its METR from 11 percent in 2005 to 5.7 percent. India, Indonesia, Russia and South Africa also reduced, to various degrees, their corporate income tax rates and, as a result, improved their tax competitiveness.

Countries that introduced tax hikes on business sectors include France, Iceland, Israel, Luxemburg, Portugal, Colombia and Egypt.[5] Some of these tax increases have taken the form of surcharges under various names (e.g., the increased social security surcharge in France, the unemployment fund surcharge in Luxemburg and the net-worth tax surcharge in Colombia) and some of them target only large firms (e.g., in France and Egypt).

With all the aforementioned changes, the average METRs in 2012 among various groups of countries all dropped from their 2010 levels (Tables 1-2). They will drop further in future years as some countries complete planned tax rate reductions (e.g., Australia, Thailand and the UK) and others possibly move toward much-needed tax reform (e.g., the US).

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[5] Chile also temporarily raised its CIT rate by three percentage points in 2011, but reduced it by 1.5 percentage points in 2012 and will restore it to its long-term level of 17 percent by 2013. We therefore ignore this temporary rate adjustment for Chile.

TABLE 2 MARGINAL EFFECTIVE TAX RATE ON CAPITAL INVESTMENT, OECD COUNTRIES, 2005 – 2012

	Marginal Effective Tax Rate								Reference: Statutory Company Income Tax Rate		
	2012	2011	2010	2009	2008	2007	2006	2005	2012	2005	Change in % points
US	35.6	35.6	35.6	35.9	35.9	35.9	36.2	36.2	39.2	39.3	-0.1
France	35.1	35.1	33.9	35.0	35.0	35.0	35.0	35.4	36.1	35.0	1.2
Japan	30.4	31.9	31.9	31.9	31.9	31.9	31.9	31.9	36.8	39.5	-2.7
Korea	29.9	29.9	29.9	29.9	32.6	32.6	32.6	32.6	24.2	27.5	-3.3
UK	26.7	26.9	28.8	28.7	28.5	29.7	29.7	29.7	24.0	30.0	-6.0
Spain	26.3	26.3	26.3	26.3	26.3	28.4	30.6	30.6	30.0	35.0	-5.0
Australia	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	30.0	30.0	0.0
Austria	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	25.0	25.0	0.0
Germany	24.6	24.6	24.6	24.6	24.6	34.2	34.2	34.2	30.2	38.9	-8.7
Norway	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	28.0	28.0	0.0
Italy	23.2	27.7	27.7	27.7	27.8	33.1	33.1	33.1	27.5	33.0	-5.5
Portugal	23.0	21.0	21.0	18.9	18.9	18.9	19.8	19.8	31.5	27.5	4.0
New Zealand	21.7	21.7	18.3	18.3	18.3	20.6	20.6	20.6	28.0	33.0	-5.0
Sweden	19.9	19.9	19.9	19.9	21.3	21.3	21.3	21.3	26.3	28.0	-1.7
Canada	19.9	18.2	19.2	27.0	27.8	30.6	36.1	38.8	26.1	34.2	-8.0
Denmark	18.9	18.9	18.9	18.9	18.9	18.9	21.4	21.4	25.0	28.0	-3.0
Finland	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	26.0	26.0	0.0
Switzerland	17.8	17.8	17.8	17.8	17.8	18.2	18.2	18.2	21.2	21.3	-0.1
Mexico	17.5	17.5	17.5	16.1	16.1	16.1	16.8	17.5	30.0	30.0	0.0
Netherlands	17.3	17.3	17.3	17.3	17.3	17.3	20.5	22.1	25.0	31.5	-6.5
Belgium	17.1	17.1	17.1	17.1	17.1	16.5	16.5	23.3	34.0	34.0	0.0
Luxembourg	17.1	17.1	16.9	16.9	18.5	19.4	19.4	19.9	28.8	30.4	-1.6
Hungary	16.6	16.6	16.6	17.1	17.1	17.1	15.7	15.1	19.0	16.0	3.0
Israel	15.0	14.3	15.0	15.7	16.4	17.9	19.4	19.4	25.0	34.0	-9.0
Poland	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	19.0	19.0	0.0
Iceland	14.2	14.2	12.7	10.5	10.5	12.7	12.7	18.0	20.0	18.0	2.0
Slovak Republic	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	19.0	19.0	0.0
Czech Rep	12.7	12.7	12.7	13.5	14.2	16.5	16.5	18.0	19.0	26.0	-7.0
Slovenia	11.9	11.9	11.9	12.6	13.3	14.0	14.7	15.4	20.0	25.0	-5.0
Estonia	11.4	11.4	11.4	11.4	11.4	11.9	12.5	13.0	21.0	24.0	-3.0
Greece	11.3	11.3	13.2	13.7	13.7	13.7	15.9	17.6	20.0	32.0	-12.0
Ireland	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	12.5	12.5	0.0
Chile	6.7	6.7	6.7	6.7	6.9	7.2	7.3	7.3	18.5	17.0	1.5
Turkey	5.7	5.7	5.7	5.7	5.7	5.7	5.7	10.9	20.0	30.0	-10.0
OECD Average	**19.4**	**19.5**	**19.5**	**19.7**	**19.9**	**20.9**	**21.4**	**22.2**	**25.5**	**28.2**	**-2.7**

With G-7 countries in bold.

