

Policy Forum: Corporate Income Taxation in Canada

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ABSTRACT

The author examines Canadian corporate income tax policy, focusing on the implications of international capital mobility, international tax competition—including the need for a corporate tax structure that is competitive with respect to the United States and other competing economies—and international tax avoidance. He begins by considering the arguments for tax exemption or even subsidization of capital income, and then examines the many qualifications to these arguments. His analysis pays particular attention to the implications of the existence of firm-specific and location-specific economic rents and the issues raised by new techniques for international tax avoidance. In all cases, the discussion of theoretical arguments is followed by an examination of the empirical evidence, including studies specific to Canada as they are available. The author then traces the implications of the analysis for corporate income tax policy in Canada, including the recently enacted corporate income tax rate reductions and other potential reforms.

KEYWORDS: CANADIAN ■ CORPORATE INCOME TAXES ■ BUSINESS TAXES ■ TAX REFORM ■ INTERNATIONAL TAXATION ■ INTERNATIONAL TAX AVOIDANCE ■ CAPITAL MOVEMENT

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INTRODUCTION AND BACKGROUND

As in many countries, tax reform is a perennial topic in Canada. In recent years, one of the main factors prompting interest in tax reform has been concern about Canada's relative economic performance in the global economy. For example, Mintz¹ observes that (1) over the period 2000-2004, the growth rate of gross domestic product (GDP) per capita in Canada ranked 24th among 29 countries in the Organisation for Economic Co-operation and Development (OECD); (2) Canadian labour productivity grew by only 1.6 percent over the same period, as compared with a 3.6 percent rate of growth in the United States; and (3) in 2006, capital investment per worker lagged other OECD countries by an average of Cdn\$1,400 and lagged

1 Jack Mintz, *The 2006 Tax Competitiveness Report: Proposals for Pro-Growth Tax Reform*, C.D. Howe Institute Commentary no. 239 (Toronto: C.D. Howe Institute, 2006).

the United States by Cdn\$3,200. Similarly, Mintz and Tarasov² argue that Canada is lagging in attracting foreign direct investment (FDI) from the world's multinational enterprises (MNEs), ranking 25th in net FDI among a group of 73 industrialized and developing countries, and 46th in net inflows of FDI as a percentage of GDP.

Although these shortfalls could potentially be related to a wide variety of factors, one plausible explanation is that relatively high combined federal and provincial taxes applied to capital income have had a negative impact on the level of capital investment, leading to lower rates of growth in labour productivity and output. This concern is magnified by a sense that increasing globalization and international capital mobility are giving rise to greater international tax competition, especially from smaller developed economies and countries emerging from socialism, many of which have recently enacted tax systems that are very favourable to FDI. Indeed, the recent dramatic success of several countries with strikingly low corporate income tax rates in attracting FDI and stimulating economic growth—particularly in the case of Ireland, with its corporate rate of 12.5 percent and dramatic growth experience, much of which is attributable to FDI in businesses that serve the EU market³—have naturally raised the question of whether such an experience could be replicated in Canada, given its proximity to the large US market.

These concerns have prompted tax changes in Canada in recent years, especially with respect to the taxation of capital income. Indeed, under currently scheduled reforms announced in the 2006 budget, the tax fairness plan, and the 2007 economic statement,⁴ the federal statutory corporate income tax rate will fall from 22.12 percent in 2006 (including a 1.12 percentage point surtax) to 15 percent in 2012. With a small net increase in provincial corporate income taxes, the combined federal-provincial statutory corporate income tax rate will fall to approximately 27.6 percent in 2012, relative to 34.3 percent in 2006 and 42.9 percent in 2000.⁵ Other recent and scheduled future reforms include the elimination of the federal capital tax in 2006; the elimination of all provincial general capital taxes (by 2012, only one province will have a general capital tax); and increases in tax depreciation rates for a number of assets, notably buildings and computers. In addition, federal and provincial dividend tax credit mechanisms have been adjusted so that the corporate and

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- 2 Jack M. Mintz and Andrey Tarasov, "Canada Is Missing Out on Global Capital Market Integration" e-brief (C.D. Howe Institute, August 21, 2007) (online: http://www.cdhowe.org/pdf/ebrief_48.pdf).
 - 3 Brendan Walsh, "Taxation and Foreign Direct Investment in Ireland," in Herbert G. Grubel, ed., *Tax Reform in Canada: Our Path to Greater Prosperity* (Vancouver: Fraser Institute, 2003), 221-45.
 - 4 Canada, Department of Finance, 2006 Budget, May 2, 2006; "Canada's New Government Announces Tax Fairness Plan," *Release* no. 2006-061, October 31, 2006; and Canada, Department of Finance, *Economic Statement*, October 30, 2007.
 - 5 See *Economic Statement*, supra note 4. Note that provincial income taxes are not deductible against federal income tax liability (although provincial capital taxes and property taxes are deductible).

individual income tax systems will be almost fully integrated for large corporations, thus eliminating virtually all double taxation of dividend income.⁶ Capital gains are subject to a 50 percent exclusion, which acts to offset the effects of corporate-level taxation of the earnings that give rise to the gains, as well as the taxation of purely inflationary gains.⁷ Finally, personal income is subject to tax at a top rate of 29.0 percent at the federal level and a weighted (by wages) average of 16.5 percent at the provincial level, resulting in a combined maximum tax rate on labour income of 45.5 percent.