TABLE 3   MARGINAL EFFECTIVE TAX RATE ON CAPITAL INVESTMENT IN 90 COUNTRIES, 2012 VS. 2005

| | Marginal Effective Tax Rate | | | | | | | | METR ranking in descending order | | Statutory Company Income Tax Rate | | |
| | 2012 | | | | 2005 | | | | | | | | |
	Overall	Manuf.	Services	Sectoral gap	Overall	Manuf.	Services	Sectoral gap	2012	2005	2012	2005	+-% point
Argentina	43.2	47.8	41.5	6.2	43.2	47.8	41.5	6.2	1	3	35.0	35.0	0.0
Chad	36.4	40.5	35.5	5.0	40.1	44.4	39.2	5.2	2	4	40.0	45.0	-5.0
Uzbekistan	35.7	39.2	34.4	4.9	36.5	40.5	35.0	5.4	3	7	16.3	19.0	-2.8
US	35.6	33.9	37.2	-3.3	36.2	35.5	37.2	-1.7	4	8	39.2	39.3	-0.1
France	35.1	36.8	34.8	2.0	35.4	37.1	35.1	2.0	5	10	36.1	35.0	1.2
India	33.5	28.1	34.9	-6.9	37.8	32.2	39.3	-7.1	6	6	32.45	36.6	-4.1
Colombia	33.4	35.8	32.9	2.9	26.3	28.9	25.8	3.1	7	23	33.0	35.0	-2.0
Brazil	31.6	34.0	30.8	3.2	35.1	34.0	35.4	-1.4	8	11	34	34	0.0
Japan	30.4	30.6	30.4	0.2	31.9	32.0	31.8	0.2	9	16	36.8	39.5	-2.7
Venezuela	30.2	30.8	30.0	0.7	30.2	30.8	30.0	0.7	10	18	34.0	34.0	0.0
Korea	29.9	32.2	28.9	3.4	32.6	35.1	31.5	3.6	11	15	24.2	27.5	-3.3
Russia	29.5	32.0	28.9	3.1	36.0	38.7	35.3	3.4	12	9	20	22	-2.0
Costa Rica	28.2	35.3	26.1	9.2	28.2	35.3	26.1	9.2	13	22	30.0	30.0	0.0
UK	26.7	25.3	26.9	-1.6	29.7	27.3	30.1	-2.8	14	19	24.0	30.0	-6.0
Spain	26.3	25.4	26.4	-1.0	30.6	29.7	30.8	-1.1	15	17	30.0	35.0	-5.0
Australia	26.2	27.9	25.9	1.9	26.2	27.9	25.9	1.9	16	24	30.0	30.0	0.0
Austria	26.0	25.9	26.0	-0.1	26.0	25.9	26.0	-0.1	17	25	25.0	25.0	0.0
Pakistan	25.8	29.1	24.7	4.4	25.8	29.0	24.7	4.4	18	26	35.0	35.0	0.0
Lesotho	24.8	13.2	28.2	-15.0	34.4	19.5	38.9	-19.4	19	12	25.0	35.0	-10.0
Philippines	24.7	26.1	24.2	1.9	29.3	30.8	28.8	2.1	20	20	30.0	35.0	-5.0
Germany	24.6	26.7	23.9	2.8	34.2	36.5	33.5	3.1	21	13	30.2	38.9	-8.7
Norway	24.5	23.3	24.6	-1.4	24.5	23.3	24.6	-1.4	22	29	28.0	28.0	0.0
Sierra Leone	23.7	17.9	24.0	-6.1	23.7	17.9	24.0	-6.1	23	31	35.0	35.0	0.0
Italy	23.2	25.2	22.7	2.4	33.1	31.1	33.5	-2.4	24	14	27.5	33.0	-5.5
Portugal	23.0	20.9	23.4	-2.5	19.8	17.8	20.1	-2.2	25	46	31.5	27.5	4.0
Peru	23.0	29.8	21.3	8.4	23.0	29.8	21.3	8.4	26	33	30.0	30.0	0.0
Bolivia	22.2	29.8	20.3	9.4	22.2	29.8	20.3	9.4	27	36	25.0	25.0	0.0
Tunisia	21.8	24.1	21.3	2.9	25.6	28.1	24.9	3.2	28	27	30.0	35.0	-5.0
New Zealand	21.7	22.5	21.5	1.0	20.6	18.6	21.0	-2.3	29	42	28.0	33.0	-5.0
Saudi Arabia	21.0	18.2	21.7	-3.5	21.0	18.2	21.7	-3.5	30	40	20.0	20.0	0.0
Iran	20.6	28.0	19.0	9.0	20.6	28.0	19.0	9.0	31	41	25.0	25.0	0.0
Indonesia	20.4	23.8	18.6	5.2	24.9	28.8	22.9	5.8	32	28	25.0	30.0	-5.0
Sweden	19.9	18.5	20.2	-1.7	21.3	19.9	21.6	-1.7	33	39	26.3	28.0	-1.7
Canada	19.9	13.8	22.4	-8.6	38.8	35.3	41.3	-6.0	34	5	26.1	34.2	-8.0
Tanzania	19.4	15.1	20.1	-5.0	19.4	15.1	20.1	-5.0	35	47	30.0	30.0	0.0
Kazakhstan	19.0	24.1	18.1	6.0	28.5	34.6	27.4	7.2	36	21	29.9	40.5	-10.6
Denmark	18.9	20.8	18.5	2.2	21.4	23.4	21.0	2.4	37	38	25.0	28.0	-3.0
Georgia	18.9	21.3	18.4	2.9	22.4	25.4	21.8	3.5	38	35	15.0	20.0	-5.0
Jamaica	18.6	15.9	18.9	-3.0	18.6	15.9	18.9	-3.0	39	50	33.3	33.3	0.0
Finland	18.5	20.4	17.9	2.6	18.5	20.4	17.9	2.6	40	51	26.0	26.0	0.0
China	18.5	21.5	15.8	5.6	45.3	47.5	43.4	4.1	41	2	25	25	0.0
Rwanda	18.2	27.0	17.1	9.9	18.2	27.0	17.1	9.9	42	53	30.0	30.0	0.0
Malaysia	17.8	19.5	16.8	2.7	20.2	22.1	19.1	3.0	43	43	25.0	28.0	-3.0
Switzerland	17.8	17.0	17.9	-1.0	18.2	17.5	18.4	-1.0	44	52	21.2	21.3	-0.1
Mexico	17.5	19.0	17.1	1.9	17.5	19.0	17.1	1.9	45	58	30.0	30.0	0.0

(cont'd)