Whether these new statutory corporate income tax rates are competitive or high relative to other countries depends on the comparison group. Tax competitiveness with the United States is a critical minimal requirement. The United States supplies about half of Canada's inbound FDI and is the destination of about 30 percent of Canada's outbound FDI.⁸ Moreover, it is critical that Canada be an attractive investment location for MNEs from other countries that wish to serve the US and, more generally, the North American markets.⁹ According to this metric, and assuming that the United States does not reduce its corporate income tax rate over the next four years or so (which may be a faulty assumption, especially in light of recent proposals for significant corporate income tax rate reductions), the Canadian combined federal and provincial statutory corporate income tax rate of 27.6 percent legislated for 2012 compares quite favourably: the Canadian Department of Finance estimates that the comparable combined US federal and state corporate statutory income tax rate (including the special lower effective tax rate on "manufacturing" income) in 2012 will be 37.9 percent, yielding a statutory rate differential of 10.3 percentage points in Canada's favour.¹⁰ Canada's projected combined statutory corporate income tax rate of 27.6 percent is also the lowest among the Group of Seven (G7)

6 Dividends received will be grossed up by a factor of 1.38 and then taxed at the personal level, at a top rate of 29.0 percent under the federal personal income tax and at an average top rate of 16.5 percent under the provincial personal income tax (implying a top marginal tax rate of 45.5 percent). Individuals will receive dividend tax credits of 15.0 percent at the federal level and an average of 10.8 percent at the provincial level, or total credits of 25.8 percent, which is close to the average combined federal and provincial corporate income tax rate of 27.6 percent. Thus, the reforms will achieve nearly complete integration.

7 It is estimated that a capital gains exclusion rate of two-thirds would be required to fully integrate the personal and corporate tax systems for non-distributed earnings: see Thomas A. Wilson, "An Evaluation of Business Taxes in Canada," in *Tax Reform in Canada*, supra note 3, at 111-40.

8 These figures are based on average FDI flows over 2001-2006.

9 As stressed by Mintz, supra note 1, increasing security concerns and the spread of protectionism reduce the likelihood that firms will locate in Canada to serve other North American markets, and thus increase the need for a tax system that treats foreign investment favourably.

10 Canada, Department of Finance, "Taxes on Business Investment: An International Comparison of Marginal Effective Tax Rates in the Manufacturing Sector," in *Tax Expenditures and Evaluations 2006* (Ottawa: Department of Finance, 2006), 37-58.

member countries, which together have a median statutory corporate income tax rate of 31.4 percent.¹¹

Although comparisons with the other G7 countries are certainly relevant for Canada, the modern integrated world economy is characterized by ever greater mobility of capital, goods, and to an increasing extent services and skilled labour, as well as significantly lower transport costs, especially for products that can be partially or fully digitized. Accordingly, international tax competition often extends beyond the heavily industrialized G7 nations to include smaller developed economies and emerging and transitional economies, including both Latin American countries in close proximity to US markets, for goods (for example, those with relatively high transport costs) where a North American location is critical and, more generally, virtually all such nations for goods where proximity to the US market is relatively unimportant. At some level, all such countries represent a potential location for investment by the MNEs of other countries (increasingly including those wishing to gain access to the US market as transportation costs decline and more goods and services become digitized), as well as by MNEs based in Canada. However, existing and likely future trade and investment patterns provide information that in practice is highly relevant in determining a country's competitors for internationally mobile capital. At present, Canada's key non-US suppliers of inbound FDI are the United Kingdom, the Netherlands, Brazil, Switzerland, and Germany.¹² While some of this inbound FDI is a substitute for imports, much of it is in support of exports to the United States. Potential alternative locations for this investment, in addition to the listed countries and the United States, are other countries in North and South America, particularly Mexico and Brazil. A consideration of Canada's outbound FDI adds only one other current major competitor, France. It is prudent, nevertheless, to also consider large, rapidly growing economies such as China, India, and the Russian Federation when assessing future growth in Canada's exports and FDI.

The recent rate reductions imply that Canada would be competitive with all of these nations with a combined federal-provincial statutory rate of 25 percent—Canada would be within 1 percentage point of the lowest rate in the group (24 percent, in Russia). Moreover, reducing tax rates further to compete with extremely small low-tax jurisdictions is likely to result in significant revenue losses with little additional FDI. Similarly, competing with the relatively small countries that have special low-tax regimes for highly mobile financial capital is unlikely to be a cost-effective policy.

Although relative statutory tax rates are important in attracting investment and determining incentives for tax avoidance (as will be discussed at length below), it is

11 By comparison with the projected Canadian and US rates, in 2012 the combined statutory corporate income tax rates for the other five G7 countries will be 41.9 percent in Japan, 31.4 percent in Italy, 33.3 percent in France, 29.8 percent in Germany, and 28 percent in the United Kingdom. See Economic Statement, *supra* note 4, updated for recent tax changes in Italy.

12 On average, from 2001 to 2006, the United States accounted for almost half of Canada's inbound FDI, while the other listed countries accounted for almost 40 percent.

well known that statutory tax rates are only one component of the total effect of a tax system on investment incentives. Other factors include depreciation or capital cost allowances (CCAs), investment tax credits and other investment allowances, the method of finance coupled with the tax treatment of interest deductions and dividends paid, and the tax treatment of inflation. In addition, the effects of taxes other than corporate income tax must be considered, including taxes on wealth or capital and indirect taxes, such as provincial sales taxes, that are assessed on business purchases. The standard tool used to analyze the combined effects of all these provisions is the marginal effective tax rate (METR), which measures the difference between gross and net returns, relative to the gross return, imposed by a tax system on a marginal or break-even investment, taking into account all the factors noted above.

A comparison of METRs in Canada with the key competitors for FDI identified above is slightly less favourable than a comparison of statutory rates.¹³ Assuming a 25 percent statutory rate, Canada's projected METR in 2012 is 23.7 percent,¹⁴ the fourth lowest in the comparison group. The Netherlands, Mexico, and Switzerland will have lower METRs, ranging from 7 to 11 percentage points lower than the METR projected for Canada. Given the current level of trade and investment links, however, it is unlikely that it would be cost-effective to reduce rates by enough to be competitive with these three countries.

In summary, once the recent changes in tax structure are fully implemented, Canadian taxation of capital income as measured by both statutory rates and METRs will compare quite favourably to that in the United States and Canada's other key current and future competitors for FDI. In this context, the recent reduction to a targeted combined federal and provincial corporate income tax rate of 25 percent seems eminently reasonable.