	Marginal Effective Tax Rate								METR ranking in descending order		Statutory Company Income Tax Rate		
	2012				2005								
	Overall	Manuf.	Services	Sectoral gap	Overall	Manuf.	Services	Sectoral gap	2012	2005	2012	2005	+-% point
Netherlands	17.3	16.2	17.6	-1.4	22.1	20.7	22.3	-1.6	46	37	25.0	31.5	-6.5
Zambia	17.2	24.2	16.1	8.1	17.2	24.2	16.1	8.1	47	60	35.0	35.0	0.0
Belgium	17.1	16.3	17.2	-0.9	23.3	22.4	23.5	-1.1	48	32	34.0	34.0	0.0
Luxembourg	17.1	18.1	17.0	1.2	19.9	21.1	19.8	1.3	49	45	28.8	30.4	-1.6
Ecuador	16.8	21.6	16.0	5.6	17.4	22.4	16.5	5.9	50	59	23.0	25.0	-2.0
Hungary	16.6	17.5	15.7	1.8	15.1	15.9	14.3	1.6	51	69	19.0	16.0	3.0
Israel	15.0	13.2	15.3	-2.2	19.4	17.3	19.8	-2.5	52	48	25.0	34.0	-9.0
Uganda	14.7	9.6	15.2	-5.6	14.7	9.6	15.2	-5.6	53	70	30.0	30.0	0.0
Bangladesh	14.6	12.9	15.1	-2.3	16.5	14.6	17.0	-2.4	54	64	27.5	30.0	-2.5
Poland	14.5	13.8	14.7	-1.0	14.5	13.8	14.7	-1.0	55	72	19.0	19.0	0.0
Iceland	14.2	11.6	14.6	-2.9	18.0	16.4	18.2	-1.8	56	56	20.0	18.0	2.0
Botswana	14.2	8.3	14.6	-6.4	14.2	8.3	14.6	-6.4	57	74	25.0	25.0	0.0
South Africa	14.1	15.6	13.7	1.8	15.5	17.1	15.1	2.0	58	65	28.0	30.0	-2.0
Ghana	14.0	14.3	14.0	0.3	14.0	14.3	14.0	0.3	59	75	25.0	25.0	0.0
Fiji	13.9	17.6	13.1	4.4	22.9	28.0	21.9	6.1	60	34	20.0	31.0	-11.0
Nigeria	13.5	20.4	12.8	7.6	13.5	20.4	12.8	7.6	61	76	32.0	32.0	0.0
Ethiopia	13.4	27.0	12.2	14.8	13.4	27.0	12.2	14.8	62	77	30.0	30.0	0.0
Morocco	13.4	17.9	12.4	5.5	16.6	21.6	15.5	6.2	63	63	30.0	35.0	-5.0
Madagascar	13.1	17.7	12.0	5.7	20.2	26.2	18.7	7.5	64	44	21.0	30.0	-9.0
Slovak Republic	12.8	16.5	11.4	5.1	12.8	16.5	11.4	5.1	65	79	19.0	19.0	0.0
Czech Rep	12.7	12.9	12.7	0.2	18.0	18.3	17.9	0.3	66	54	19.0	26.0	-7.0
Vietnam	12.6	19.6	9.1	10.5	14.6	22.4	10.8	11.5	67	71	25.0	28.0	-3.0
Thailand	12.1	14.9	10.1	4.8	16.8	20.3	14.3	6.0	68	62	23.0	30.0	-7.0
Trinidad	12.0	3.6	16.8	-13.2	15.4	5.6	20.9	-15.2	69	68	25.0	30.0	-5.0
Slovenia	11.9	12.1	11.8	0.3	15.4	15.6	15.3	0.3	70	67	20.0	25.0	-5.0
Estonia	11.4	11.4	11.4	0.0	13.0	13.0	13.0	0.0	71	78	21.0	24.0	-3.0
Greece	11.3	10.6	11.4	-0.8	17.6	16.5	17.7	-1.3	72	57	20.0	32.0	-12.0
Ireland	11.2	10.6	11.4	-0.8	11.2	10.6	11.4	-0.8	73	80	12.5	12.5	0.0
Taiwan	11.1	13.3	10.0	3.2	16.9	19.9	15.4	4.5	74	61	17.0	25.0	-8.0
Jordan	9.5	11.5	9.1	2.5	18.8	13.7	20.0	-6.3	75	49	15.1	23.2	-8.2
Egypt	9.4	12.6	8.4	4.2	15.5	19.7	14.1	5.6	76	66	25.0	34.0	-9.0
Singapore	9.3	7.0	10.1	-3.1	11.2	8.6	12.1	-3.5	77	81	17.0	20.0	-3.0
Croatia	9.1	11.7	8.5	3.1	9.1	11.7	8.5	3.1	78	83	22.0	22.0	0.0
Kenya	9.0	-24.0	15.4	-39.4	9.0	-24.0	15.4	-39.4	79	84	30.0	30.0	0.0
Kuwait	8.7	9.8	8.5	1.3	46.3	52.4	45.4	7.0	80	1	15.0	55.0	-40.0
Romania	8.6	11.0	7.7	3.3	18.0	11.0	20.6	-9.6	81	55	16.0	35.0	-19.0
Mauritius	7.9	8.8	7.7	1.1	14.5	16.0	14.1	1.8	82	73	15.0	25.0	-10.0
Chile	6.7	7.3	6.6	0.7	7.3	7.9	7.2	0.8	83	87	18.5	17.0	1.5
Qatar	5.8	9.1	5.2	3.8	24.2	32.9	22.6	10.3	84	30	10.0	35.0	-25.0
Latvia	5.8	7.4	5.5	1.8	5.8	7.4	5.5	1.8	85	88	15.0	15.0	0.0
Turkey	5.7	5.0	5.9	-1.0	10.9	10.0	11.2	-1.2	86	82	20.0	30.0	-10.0
Ukraine	5.6	11.4	3.6	7.8	7.5	14.3	5.1	9.3	87	86	21.0	25.0	-4.0
Bulgaria	5.0	5.3	4.9	0.4	7.9	8.4	7.7	0.7	88	85	10.0	15.0	-5.0
Hong Kong	3.9	3.5	3.9	-0.4	4.2	3.8	4.2	-0.5	89	89	16.5	17.5	-1.0
Serbia	-4.0	-11.2	-2.2	-9.0	-4.0	-11.2	-2.2	-9.0	90	90	10.0	10.0	0.0
Average	**18.2**	**18.9**	**17.9**	**0.9**	**21.5**	**22.2**	**21.4**	**0.8**			**25.1**	**28.8**	**-3.7**

With G-7 countries in bold.

THE CANADIAN PATH TO BUSINESS TAX REFORM

Canada has made impressive progress in business tax reform since 2001, when the federal government started phasing in a rate reduction to improve Canadian business tax competitiveness. This year, the federal government completed its scheduled federal corporate income tax (CIT) reduction plan, with the final 1.5 percentage-point reduction to arrive at the 15 percent CIT rate. Provincial governments followed the federal initiative with various reform plans such as eliminating capital tax for non-financial sectors, which plans were completed in 2012, reducing corporate income tax rates and harmonizing the provincial sales tax with the federal GST. As a result of this concerted tax reform effort among all levels of government, our Canadian METR for non-resource sectors has steadily dropped from 44 percent in 2000 and will reach a level of about 20 percent by 2014. Had British Columbia not reversed its sales tax harmonization, and if Ontario keeps its rate reduction plan intact, the Canadian METR for 2014 would be well below 19 percent, and Canada's tax competitive status would be further improved among the OECD countries and around the world.

In the meantime, the federal and many provincial governments also took several measures to improve tax neutrality, the most significant of which has been unifying the two-tier income tax rates between manufacturing and non-manufacturing sectors, and reducing preferential tax treatment towards resource sectors.[6] The latest change in this direction, as introduced in the federal budget for 2012, is to phase out the corporate mineral investment tax credit for exploration and the Atlantic Investment Credit applicable to the non-renewable resource sectors. Our simulations[7] show that these plans, once implemented, will largely eliminate existing tax advantages enjoyed by these resource sectors over non-resource sectors as a whole.

Impact on Investment

Corporate taxes impact on investment decisions by raising the cost of capital faced by companies. As a result, based upon consensus empirical estimates, we assume that a 10 percent increase in the cost of capital (due to taxation) reduces capital demand by seven percent.[8] With the reduction in Canada's METR of 38.8 percent in 2005 to 19.9 percent in 2012, we estimate that the effect of the tax reductions will be to increase the capital stock by $467 billion over the long run, assuming all other factors influencing investment do not change. This is a substantial impact, of which the realized portion has helped offset some of the negative impacts arising from the recession in 2009 and slow economic growth that evolved afterwards.

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[6] The resource sector is not included in our 90-country analysis. However, we have undertaken a recent analysis of oil and gas taxation in six countries that is forthcoming.

[7] These shall be reported in "Capturing Economic Rents from Resources through Royalties and Taxes," mimeograph prepared for the PWC Tax Policy Roundtable, University of Calgary, 2012.

[8] The estimate of investment sensitivity to changes in the cost of capital is relatively conservative. See H. Kerr, K. McKenzie and J. Mintz eds., *Tax Policy in Canada*, Canadian Tax Foundation, Toronto, Canada, 2012, pp. 7:34-38.

While the progress in reforming our business tax is impressive, the mindset that tax policy should favour some business activities over others lingers on. Only three years after the corporate income tax rates differentiating manufacturing and processing business from others were unified, the federal government introduced a temporary accelerated capital cost allowance in 2007 for machinery and equipment used in manufacturing or processing (M&P), including the forestry industry. This "temporary" tax depreciation has more than offset the more neutral application of the tax system. Worst of all, it has been repeatedly extended and is now effective until the end of 2013.

As measured by the inter-industry dispersion index for METR[9] on capital investment, accelerated tax depreciation abruptly increased the inter-industry tax distortion by more than 50 percent from 2006 to 2007 (Table 4). The other factor that helped worsen tax neutrality in 2007 was the elimination of the capital tax only for manufacturing and processing businesses in Ontario, Quebec and Manitoba. Quebec's introduction of a five percent investment tax credit for manufacturing assets in 2008 further increased inter-industry tax distortions by another 30 percent. The drastic rise in the METR dispersion index in 2010 was mainly associated with the substantial overall METR drop (attributable to the sales tax harmonization in British Columbia and Ontario) that accentuated the distortive effect of various tax supports, ranging from the federal accelerated capital cost allowances and the Atlantic Investment Tax Credit to several provincial investment tax credits for manufacturing assets.