Note, however, that although the data presented take into account legislated tax reductions in Canada and other countries coming into effect by 2012, they do not consider other potential tax reductions by other countries. This is almost certainly a highly optimistic assumption, as it seems likely that international tax competition will continue to put downward pressure on both statutory and marginal effective corporate tax rates around the world, including in the United States, where proposals to significantly reduce the corporate income tax rate are currently under discussion. In particular, interest in the schedular Nordic dual income tax (which is discussed further below), under which capital income is taxed at a lower rate than that applied to labour income, seems to be spreading: variants of such taxes (including provisions for taxing only interest income at relatively low rates) have recently been enacted in Austria, France, Iceland, Greece, Italy, Japan, and Portugal, and are

13 For estimates of METRs for 80 countries, see Jack Mintz, *The 2007 Tax Competitiveness Report: A Call for Comprehensive Tax Reform*, C.D. Howe Institute Commentary no. 254 (Toronto: C.D. Howe Institute, 2007).

14 See Canada, Department of Finance, 2008 Budget Plan, February 26, 2008.

under consideration in Germany and Switzerland.¹⁵ In addition, other countries may follow the example of Belgium, which recently adopted an “allowance for corporate equity” (ACE) tax; under this approach, businesses receive a special deduction for equity-financed investment, equal to the product of their equity capital and a market-determined interest rate, which equalizes the tax treatment of debt-financed and equity-financed investment and creates a consumption-based business tax system characterized by a METR of zero.¹⁶ Given these developments and the widespread concern about increasing globalization and international capital mobility, it seems likely that Canada’s international competitiveness will continue to be an issue, although the corporate tax rate reductions that have occurred or are scheduled to occur have significantly improved its current relative standing.

In light of the recent reductions in the tax burden on capital income in Canada, a natural question is whether such tax reductions are likely to affect the overall level of investment in Canada, and more specifically whether FDI will be favourably affected. Although the early empirical evidence on the issue of the tax sensitivity of investment was mixed, the more recent evidence, which accounts for the costs of adjusting the capital stock in response to changes in taxes and uses improved econometric techniques, is consistent with significant effects of taxes on investment, as captured by tax-induced changes in the cost of capital.¹⁷ More specifically, the Department of Finance estimates that the corporate income tax rate reductions implemented over the period 2001-2004 had a significant positive effect on investment, with a preferred estimate that indicates an elasticity of 0.7 (in absolute value) of net investment with respect to tax-induced changes in the cost of capital.¹⁸ In addition, Iorwerth and Danforth estimate that a 10 percent reduction in the costs of capital increases investment in machinery and equipment by approximately 10 percent, implying a roughly unitary overall (domestic and foreign) investment elasticity.¹⁹

15 Peter Birch Sørensen, “Neutral Taxation of Shareholder Income” (2005) vol. 12, no. 6 *International Tax and Public Finance* 777-801; and Bernd Genser and Andreas Reutter, “Moving Towards Dual Income Taxation in Europe” (2007) vol. 63, no. 3 *FinanzArchiv: Public Finance Analysis* 436-56.

16 Brazil has a variant of the ACE tax, under which the deduction for equity is allowed only for dividends paid. See Alexander Klemm, *Allowances for Corporate Equity in Practice*, IMF Working Paper no. 06/259 (Washington, DC: International Monetary Fund, 2006).

17 Kevin A. Hassett and Kathryn Newmark, “Taxation and Business Behavior: A Review of the Recent Literature,” in John W. Diamond and George R. Zodrow, eds., *Fundamental Tax Reform: Issues, Choices, and Implications* (Cambridge, MA: MIT Press, 2008), 191-214.

18 Canada, Department of Finance, “Corporate Income Taxes and Investment: Evidence from the 2001-2004 Rate Reductions,” in *Tax Expenditures and Evaluations, 2007* (Ottawa: Queen’s Printer, 2008).

19 Aled ab Iorwerth and Jeff Danforth, *Is Investment Not Sensitive to Its User Cost? The Macro Evidence Revisited*, Department of Finance Canada Working Paper no. 2004-05 (Ottawa: Department of Finance, 2004).

The empirical evidence also demonstrates that FDI is sensitive to tax factors, and suggests that this sensitivity is increasing over time—although some of the increase in the measured sensitivity of FDI may simply reflect improved measurement techniques.²⁰ For example, Hines²¹ concludes that the “econometric work of the last 15 years provides ample evidence of the sensitivity of the level and location of FDI to its tax treatment.” A similar conclusion is reached by de Mooij and Ederveen,²² who perform a “meta analysis” of the literature, in which they correlate the results of 25 studies of the effects of taxes on FDI (measured as elasticities of FDI with respect to various home-country tax variables) to the characteristics of the underlying studies. Both surveys suggest that FDI is responsive to effective tax rates, with elasticities in the neighborhood or in excess of 1. Perhaps more important, the most recent and most careful studies—especially Altshuler, Grubert, and Newlon;²³ Grubert and Mutti;²⁴ and de Mooij and Ederveen²⁵—tend to obtain the largest estimates. For example, Altshuler, Grubert, and Newlon estimate that the elasticity of investment with respect to after-tax host-country rates of return for US MNEs increased from 1.5 in 1984 to 2.8 in 1992. Grubert and Mutti estimate an investment elasticity of roughly 3 for countries with relatively open trade regimes. Finally, for the sample of studies they analyze, de Mooij and Ederveen calculate a median estimate of the investment elasticity of 3.3; they also note that the more recent studies tend to obtain the largest elasticities. These studies are limited to data from the early 1990s. As discussed immediately below, the increasing tax-avoidance activity on the part of US MNEs suggests that FDI should become less sensitive to taxes, since the burden of high host-country rates can be more easily avoided. Nevertheless, more recent research suggests that at least through 2000, the tax sensitivity of FDI is not declining

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- 20 Note that these studies attempt to isolate the effects of taxes on investment and do not imply that other factors (such as access to markets, the availability of relatively low-cost productive labour, and a stable and transparent legal and political environment) are not also critical to investment decisions. Note also that there are difficulties in estimating tax effects on investment, including various econometric issues and measurement problems (for example, most measures of FDI include merger and acquisition activity, and effective tax rates are difficult to measure): see Roger H. Gordon and James R. Hines Jr., “International Taxation,” in Alan J. Auerbach and Martin Feldstein, eds., *Handbook of Public Economics*, vol. 4 (Amsterdam: North Holland/Elsevier, 2002), 1935-95.
- 21 James R. Hines Jr., “Lessons from Behavioral Responses to International Taxation” (1999) vol. 52, no. 1 *National Tax Journal* 305-22, at 312.
- 22 Ruud A. de Mooij and Sjeff Ederveen, “Taxation and Foreign Direct Investment: A Synthesis of Empirical Research” (2003) vol. 10, no. 6 *International Tax and Public Finance* 673-93.
- 23 Rosanne Altshuler, Harry Grubert, and T. Scott Newlon, “Has U.S. Investment Abroad Become More Sensitive to Tax Rates?” in James R. Hines Jr., ed., *International Taxation and Multinational Activity* (Chicago: University of Chicago Press, 2001), 9-32.
- 24 Harry Grubert and John Mutti, *Taxing International Business Income: Dividend Exemption Versus the Current System* (Washington, DC: AEI Press, 2001).
- 25 De Mooij and Ederveen, *supra* note 22.

and may even be increasing. For example, Altshuler and Grubert²⁶ examine data for 1992, 1998, and 2000, and find that their estimated investment tax elasticities are increasing over the period (with some estimates in the range of -4), although the differences in the elasticities over time are not statistically significant.²⁷ Thus, the empirical literature as a whole suggests that international capital is quite mobile and significantly affected by tax factors—even if the degree of responsiveness is not as large as would be implied by a perfectly elastic supply of internationally mobile capital—and the possibility that the tax sensitivity of FDI will decline as tax-avoidance activity continues to grow has not yet appeared in the data.

Because various financial accounting manipulations (described below) can be utilized to lower an MNE's tax burden (and there is ample evidence that at least some firms are taking advantage of these options), one would expect a decline in the sensitivity of FDI to legislated statutory tax rates or effective tax rates calculated without taking into account the potential for tax-avoidance activity. Altshuler and Grubert,²⁸ among others, have argued that MNEs, especially those based in the United States, have become more aggressive in recent years in their tax-avoidance activity. Altshuler and Grubert note that in the case of US firms, this has been especially so since the passage of the check-the-box regulations in 1997, which significantly facilitated tax-avoidance activity by allowing US MNEs to specify the tax treatment of a related entity as a separate corporate subsidiary or an integrated branch (that is, a passthrough or disregarded entity) simply by checking the appropriate box on the firm's tax return. Thus, there is some reason to believe that the tax sensitivity of FDI may be declining, since much of this tax-avoidance activity increases cross-border financial flows without affecting real investment. However, this point has yet to be confirmed empirically, and, if anything, the tax sensitivity of FDI may have increased in recent years.

To sum up, empirical evidence suggests that while capital may not be perfectly mobile, FDI is quite sensitive to tax factors. Moreover, there is some evidence that this sensitivity is increasing over time as globalization increases, especially in the form of international competition for highly mobile capital. However, other research suggests that the increase in the tax sensitivity of investment may be tempered by the increased availability of tax-avoidance devices that reduce the need to reallocate real investment in order to reduce tax liability in relatively high-tax countries.

As a final background point, it is useful to examine the extent of international tax competition in recent years. It is clear that statutory corporate tax rates have

26 Rosanne Altshuler and Harry Grubert, "Taxpayer Responses to Competitive Tax Policies and Tax Policy Responses to Competitive Taxpayers: Recent Evidence" (2004) vol. 34, no. 13 *Tax Notes International* 1349-62.

27 Similar results are reported by de Mooij and Ederveen in an update of their 2003 study: Ruud de Mooij and Sjeff Ederveen, *Explaining the Variation in Empirical Estimates of Tax Elasticities of Foreign Investment*, Tinbergen Institute Discussion Paper no. 2005-108/3 (Rotterdam: Tinbergen Institute, 2005).

28 Rosanne Altshuler and Harry Grubert, "Governments and Multinational Corporations in the Race to the Bottom" (2006) vol. 110, no. 8 *Tax Notes* 459-74.

declined significantly. For example, Devereux, Griffith, and Klemm²⁹ note that average statutory corporate income tax rates in the European Union and the United States fell dramatically from 48 percent in 1982 to 35 percent in 2001. Similarly, Devereux³⁰ shows that the average statutory tax rate in the OECD countries was roughly 40 percent over the period from 1965 to the early 1990s, but dropped from 41 percent in 1988 to 33 percent in 1993, and was roughly constant at that level through 2004 (when it was 32 percent). At the same time, however, those rate reductions have been accompanied by base-broadening efforts, so that overall corporate tax revenues as well as average effective tax rates (AETRs) and especially METRs have declined considerably less;³¹ indeed, corporate tax revenues as a share of total revenues have risen over the past two decades in both the United States and Canada.³² Similarly, corporate tax revenues as a fraction of GDP have been roughly constant over the past 40 years, and indeed have increased in recent years.³³ This evidence is suggestive of tax competition in statutory rates, but it also implies that tax competition has not yet had as significant an impact in these countries on the METRs that are the relevant concept in most theoretical tax-competition models.³⁴

More generally, although the data are now somewhat dated, Grubert³⁵ examines a sample of 60 countries and shows that AETRs, defined as foreign taxes paid relative

29 Michael P. Devereux, Rachel Griffith, and Alexander Klemm, "Corporate Income Tax Reforms and International Tax Competition" (2002) vol. 17, no. 35 *Economic Policy* 451-95.

30 Michael P. Devereux, *Developments in the Taxation of Corporate Profit in the OECD Since 1965: Rates, Bases and Revenues*, Oxford University Centre for Business Taxation Working Paper no. 07/04 (Oxford: Oxford University Centre for Business Taxation, 2007).

31 Devereux, Griffith, and Klemm, *supra* note 29; Joeri Gorter and Ruud de Mooij, *Capital Income Taxation in Europe: Trends and Trade-Offs*, CPB Special Publications no. 30 (The Hague: CPB Netherlands Bureau for Economic Policy Analysis, 2001); and Johannes Becker and Clemens Fuest, *Optimal Tax Policy When Firms Are Internationally Mobile*, CESifo Working Paper no. 1592 (Munich: Center for Economic Studies and Ifo Institute for Economic Research, 2005).