Our simulations show that when the federal accelerated capital cost allowance finally ends in 2014 (at which time British Columbia also completes its reversal of sales tax harmonization), the inter-industry METR dispersion will drop by 61 percent from 72 percent (2012) to 28 percent. It would fall even further, to 15 percent, should both the federal Atlantic Investment Tax Credit and provincial investment tax credits (i.e., the manufacturing investment tax credits provided in Manitoba, Nova Scotia, PEI, Quebec and Saskatchewan) all be eliminated (Table 4, 2014a), and even fall to 12 percent if all the provincial sales taxes were to be harmonized with the federal GST (Table 4, 2014b). Inter-asset distortions, which are more significant and arguably more harmful in affecting production efficiency, would fall substantially with the removal of special preferences.

TABLE 4   COEFFICIENT OF VARIATION FOR METRS ON CAPITAL INVESTMENT, SELECTIVE YEARS

	2006	2007	2008	2009	2010	2011	2012	2014	2014a	2014b
Inter-industry	15.6%	34.3%	46.5%	45.2%	69.3%	68.5%	71.9%	28.3%	15.4%	11.6%
Inter-asset	27.3%	46.9%	68.0%	65.6%	80.5%	82.8%	88.1%	38.0%	26.4%	22.6%
Overall	26.5%	50.2%	66.6%	65.0%	84.8%	85.6%	89.5%	42.5%	26.8%	23.6%

*   The year 2014 refers to the year in which all announced changes are adopted. Case 2014a assumes that there is no investment tax credit of any kind provided by any government in 2014, and case 2014b further assumes all provincial sales taxes are harmonized with the federal GST in 2014 (i.e., there is no sales tax on capital goods.)

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[9]   This dispersion index is the coefficient of variation — the weighted standard deviation of marginal effective tax rates divided by the average marginal effective tax rate.

Setting aside the above technical analysis of tax distortions, the bad news is that despite persistent tax support for manufacturing businesses through either a reduced tax rate or accelerated cost allowance, Canadian capital investment in the manufacturing sector has been below the national growth rate in investment over the past two decades (Figure 1). As a result, annual capital investment in manufacturing as a share of national capital investment dropped from 24 percent in 1990 to 11 percent in 2011, while that in agriculture, forestry and fishing dropped from four percent to three percent. In contrast, the fastest capital investment growth appeared to be largely associated with the higher value-added service sectors including "professional, scientific and technical services," and "administration and support, waste management and remediation services" (Figure 1). All these higher value-added sectors shared an average annual growth rate in capital investment above nine percent over the past two decades, and their shares in national capital investment more than tripled in the same period.[10]

**FIGURE 1   AVERAGE ANNUAL GROWTH (IN PERCENT) IN CAPITAL INVESTMENT BY INDUSTRY:
                 TOTAL PRIVATE SECTOR AND THE SLOWEST VS. FASTEST GROWING INDUSTRIES**
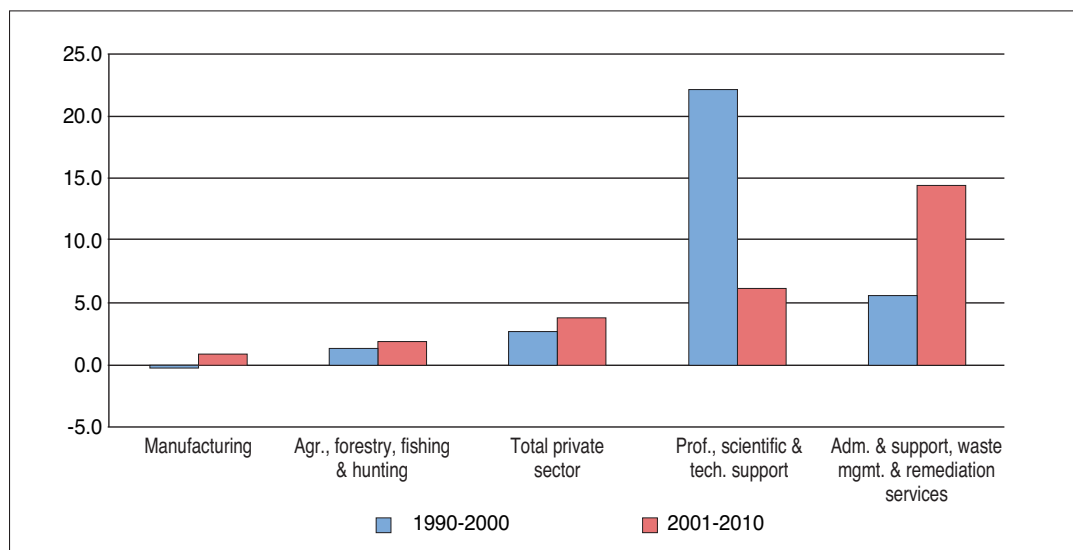
A cross-country comparison of the annual growth rate in manufacturing GDP (Figure 2) also shows that the manufacturing growth rate in all the old OECD member countries, except for Norway and Switzerland, dropped in the past decade, regardless of whether there was targeted tax support for manufacturing. Obviously, such special tax support has not offset the relative decline of manufacturing that is taking place among many OECD economies.

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[10] It is unfortunate that the starting points for these industries were so small that they had to grow much faster to make our economy stronger in the higher-value-added sectors. For example, the investment in "professional, scientific and technical services" accounted for only 0.3 percent of the national total in 1961. This share grew almost nine times by 2000, and since then gradually dropped to 1.4 percent by 2011.

**FIGURE 2   ANNUAL GROWTH RATE IN MANUFACTURING VALUE-ADDED:
1990-2000 AND 2000-2010**
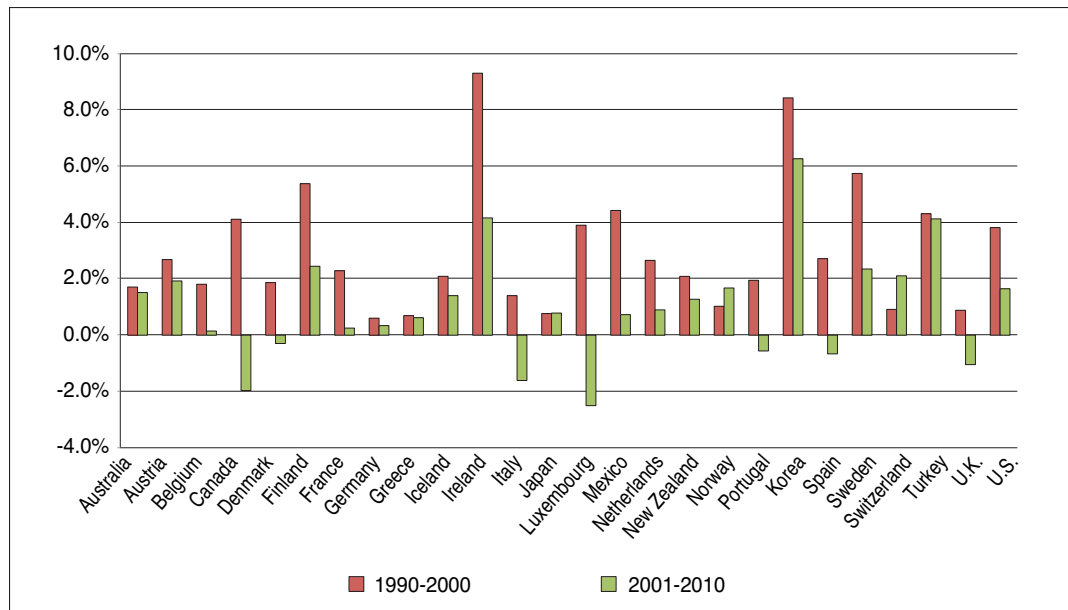
Source: Authors' estimate based on IFS Data March 2012, http://data.un.org/Browse.aspx

So, why do governments persist in favouring manufacturing businesses that shift to non-OECD economies? A typical argument for a more favourable treatment of manufacturing is that it is an internationally mobile industry compared to services, and therefore worthy of preferential treatment. However, this argument is less apparent today, since many service industries have become mobile themselves, operating at a global level. Further, some forms of capital such as structures and non-renewable resources are not mobile, while business management services and profits can easily shift from one jurisdiction to another. Mobility is not limited to manufacturing alone.