32 Alan J. Auerbach, *The Future of Capital Income Taxation*, Berkeley Program in Law and Economics Working Paper no. 217 (Berkeley, CA: Berkeley Program in Law and Economics, 2006).

33 Devereux, *supra* note 30.

34 See Devereux, *ibid.*, for a discussion of additional possible explanations for the relative stability of corporate revenues in light of reductions in statutory rates, including increased inward profit shifting as statutory rates decline, increased shifting of income to the corporate base from the individual base, increased relative firm profitability, and increased investment in response to tax reductions. In addition, Auerbach argues that corporate tax revenues have increased owing to increasing dispersion of corporate profitability, coupled with the fact that profits are taxed while losses are not fully deductible, resulting in a higher average tax rate on positive income net of losses: Alan J. Auerbach, *Why Have Corporate Tax Revenues Declined? Another Look*, NBER Working Paper no. 12463 (Cambridge, MA: National Bureau of Economic Research, 2006).

35 Harry Grubert, "Tax Planning by Companies and Tax Competition by Governments: Is There Evidence of Changes in Behavior?" in *International Taxation and Multinational Activity*, *supra* note 23, 113-39.

to net income as reported by US MNEs to the Internal Revenue Service (IRS), fell by almost 10 percentage points between 1984 and 1992,³⁶ with statutory rates falling by a somewhat smaller amount (and rates in the European Union falling by less than this average). This result is more consistent with the existence of tax competition in effective tax rates, as is Grubert's finding that AETRs fell much more in the small, open, and relatively poor countries that are most susceptible to the effects of tax competition.³⁷ Altshuler and Grubert³⁸ find that the rate of decline in AETRs continued but moderated over the 1992-2000 period, and that although the declines were more pronounced in smaller countries through 1997, this result vanishes for the period 1998-2000—a result that they attribute to the increased importance of tax planning and tax-avoidance activities rather than to reduced competition in tax rates. Similarly, Slemrod³⁹ finds that statutory tax rates are negatively associated with measures of openness (although he does not find evidence of such a link for revenues as a fraction of GDP). Devereux, Lockwood, and Redoano⁴⁰ present empirical evidence consistent with an expanded structural model of tax competition in which countries engage both in tax competition in statutory tax rates to attract mobile profits and investments that earn above-normal returns (as will be discussed further below), and in tax competition in METRs.

Garretsen and Peeters⁴¹ examine the impact of increasing capital mobility (measured either as increases in FDI flows relative to gross capital formation, or by using an index of the extent of the legal restriction placed on international capital mobility) on corporate tax rates for a sample of 19 OECD countries. They base their model on the theory of tax competition with agglomeration economies, which suggests that tax competition should be less intense among “core countries” that are characterized by significant economies of agglomeration, relative to smaller, less developed

36 This evidence is difficult to interpret because corporate AETRs may fall for many reasons other than changes in the corporate tax structure, including variations in profit rates, cyclical factors, interactions between the corporate and individual tax systems when individual rates change, changes in inflation rates, and changes in the extent to which multinationals engage in income-shifting activities. See Jack M. Mintz and Duanjie Chen, “Will the Corporate Income Tax Withier?” in *Report of Proceedings of the First World Tax Conference: Taxes Without Borders* (Toronto: Canadian Tax Foundation, 2000), 45:1-16.

37 Grubert notes that rates in the European Union have not converged over this period and argues that this suggests an absence of tax competition: *supra* note 35. However, this interpretation is open to question: if the long-run implication of increased tax competition is that corporate income tax rates will converge to zero, it is not clear that convergence about intermediate rates during the transition to this equilibrium should necessarily be expected.

38 Altshuler and Grubert, *supra* note 28.

39 Joel Slemrod, “Are Corporate Tax Rates, or Countries, Converging?” (2004) vol. 88, no. 6 *Journal of Public Economics* 1169-86.

40 Michael P. Devereux, Ben Lockwood, and Michela Redoano, “Do Countries Compete over Corporate Tax Rates?” (manuscript, University of Warwick, 2005).

41 Harry Garretsen and Jolanda Peeters, *Capital Mobility, Agglomeration and Corporate Tax Rates: Is the Race to the Bottom for Real?* De Nederlandsche Bank Working Paper no. 113 (September 2006).

“peripheral” countries.⁴² They find that increased capital mobility does lead to tax competition in the form of lower corporate tax rates, but that this effect is considerably less pronounced for countries with significant agglomeration economies (estimated using several measures of market potential); they conclude that “[i]f there is a race to the bottom, it seems that it is more real for some countries than others.”⁴³ Their results suggest that international tax competition for mobile capital falls in the low to moderate range for Canada, which ranks between third and ninth among the 19 countries in their sample in the level of agglomeration economies according to their various measures; Canada’s relatively high ranking is explained primarily by its proximity to the US market.⁴⁴

A further complicating factor in measuring the extent of tax competition, stressed by Altshuler and Grubert,⁴⁵ is that it may increasingly be taking the form of allowing and even facilitating tax avoidance by MNEs. If this is so, the AETRs on MNEs in host countries may be relatively low once tax avoidance is taken into account, while effective tax rates may be higher for domestic firms that cannot take advantage of these opportunities. These techniques may be facilitated by the home country of the MNE in the interest of international competitiveness. Altshuler and Grubert estimate that more aggressive use of tax-planning techniques, facilitated by both host and home countries, reduced the tax burdens of MNEs by 15 percent in 2002.

Yet another complicating factor in interpreting the empirical evidence on tax competition, especially during the late 1980s and early 1990s, is that much of the statutory tax rate reduction that has occurred worldwide over the past 30 years may be attributable not to international tax competition but to a widespread perception, supported by many economists, that a movement toward broader bases and lower rates is an inherently desirable tax policy, especially following the large-scale reforms in the mid-1980s in the United States and the United Kingdom that were based on this longstanding principle.⁴⁶ In addition, to the extent that capital-importing countries were at least partially setting their corporate rates to maximize the treasury transfer effect from the United States and the United Kingdom (discussed further below), reductions in their corporate tax rates would have been

42 Richard E. Baldwin and Paul Krugman, “Agglomeration, Integration and Tax Harmonisation” (2004) vol. 48, no. 1 *European Economic Review* 1-23.

43 Garretsen and Peeters, *supra* note 41, at 1 (abstract).

44 The countries in the study sample are Australia, Austria, Belgium, Canada, Finland, France, Germany, Greece, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

45 Altshuler and Grubert, *supra* note 28.

46 Cnossen and Messere describe the worldwide reforms that followed the US and UK reforms: Sijbren Cnossen and Ken Messere, “Personal Income Tax Reforms in OECD Member Countries,” in Sijbren Cnossen and Richard M. Bird, eds., *The Personal Income Tax: Phoenix from the Ashes?* (Amsterdam: North-Holland, 1990), 17-60.

expected after the 1980s reforms. Indeed, Grubert, Randolph, and Rousslang⁴⁷ demonstrate that the amount of foreign-source income for US MNEs that would have been attributable to firms in an excess foreign tax credit (FTC) position would have soared had such rate reductions not occurred. Thus, although there is considerable evidence which suggests that the statutory tax rate and METR reductions predicted by some theories of tax competition are occurring, that evidence is not yet entirely conclusive. Moreover, tax competition is more likely to affect smaller, less developed countries than countries with significant economies of agglomeration, with Canada characterized by a relatively high level of such economies, and some of the recent declines in AETRs appear to be due to the increased use of tax planning and tax-avoidance activities rather than to increasing competition in tax rates.

The purpose of this article is to examine Canadian corporate income tax policy within this context, following and extending the analytical framework initially presented in Zodrow⁴⁸ and focusing on income tax reform while ignoring more sweeping options involving consumption-based direct taxes. The remainder of the study proceeds as follows. The following section considers the arguments for tax exemption or even subsidization of capital income; the subsequent section considers qualifications to those arguments. In both cases, the discussion of theoretical arguments is followed by an examination of the empirical evidence, including studies specific to Canada as applicable and available. The fourth section sets out the implications of the analysis for corporate income tax policy in Canada.

THE CASE FOR TAX EXEMPTION OR SUBSIDIZATION OF CAPITAL INCOME

The Basic Argument for a Zero Tax Rate

The standard argument against source-based taxation of capital income by a small open economy—defined as one that is too small to affect the return to internationally mobile capital or the prices of internationally traded goods—is that such taxation is inherently counterproductive because mobile international capital will migrate from the taxing country until its before-tax rate of return rises enough to entirely offset the tax.⁴⁹ This emigration of capital lowers the productivity of the

47 Harry Grubert, William Randolph, and Donald Rousslang, "Country and Multinational Company Responses to the Tax Reform Act of 1986" (1996) vol. 49, no. 3 *National Tax Journal* 341-58.

48 George R. Zodrow, "Capital Mobility and Source-Based Taxation of Capital Income in Small Open Economies" (2006) vol. 13, no. 2 *International Tax and Public Finance* 269-94.

49 George R. Zodrow and Peter Mieszkowski, "The Incidence of the Property Tax: The Benefit View vs. the New View," in George R. Zodrow, ed., *Local Provision of Public Services: The Tiebout Model After Twenty-Five Years* (New York: Academic Press, 1983), 109-29; Roger H. Gordon, "Taxation of Investment and Savings in a World Economy" (1986) vol. 76, no. 5 *The American Economic Review* 1086-1102; and Assaf Razin and Efraim Sadka, "International Tax Competition and Gains from Tax Harmonization" (1991) vol. 37, no. 1 *Economics Letters* 69-76. This argument ignores any FTCs for host-country taxes that might be granted in the home

fixed factors in the taxing country—land and labour (or at least relatively immobile labour)—so that local factors of production ultimately bear the entire burden of the capital income tax, including the revenue raised and the efficiency costs of the tax. The efficiency costs arise for numerous reasons. Most obviously, the tax induces an inefficiently low overall capital intensity of production and a tax bias favouring labour-intensive goods.⁵⁰ In addition, as stressed in the tax-competition literature, the use of capital income taxation creates downward pressure on capital income tax rates due to interjurisdictional competition for mobile capital, which in turn creates a tendency for inefficiently low expenditures on public services.⁵¹ Finally, Harberger⁵² argues that in a small open economy, immobile labour and land will typically bear more than 100 percent of a tax on capital income, once general equilibrium effects across business sectors are considered. Specifically, Harberger analyzes the effects of a corporate income tax in the context of a general equilibrium

country, an issue that is discussed below. In addition, it is important to note that this argument does not extend to benefit taxes that reflect the value to businesses of public services, including public infrastructure (see Richard M. Bird and Thomas Tsiopoulos, “User Charges for Public Services: Potentials and Problems” (1997) vol. 45, no. 1 *Canadian Tax Journal* 25-86; and David G. Duff, “Benefit Taxes and User Fees in Theory and Practice” (2004) vol. 54, no. 4 *University of Toronto Law Journal* 391-447), or to taxes on negative externalities such as pollution taxes; both of these forms of taxation are highly desirable sources of revenue if structured appropriately.