The fact is that, even without the existing accelerated depreciation, the Canadian METR for manufacturing is still 8.6 percentage points below that for the broad range of service industries (Table 3), which is partly attributable to the federal Atlantic Investment Tax Credit and the additional provincial investment tax credits for manufacturing businesses (see below). This METR gap favouring manufacturing industry is the widest among OECD countries and the fifth-widest among the 90 countries (Table 3), surpassed only by that in four less-developed countries including Kenya (39 points), Lesotho (15 points), Trinidad (13 points) and Serbia (9 points). A cost-benefit analysis of our persistent tax support for manufacturing and processing industry is certainly warranted in the ongoing policy debate and with respect to future tax reform on this thorny (or hot-potato?) issue.

In conclusion, tax policy favouring the manufacturing industry over others has failed to overcome the economic factors that are fundamental in determining industrial structure. Investment depends on profitability and is greatly influenced by globalization. Tax incentives aimed at investments with poor economic returns ultimately hurt Canada's productivity by maintaining low-growth sectors.

PROVINCIAL DIVERSITY IN TAX COMPETITIVENESS

The 10 provinces in Canada have taken different paths in business tax design and reform, which is understandable given the geographic and demographic diversity among provinces. As a result, the 10 provinces spread out widely in our international ranking of business tax competitiveness (Table 5).

Table 5 identifies the 10 provinces, along with the 34 OECD member countries, with respect to their business tax competitiveness as measured by METR in descending order. As mentioned above, all the Canadian METR numbers are for 2014 when all of the announced tax changes, including the end of federal accelerated depreciation for manufacturing, the sales tax harmonization in Prince Edward Island and de-harmonization in British Columbia, are implemented. As shown in the table, among the 44 jurisdictions, the 10 Canadian provinces occupy both the most competitive spot (i.e., New Brunswick) and the fifth least competitive one (British Columbia), and eight spots between these two extremes.

TABLE 5   METR FOR CANADIAN PROVINCES, RANKED AMONG THE OECD COUNTRIES

	Marginal Effective Tax Rate								2012 ranking
	2012	2011	2010	2009	2008	2007	2006	2005	
US	35.6	35.6	35.6	35.9	35.9	35.9	36.2	36.2	1
France	35.1	35.1	33.9	35.0	35.0	35.0	35.0	35.4	2
Japan	30.4	31.9	31.9	31.9	31.9	31.9	31.9	31.9	3
Korea	29.9	29.9	29.9	29.9	32.6	32.6	32.6	32.6	4
BC*	27.7	18.5	19.4	28.9	29.4	31.9	35.0	39.1	5
Manitoba	27.1	27.0	29.7	31.0	33.0	36.2	40.6	39.5	6
UK	26.7	26.9	28.8	28.7	28.5	29.7	29.7	29.7	7
Spain	26.3	26.3	26.3	26.3	26.3	28.4	30.6	30.6	8
Australia	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	9
Austria	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	10
Saskatchewan	25.2	25.0	25.7	26.0	26.5	31.1	38.2	43.9	11
Germany	24.6	24.6	24.6	24.6	24.6	34.2	34.2	34.2	12
Norway	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	13
Italy	23.2	27.7	27.7	27.7	27.8	33.1	33.1	33.1	14
Portugal	23.0	21.0	21.0	18.9	18.9	18.9	19.8	19.8	15
New Zealand	21.7	21.7	18.3	18.3	18.3	20.6	20.6	20.6	16
Sweden	19.9	19.9	19.9	19.9	21.3	21.3	21.3	21.3	17
Canada	19.9	18.2	19.2	27.0	27.8	30.6	36.1	38.8	18
Ontario	19.8	18.7	19.7	32.8	33.1	35.0	40.6	43.4	19
Denmark	18.9	18.9	18.9	18.9	18.9	18.9	21.4	21.4	20
Finland	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	21
Alberta	17.9	17.7	18.4	19.4	20.0	22.3	26.0	31.4	22
Switzerland	17.8	17.8	17.8	17.8	17.8	18.2	18.2	18.2	23
Mexico	17.5	17.5	17.5	16.1	16.1	16.1	16.8	17.5	24
Netherlands	17.3	17.3	17.3	17.3	17.3	17.3	20.5	22.1	25
Belgium	17.1	17.1	17.1	17.1	17.1	16.5	16.5	23.3	26
Luxembourg	17.1	17.1	16.9	16.9	18.5	19.4	19.4	19.9	27
Quebec	16.9	16.9	17.8	19.3	20.6	25.9	33.6	36.2	28
Hungary	16.6	16.6	16.6	17.1	17.1	17.1	15.7	15.1	29
Israel	15.0	14.3	15.0	15.7	16.4	17.9	19.4	19.4	30
Poland	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	31

(cont'd)

	Marginal Effective Tax Rate								2012 ranking
	2012	2011	2010	2009	2008	2007	2006	2005	
Iceland	14.2	14.2	12.7	10.5	10.5	12.7	12.7	18.0	32
Slovak Republic	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	33
Czech Rep	12.7	12.7	12.7	13.5	14.2	16.5	16.5	18.0	34
Slovenia	11.9	11.9	11.9	12.6	13.3	14.0	14.7	15.4	35
Estonia	11.4	11.4	11.4	11.4	11.4	11.9	12.5	13.0	36
Greece	11.3	11.3	13.2	13.7	13.7	13.7	15.9	17.6	37
Ireland	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	38
Newfoundland	11.2	11.0	11.9	13.6	14.4	17.3	21.1	20.3	39
PEI*	10.8	28.8	29.5	30.3	30.8	32.9	36.6	37.3	40
Nova Scotia	7.7	8.0	10.1	18.6	20.1	23.3	28.6	27.5	41
Chile	7.2	7.8	6.7	6.7	6.9	7.2	7.3	7.3	42
Turkey	5.7	5.7	5.7	5.7	5.7	5.7	5.7	10.9	43
New Brunswick	4.6	2.9	4.9	7.2	16.0	20.2	26.5	21.4	44

*   The METR for British Columbia in 2012 is 17 percent with HST still in place, while that in PEI is 28 percent with the sales tax harmonization pending.

As background we provide METR on capital by province and industry in Table 6a for 2012 and Table 6b for 2014. The latter is consistent with Tables 1-3 and 5 where Canadian METRs include announced changes (i.e., the ending of the federal accelerated capital cost allowance, sales tax harmonization in PEI and de-harmonization in BC).

The lowest METRs are in New Brunswick due to its relatively low corporate income tax rate of 10 percent, as well as the Atlantic Investment Tax Credit, which benefits the manufacturing and forestry industries. The highest METRs expected by 2014 are in Manitoba, Saskatchewan and British Columbia, in part due to relatively high corporate income tax rates (12 percent in Saskatchewan and Manitoba) and, more importantly, their reliance on the retail sales tax. The impact of retail sales taxes on the cost of capital can be seen in a comparison of the METR for British Columbia between 2012 (Table 6A) and 2014 (Table 6B). For 2012, the harmonized sales tax in British Columbia is still in the form of a VAT that has no impact on the cost of capital, and the associated METR is 17.4 percent. For 2014, when the reversal of HST to the retail sales tax is implemented, the METR in British Columbia will be 27.7 percent — an increase of more than 10 percentage points!