50 Gordon and Hines, *supra* note 20.

51 George R. Zodrow and Peter Mieszkowski, “Pigou, Tiebout, Property Taxation, and the Under-Provision of Local Public Goods” (1986) vol. 19, no. 3 *Journal of Urban Economics* 356-70; John D. Wilson, “A Theory of Interregional Tax Competition” (1986) vol. 19, no. 3 *Journal of Urban Economics* 296-315; and Hans-Werner Sinn, “Tax Harmonization and Tax Competition in Europe” (1990) vol. 34, no. 2-3 *European Economic Review* 489-504. Tax competition models often suggest a “race to the bottom” as tax competition eliminates capital income taxes, although this could just as easily be labelled a “race to the top” as countries are forced to use efficient benefit taxes to finance their public services rather than inefficient non-benefit taxes on mobile capital: see Charles E. McLure, “Tax Competition: Is What’s Good for the Private Goose Also Good for the Public Gander?” (1986) vol. 39, no. 3 *National Tax Journal* 341-48. For recent reviews of the voluminous literature on both negative and positive aspects of tax competition, see John D. Wilson, “Theories of Tax Competition” (1999) vol. 52, no. 2 *National Tax Journal* 269-304; Mintz and Chen, *supra* note 35; Wallace Oates, “Fiscal Competition and European Union: Contrasting Perspectives” (2001) vol. 31, no. 2-3 *Regional Science and Urban Economics* 133-45; George R. Zodrow, “Tax Competition and Tax Coordination in the European Union” (2003) vol. 10, no. 6 *International Tax and Public Finance* 651-71; Clemens Fuest, Bernd Huber, and Jack Mintz, “Capital Mobility and Tax Competition: A Survey” (2005) vol. 1, no. 1 *Foundations and Trends in Microeconomics* 1-62; and David E. Wildasin and John D. Wilson, “Capital Tax Competition: Bane or Boon?” (2004) vol. 88, no. 6 *Journal of Public Economics* 1065-91.

52 Arnold C. Harberger, “The ABCs of Corporate Tax Incidence: Insights into the Open-Economy Case,” in American Council for Capital Formation, ed., *Tax Policy and Economic Growth* (Washington, DC: ACCF Center for Policy Research, 1995), 51-71; and Arnold C. Harberger, “Corporate Tax Incidence: Reflections on What Is Known, Unknown, and Unknowable,” in *Fundamental Tax Reform*, *supra* note 17, 283-308.

model with four sectors (corporate and non-corporate tradable goods and corporate and non-corporate non-tradable goods). He argues that when a corporate income tax is imposed in an open economy, its economic effects are determined primarily in the corporate tradable goods sector, since both the price of tradable goods and the after-tax return to capital are fixed. As a result, labour must bear all of the tax burden in this sector. However, because labour is mobile, its price falls across all sectors, which creates a tendency for labour to bear more than 100 percent of the tax—a result that Harberger argues obtains for most of his analyses; for example, in the central case that he considers,⁵³ labour bears 130 percent of the burden of the corporate income tax.

The clear implication of all these analyses is that, solely from the viewpoint of the residents of the taxing country, it is preferable simply to tax local factors (land and relatively immobile labour) directly, and thus avoid at least the efficiency costs of the tax on capital income. Furthermore, this argument implies that concerns about the equity implications of reducing source-based taxes on capital income in an open economy are misplaced: the incidence of such a tax will not fall on relatively wealthy capital owners, but instead will be borne by labour as lower wages or by consumers as higher prices. This logic yields the now standard zero tax result—in a small open economy, the optimal source-based tax rate on capital income is zero.⁵⁴

It is important to note that these results are typically derived within the context of models that assume a perfectly competitive environment, and thus imply that it is the METR, or the effective source-based tax rate applied to a break-even investment that just earns normal profits, that should be zero. This does not imply, however, that the statutory business tax rate must necessarily be zero. For example, the

53 Harberger, “Corporate Tax Incidence,” *supra* note 52.

54 These arguments, of course, supplement the traditional case against the most common form of source-based capital income taxation, the corporate income tax. Many observers have argued that the corporate tax, especially when applied to MNEs, is a singularly complex and inefficient tax instrument, significantly distorting a wide variety of decisions, including those regarding asset mix, method of finance, organizational form, and the mix of retentions, dividends paid, and share repurchases: see Jane G. Gravelle, *The Economic Effects of Taxing Capital Income* (Cambridge, MA: MIT Press, 1994); and Sijbren Cnossen, “Company Taxes in the European Union: Criteria and Options for Reform” (1996) vol. 17, no. 4 *Fiscal Studies* 67-97. Moreover, taxation of capital income reduces the level of investment, which in turn reduces labour productivity and wage growth. Indeed, although it is still a contentious issue, many tax experts argue that—independent of international considerations—taxation on the basis of consumption is, for these and other reasons, preferable to income taxation; that is, a METR of zero on the return to saving and investment, including taxes on a personal level, is desirable. For recent reviews of these arguments, see Auerbach, *supra* note 32; Alan J. Auerbach, “Tax Reform in the 21st Century,” in *Fundamental Tax Reform*, *supra* note 17; Peter Birch Sorensen, *Can Capital Income Taxes Survive? And Should They?* CESifo Working Paper no. 1793 (Munich: Center for Economic Studies and Ifo Institute for Economic Research, 2006); and George R. Zodrow, “Should Capital Income Be Subject to Consumption-Based Taxation?” in Henry J. Aaron, Leonard E. Burman, and C. Eugene Steuerle, eds., *Taxing Capital Income* (Washington, DC: Urban Institute, 2007).

standard zero tax prescription is consistent with a business cash flow tax that allows immediate expensing (rather than deductions for depreciation), and thus is characterized by a METR of zero, while above-normal returns or economic rents are simultaneously taxed at the statutory tax rate. The more recent literature, however, has argued that a more broadly defined concept of tax competition applies to statutory tax rates as well.

Extending the Zero Tax Argument to Statutory Tax Rates

Although the discussion thus far has focused on the effects of taxation on marginal investments, two additional strands of the literature have emphasized the important role played by statutory tax rates. Specifically, much recent research focuses on the effects of statutory tax rates on the decisions of MNEs regarding the location of investments that generate firm-specific economic rents⁵⁵ and on income shifting across countries by the MNEs.

The Taxation of Firm-Specific Rents

The accelerating pace of globalization implies that a key element in the evaluation of any system of capital income taxation is its effects on investment by large MNEs. METR analysis is relevant for investment by an MNE, because its level of investment, given its decision to invest in a country, will be affected by the METRs associated with the tax system in that country. However, as stressed by Devereux and Griffith⁵⁶ and Devereux and Hubbard,⁵⁷ the economic theories underlying the formation of MNEs and their decisions to invest abroad focus on their potential to earn significant economic rents, especially those attributable to ownership, locational, or internalization advantages.⁵⁸ Much of these rents are firm-specific—that is, they are attributable to

55 The zero tax argument does not, however, apply to location-specific rents, discussed below. It should be noted that distinguishing between firm-specific and location-specific rents is far from straightforward. See James R. Markusen, “The Boundaries of Multinational Enterprises and the Theory of International Trade” (1995) vol. 9, no. 2 *Journal of Economic Perspectives* 169-89, for a recent review of the theory of multinational enterprises, including a discussion of the characteristics of multinational investments that may generate location-specific and firm-specific economic rents.