TABLE 6A   MARGINAL EFFECTIVE TAX RATE ON CAPITAL INVESTMENT IN CANADA: 2012, BY INDUSTRY AND BY PROVINCE

	Forestry	Utility	Constr.	Manuf.	W. Trade	R. Trade	Transp.	Comm.	Other Serv.	Aggregate
Canada	-0.4	18.0	22.5	6.0	21.5	21.8	17.6	20.8	23.6	16.8
Nfld & Lab	-56.4	0.0	23.5	-44.6	21.1	22.9	18.8	21.4	21.2	9.6
PEI	-94.9	0.0	42.5	-64.4	37.9	36.4	33.8	47.6	42.3	27.7
Nova Scotia	-160.5	21.4	25.7	-123.5	24.6	25.1	20.5	23.2	23.2	5.2
New Brunswick	-50.9	16.7	20.4	-39.8	19.4	19.9	15.8	18.2	18.1	1.5
Quebec	-5.0	18.3	22.0	1.0	21.4	21.8	16.6	19.8	24.3	14.5
Ontario	8.3	17.8	21.6	10.3	20.7	21.3	17.0	19.4	24.2	17.6
Manitoba	-3.0	23.9	35.2	-2.0	29.8	29.6	27.3	38.6	35.8	26.0
Saskatchewan	8.7	22.6	31.9	11.1	28.7	28.0	23.2	35.5	31.1	24.0
Alberta	9.1	16.7	20.4	12.6	19.4	19.9	16.1	18.2	18.2	16.5
British Columbia	9.1	16.8	20.4	11.2	19.8	20.2	15.3	18.2	22.8	17.4

	Forestry	Utility	Constr.	Manuf.	W. Trade	R. Trade	Transp.	Comm.	Other Serv.	Aggregate
Canada	9.9	18.8	24.0	13.8	22.4	22.8	19.1	23.3	25.0	19.9
Nfld & Lab	-40.8	0.0	23.5	-31.0	21.1	22.9	18.8	21.4	21.2	11.2
PEI	-96.7	0.0	25.7	-72.1	24.6	25.1	22.7	23.2	23.0	10.8
Nova Scotia	-102.6	21.4	25.7	-82.8	24.6	25.1	20.5	23.2	23.2	7.7
New Brunswick	-32.6	16.7	20.4	-25.2	19.4	19.9	15.8	18.2	18.1	4.6
Quebec	5.4	18.3	22.0	9.1	21.4	21.8	16.6	19.8	24.3	16.9
Ontario	16.2	17.8	21.6	17.6	20.7	21.3	17.0	19.4	24.2	19.8
Manitoba	6.5	23.9	35.2	6.5	29.8	29.6	27.3	38.6	35.8	27.1
Saskatchewan	16.1	22.6	31.9	17.7	28.7	28.0	23.2	35.5	31.1	25.2
Alberta	16.4	16.7	20.4	18.5	19.4	19.9	16.1	18.2	18.2	17.9
British Columbia	20.0	22.6	34.0	22.0	28.5	28.2	23.6	37.2	32.7	27.7

Source: Authors' estimate.

Several interesting observations can be drawn from Tables 5 and 6A-B. First, Ontario, still the largest province in terms of its GDP share in Canada (over 37 percent for 2010), closely matches our estimate of national tax competitiveness with a METR of 19.8 percent (vs. 19.9 percent for Canada), which is in turn about a half percentage point higher than the OECD average of 19.4 percent (Table 1). Should Ontario stick to its previously announced tax reduction plan, its METR would be below the OECD average and help improve Canada's overall tax competitiveness.

Second, the three provinces that have a METR above the national average will all be in Western Canada with British Columbia having the highest METR (28 percent), followed by Manitoba (27 percent) and Saskatchewan (25 percent). They are, respectively, the fifth, sixth and the 11th least tax-competitive among the 44 jurisdictions in Table 5. The common feature in these provinces is a provincial sales tax that is not in the form of a value-added tax like the federal GST, and hence adds additional tax costs on capital investment through its levy on purchases of capital goods. This provincial sales tax effectively raised METRs by over nine, 10 and 14 percentage points, respectively, for Saskatchewan, British Columbia and Manitoba. The variation in the impact of the sales tax on the cost of capital is mainly due to differences in the sales tax exemption for capital goods by province, combined with differences in industrial structure across provinces.

Third, the four Atlantic provinces are among the most tax-competitive within the OECD, with New Brunswick having the lowest METR among all jurisdictions. The common feature in these four provinces is eligibility for the federal Atlantic Investment Tax Credit, and a harmonized sales tax (HST) that has little distortive impact on capital investment. But these provinces differ widely in their corporate income tax rates and tax bases. The corporate income tax rate ranges from 10 percent in New Brunswick to 16 percent in Nova Scotia and Prince Edward Island, with Newfoundland & Labrador still applying a two-tier income tax rate (six percent for manufacturing and processing and 14 percent for other industries) and Nova Scotia and Prince Edward Island providing additional investment tax credits for manufacturing businesses. In our view, New Brunswick, with its lowest CIT rate and broadest tax base, provides a better tax regime for the other three Atlantic provinces to follow.

And finally, Alberta and Quebec are two provinces with very different tax structures, but only a one-percentage point METR gap between them. Alberta has a lower income tax rate (10 percent) but a broader tax base, which is the main factor leading to a higher METR (18 percent) compared to that for Quebec. Quebec has a higher tax rate (11.9 percent) but a narrower tax base; its five percent investment tax credit for M&P assets contributes to a METR reduction of over three percentage points. In other words, without this investment tax credit, the METR for Quebec would be over 20 percent. But Quebec could easily match Alberta's tax competitiveness by reducing its income tax rate to 10 percent while eliminating its tax credit supporting only manufacturing and processing businesses.

Corporate Income Tax Revenues and Tax Rate Changes

Proponents of tax rate hikes on corporations typically argue that governments would receive robust new revenues to fund important health, education and social services. Ontario recently backed off its final legislated corporate tax rate reduction (from 11.5 percent to 11 percent in July 1, 2012 and 10 percent in July 1, 2013) on the presumption that revenues would increase $1.5 billion over three years. These budgetary estimates are typically measured by taking forecasted profits multiplied by the change in the corporate rate from the current rate before implementation of a tax change.

In Canada, finance departments typically include modest changes in the tax base induced by a lower cost of capital resulting from corporate tax changes. Investment does take time to increase when the cost of capital is reduced, which is only picked up in revenue forecasts on a longer-term basis. However, what is typically ignored is the impact of rate changes on the incentive for corporations to shift profits into and out of jurisdictions. Profit-shifting is much more responsive in the short-term, since financial and transfer pricing practices are fairly easy to change without making costly alterations to production or investment decisions.

In the past several years, a large number of profit-shifting studies have been undertaken internationally and in Canada. Although estimates vary, most studies show that the corporate tax base is very sensitive to statutory tax rate changes. Weichenrieder finds that a 10-percentage point increase in the parent home-country tax rate causes German subsidiary profitability to rise by 0.5 percentage points.[11] Bartelsman and Beetsma find that two-thirds of the projected increase in revenues, assuming no behavioural responses, is lost after accounting for profit-shifting.[12] Huizinga and Laeven find that a one percent increase in the corporate income tax rate shrinks the tax base by 1.3 percent for European multinationals.[13]

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[11] A. Weichenrieder, "Profit Shifting in the EU: Evidence from Germany," *International Tax and Public Finance*, 16(3), 2009, 281-97.

[12] Bartlesman, E. and R. Beetsma, "Why Pay More? Corporate Tax Avoidance through Transfer Pricing in OECD Countries," *Journal of Public Economics*, 87(9-10), 2225-2252.

[13] H. Huizinga and L. Laeven, "International Profit-Shifting Within Multinationals: A Multi-Country Perspective," *Journal of Public Economics*, 92, 2008, 1164-1182.

Three Canadian studies suggest substantial corporate tax-base sensitivity to statutory corporate tax rate changes. Jog and Tang find quite large reductions in debt financing for Canadian multinationals when corporate income tax rates decline.[14] Mintz and Smart estimate that a point reduction in the provincial statutory tax rate increases the corporate tax base by 4.9 percent for large corporations that do not allocate income across provinces, and 2.3 percent for those that allocate corporate income.[15] Dahlby and Ferede estimate that a one-point increase in the federal-combined corporate tax rate reduces the tax base by 2.3 percent in the short run.[16]

Federal and provincial governments have been reducing corporate income tax rates since 2000 (when the combined federal-provincial corporate rate was over 42 percent) to a combined federal-provincial corporate rate of 26.1 percent in 2012. From 2000 to 2010, the period for which complete financial and taxation statistics for enterprises are available, the statutory tax rate has fallen from 42.4 percent to 29.4 percent (i.e., by over 25 percent). Yet, given the severity of the 2009 recession on corporate profits, as well as the effect of ongoing rate reductions, we have not seen a significant reduction in corporate taxes as a share of GDP (Figure 3), which is consistent with the implications of profit-shifting studies. A counter argument was that corporate profit as a share of GDP has been up over the past decade, mainly owing to advances in technology and globalization that raised the return to capital, compared to the compensation for labour, around the world. Our analysis shows that, while net profit as a share of GDP in Canada fluctuated along with the economic cycle, taxable income, as a share of GDP, has been steadily trending upward even in recent recessionary years.

FIGURE 3   CANADIAN CORPORATE INCOME TAX: RATE VS. REVENUE (AS % OF GDP)
BASED ON STATISTICS CANADA, FINANCIAL AND TAXATION STATISTICS FOR ENTERPRISES
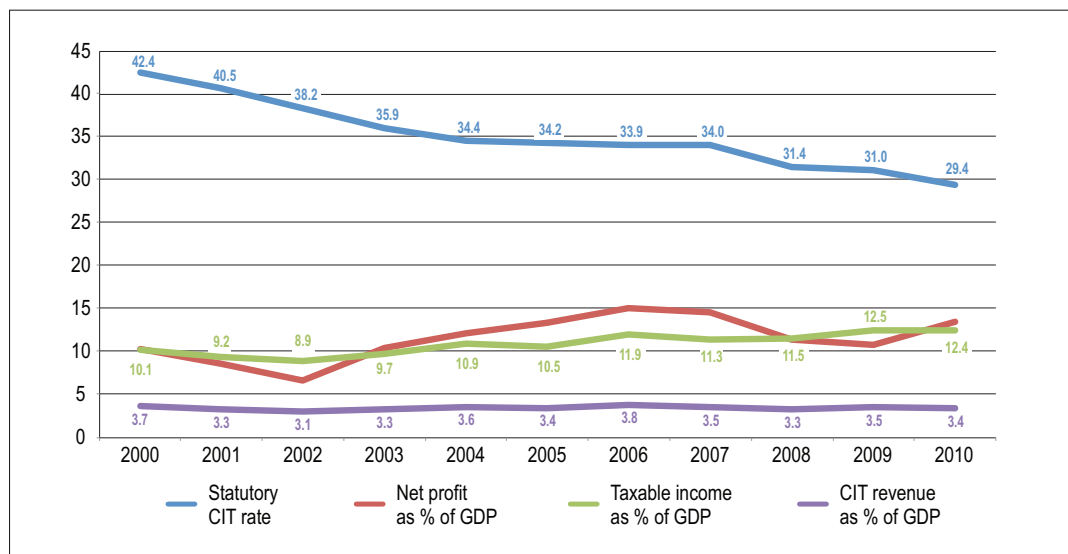
Source: Statistics Canada, Cansim Tables 1800003 and 3800016 and authors' estimate based on these tables.

[14] V. Jog, V., Tang, J., "Tax reforms, Debt Shifting and Tax Revenues: Multinational Corporations in Canada," International Tax and Public Finance 8, 2001, 5-26.

[15] J. Mintz and M. Smart, "Income shifting, investment, and tax competition: theory and evidence from provincial taxation in Canada," *Journal of Public Economics*, 88, 2004, 1149-1168.

[16] B. Dahlby and E. Ferede, "What Does it Cost Society to Raise a Dollar of Tax Revenue? The Marginal Cost of Public Funds," *C. D. Howe Institute Commentary* No. 324, C. D. Howe Institute, Toronto, 2011.

Taking both the Mintz-Smart and Dahlby-Ferede corporate tax base sensitivity estimates, we estimate that the impact of Ontario freezing the general corporate income tax rate (by eliminating the future rate reductions already budgeted) is to increase annual revenues in a range of $440 million to $575 million, compared to $700 million assuming no profit-shifting response. The federal government, as a result of a smaller corporate tax base in Ontario, would also lose $160 million to $280 million. Corporate taxable income in other provinces might increase due to the Ontario corporate tax increase or shift to foreign jurisdictions where corporate income tax rates are much lower. Assuming the Ontario base shifts primarily to countries outside Canada, the aggregate increase in federal-provincial corporate tax revenue due to the Ontario corporate tax increase ranges from $160 million to $415 million.

Although the Ontario government will gain some revenue in the short run by raising its legislated corporate rate of 10 percent to 11.5 percent in 2013, the effect will be to hurt growth and jobs. Roughly, Ontario will lose $7.5 billion in capital investment in the long run by forgoing plans to reduce the general corporate rate to 10 percent by mid-2013.

Of course, Ontario has made significant strides in achieving competitiveness with its harmonization of its sales tax with the federal GST and past corporate income and capital tax reductions. Not carrying through with its final stage of reductions is a missed opportunity. It may be that the tax rate will be reduced when fiscal room becomes available, but most businesses will discount this promise unless the rate reductions are confirmed in legislation.

One of the consequences is that Ontario will not achieve the more equal treatment of industries that it would have achieved in 2013 by moving to the 10 percent corporate rate. Manufacturing and resource income will remain taxed at 10 percent while other industries will be subject to the 11.5 percent rate.

Indeed, if Ontario wishes to impose higher taxes on corporations, it would have been better to eliminate tax preferences and business subsidies that distort the allocation of capital across sectors and activities. Examples include the Ontario Apprenticeship Training Tax Credit, Ontario Book Publishing Tax Credit, Ontario Business Research Institute Tax Credit, Ontario Computer Animation and Special Effects Tax Credit, Ontario Co-operative Education Tax Credit, Ontario Film and Television Tax Credit, Ontario Focused Flow-through Share Tax Credit, Ontario Innovation Tax Credit, Ontario Interactive Digital Media Tax Credit, Ontario Political Contribution Tax Credit, Ontario Production Services Tax Credit and Ontario Sound Recording Tax Credit.

Ontario does plan to review both mining royalties and tax expenditures as it grapples with its massive debt. We believe that this review should give serious consideration to the cancellation of a number of special credits that are either ineffective or lead to investment in sub-par investments.

CONCLUSIONS

Canada has had remarkable success since the year 2000 in achieving a competitive corporate tax system that at one time imposed one of the highest tax burdens in the world. In our 2012 ranking, Canada's METR is the seventh highest and hence the most tax-competitive among the G-7 countries. Similarly, Canada is the 20st most tax-competitive among the 34 OECD countries (with the 15th highest METR) and 57th most competitive among the 90 countries (with the 34rd highest METR).

However, the principles enunciated for corporate tax reform — neutrality with internationally competitive tax rates — have only been partially adopted. Canada has achieved internationally competitive tax rates, but the tax system could be made much more neutral, and less distortionary, across sectors and provinces. It is important now for governments to reduce tax preferences, providing room for even more rate reductions.

The business tax reform in recent years has helped grow the economy. Investment has improved despite two recessions at the beginning and end of the last decade.

We also show that the corporate rate reductions, more than 30 percent since the year 2000, have had little impact on corporate tax revenues as a share of GDP as a result of multinational shifting of profits into Canada due to lower rates.

APPENDIX

METHODOLOGY FOR ESTIMATING MARGINAL EFFECTIVE TAX RATES

The estimates of marginal effective tax rates on new investment in this report are based on a methodology summarized in Duanjie Chen and Jack Mintz, "Taxing Business Investments: A New Ranking of Effective Tax Rates on Capital," World Bank, 2008. Our model assumes a multinational company seeking to maximize value for its projects around the world, raising equity and debt financing from international markets. The company minimizes its cost of finance by choosing an optimal debt and dividend policy, taking into account tax and non-tax factors that influence financial decisions (independent of the investment decision). The cost of equity and debt is determined by international markets and is independent of the availability of domestic savings in a small open economy. Therefore, personal income taxes on dividends, interest and capital gains do not affect the multinational's cost of financing, even though those personal taxes do effect personal savings decisions.

To calculate the effective tax rate on new investments, similar investment projects in manufacturing and service industries are assumed in each country. The same capital structure for eight industries (manufacturing, construction, utilities, communications, transport, wholesale trade, retail trade, and other services) is assumed across countries, using data for capital stock weights developed by the Canadian government agency, Finance Canada. We also use Statistics Canada's recently estimated economic depreciation rates, and apply them across all countries. For country-specific inflation rates and industrial structures (i.e., the relative GDP share between manufacturing and services sector that includes all non-manufacturing, non-resource and non-agricultural industries), we rely on the latest statistics published in the International Financial Statistics, except for Canada and the US, for which we obtained capital share by industry from the Canadian government agency.

The standard method used to estimate marginal effective tax rates has been extensively documented. The formula based on this method has been modified to incorporate miscellaneous taxes such as capital- or asset-based taxes and property-related taxes. Following are the general formulas used in this study. Note that these formulas are for profitable and hence tax-paying firms only. For a tax-loss case, the formulas will be much more complicated and empirically based on the history and use of tax-loss deductions.

(I) MARGINAL EFFECTIVE TAX RATE (t)

The marginal effective tax rate on a given type of capital is defined as the proportional difference between the gross-of-tax rate of return (r^G) required by a firm and the net-of-tax rate of return (r^N) required by an investor. r^G is the marginal revenue product (or user cost of capital, in equilibrium) net of economic depreciation. The after-tax rate of return is the weighted average of the return to debt and equity securities held by the financial investor. Thus, the effective tax rate (t) is defined as

$$t = (r^G - r^N)/r^G \qquad (1)$$

(II) THE NET-OF-TAX RATE OF RETURN ON CAPITAL (r^N)

The net-of-tax rate of return on capital is defined by the formula

$$r^N = \text{ß}i + (1 - \text{ß})\varrho - \pi \qquad (3)$$

with ß = the ratio of debt to assets ratio, i = cost of debt, ϱ = cost of equity, and π = inflation rate.

This is the rate of return on capital required by financial investors, or suppliers of investment funds to firms. Note that financial investors often include firms themselves when there is equity generated internally.

(III) THE REAL COST OF FINANCING (r^f)

The real cost of financing (r^f) is one of the main components of cost of capital, or gross-of-tax rate of return (r^G) on capital. The real cost of financing (r^f) is defined by

$$r^f = \text{ß}i(1 - U) + (1 - \text{ß})\,\varrho - \pi \qquad (2)$$

with U = the statutory corporate income tax rate.

That is, the real cost of financing for the firm is the weighted-average cost of financing net of the inflation rate.

(IV) THE GROSS-OF-TAX RATE OF RETURN (r^G) ON CAPITAL[17]

A. Depreciable assets (i.e. buildings and machinery and equipment)

$$r^G = (1+t_m)(r^f +\delta)(1- k)[1 - A +\tau (1-U)/(\alpha +r^f+\pi)]/(1-U) - \delta \qquad (4)$$

Where t_m = tax on transfer of property, or a transaction tax (e.g., the state sales tax) on capital goods wherever this is applicable, r^f = real cost of financing as defined in Section (iii) above, δ = economic depreciation rate, k = investment tax credit rate, A = the present value of tax benefit from the investment allowance and depreciation allowance, τ = the capital-based tax rate, and α = tax depreciation rate.

B. Inventory

$$r^G =(r^f +U\pi\zeta)/(1-U) \qquad (5)$$

Where $\zeta = 1$ for the FIFO accounting method, 0 for LIFO, and 0.5 for the average cost method, or when both LIFO and FIFO are permitted.

C. Land

$$r^G = r^f [1 +\tau (1-U)/(r^f + \pi)]/(1-U) \qquad (6)$$

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[17] Formulas provided here are only for the regular case where companies are profitable and pay taxes. For the cases of Belgium and Italy that provide an allowance for corporate equity financing costs, formulas are available upon request from the authors.

(V) AGGREGATION

The METR for a given industry is the proportional difference between the weighted average of the before-tax rate of return by asset type and the after-tax rate of return; the latter is the same across asset types within a given sector.[18] That is, the marginal effective tax rate for industry i, t_i, is calculated as following:

$$t_i = (\Sigma_j r^G_{ij} w_{ij} - r^N_{\ i})/ \Sigma_j r^G_{ij} w_{ij} \tag{7}$$

where j denotes asset type (i.e. investments in buildings, machinery, inventories, and land), and w_{ij} denotes the weight of asset type j in industry i.

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[18] The net-of-tax rate of return can be the same across all the sectors when there is no sectoral differentiation in the statutory income tax rate.

About the Authors

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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 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 Shepell, and the Social Sciences and Humanities Research Council. 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.

Dr. Mintz held the position of Professor of Business Economics at the Rotman School of Business from 1989-2007 and Department of Economics at Queen's University, Kingston, 1978-1989. He was a Visiting Professor, New York University Law School, 2007; President and CEO of the C.D. Howe Institute from 1999-2006; Clifford Clark Visiting Economist at the Department of Finance, Ottawa; Chair of the federal government's Technical Committee on Business Taxation in 1996 and 1997; and Associate Dean (Academic) of the Faculty of Management, University of Toronto, 1993-1995. He was founding Editor-in-Chief of *International Tax and Public Finance*, published by Kluwer Academic Publishers from 1994-2001, and recently chaired the Alberta Financial and Investment Policy Advisory Commission reporting to the Alberta Minister of Finance.

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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