56 Michael P. Devereux and Rachel Griffith, “Taxes and the Location of Production: Evidence from a Panel of U.S. Multinationals” (1998) vol. 68, no. 3 *Journal of Public Economics* 335-67; and Michael P. Devereux and Rachel Griffith, “The Impact of Corporate Taxation on the Location of Capital: A Review” (2003) vol. 33, no. 2 *Economic Analysis and Policy* 275-92.

57 Michael P. Devereux and R. Glenn Hubbard, “Taxing Multinationals” (2003) vol. 10, no. 4 *International Tax and Public Finance* 469-87.

58 J.H. Dunning, “Trade, Location of Economic Activity, and the Multinational Enterprise: A Search for an Eclectic Approach,” in B. Ohlin, P.O. Hesselborn, and P.M. Wijkman, eds., *The International Allocation of Economic Activity* (London: Macmillan, 1977), 395-418; and J.H. Dunning, *International Production and the Multinational Enterprise* (London: Allen and Unwin, 1981). Rather surprisingly, empirical evidence on the extent to which MNEs actually earn above-normal rents, at least outside the resource sector, is limited, and the available results are

factors such as unique technological knowledge, superior managerial skills or production techniques, or valuable brands, trademarks, reputations, and other intangible assets. Moreover, recent empirical evidence indicates that the dispersion of relative profitability in the United States has increased significantly in recent years, suggesting an increase in the relative importance of investments that generate above-normal returns.⁵⁹ Such investments are also among those most highly prized by national governments, because they are most likely to be associated with high levels of technology transfer and the generation of other external benefits. In addition, this literature stresses that multinational decisions regarding the location of such investments are typically made among numerous mutually exclusive discrete choices; for example, a firm may want to take advantage of significant economies of scale due to large fixed costs by choosing a single location to serve multiple national markets.

In these circumstances, the key tax factor affecting investment decisions is the AETR, defined by Devereux and Griffith⁶⁰ as a weighted average of the statutory rate and the METR, with the weights equal to the above-normal and normal rates of return available on investments. This reasoning has important implications for international tax competition. Specifically, because the investments that generate firm-specific economic rents are also highly mobile, countries face an incentive to undercut their competitors in an attempt to gain the benefits of such investment for their residents, resulting in an equilibrium in which there is again a tendency for capital income tax rates to be competed down to zero.⁶¹ Thus, because these investments are discrete and generate economic rents, the statutory rate is as critical as the marginal effective rate—and the standard tax competition models imply that both rates should be zero for a small open economy.

Recent empirical evidence supports the importance of AETRs, and thus statutory tax rates, in determining investment levels. The study most often cited is by Devereux and Griffith,⁶² who investigate the effects of AETRs and METRs on the production location decisions of a sample of US MNEs. Devereux and Griffith construct a model in which the level of investment is determined primarily by the METR, while the choice of investment location among several alternative options is determined primarily by the AETR. Their empirical results indicate that a 1 percentage point increase in the AETR in a country reduces the probabilities of a US firm

largely inconclusive: see, for example, John Doukas and Nickolaos G. Travlos, "The Effect of Corporate Multinationalism on Shareholders' Wealth: Evidence from International Acquisitions" (1988) vol. 43, no. 5 *Journal of Finance* 1161-75.

59 Auerbach, *supra* note 32.

60 Devereux and Griffith, "The Impact of Corporate Taxation on the Location of Capital," *supra* note 56.

61 Gordon and Hines, *supra* note 20.

62 Devereux and Griffith, "Taxes and the Location of Production," *supra* note 56.

choosing to produce there by between 0.5 and 1.3 percentage points.⁶³ Several other studies have linked FDI and AETRs; for example, Altshuler, Grubert, and Newlon,⁶⁴ using an AETR measure, estimate an elasticity of FDI with respect to the cost of capital of 2.7.

Devereux, Lockwood, and Redoano⁶⁵ explicitly examine the issue of the extent of international tax competition over METRs and statutory tax rates. Following the literature cited above, they construct a model in which MNEs choose their investment locations in response to differences in statutory tax rates and choose their level of investment, given the locations, in response to the METR. In addition, as discussed below, firms are assumed to have the ability to shift profits across jurisdictions in response to differences in statutory tax rates. Governments potentially compete in both METRs and statutory tax rates. Devereux, Lockwood, and Redoano analyze multinational investment decisions in a sample of 21 OECD countries over the period 1982-1999. They find strong evidence of international tax competition over statutory corporate tax rates; specifically, they estimate that a 1 percentage point reduction in the weighted average statutory tax rate in other countries results in a 0.7 percentage point reduction in the home-country tax rate. They also find evidence of competition in METRs, but the magnitudes of the effects are much smaller, suggesting that competition over statutory tax rates is the dominant form of international tax competition.⁶⁶ Finally, they note that their estimated government tax reaction functions suggest that equilibrium statutory tax rates should have fallen substantially over the time period considered, consistent with the observed behaviour described above.

The Role of Income Shifting in Limiting Statutory Tax Rates

The argument for low statutory tax rates owing to tax competition for firm-specific economic rents is buttressed by the pervasive phenomenon of income shifting. Modern MNEs have considerable discretion in allocating profits among the various countries in which they operate. In particular, because it is exceedingly difficult for tax authorities to allocate a multitude of overhead expenses, determine appropriate “transfer prices” for transactions between related entities, and allocate deductions for

63 This result, however, is sensitive to the choice of the AETR variable; in particular, the effect of the AETR on the probability that a US firm will invest in a particular country disappears if an accounting measure of the AETR is utilized.

64 Altshuler, Grubert, and Newlon, *supra* note 23.

65 Devereux, Lockwood, and Redoano, *supra* note 40.

66 Devereux, Lockwood, and Redoano note that the strategic tax interactions between countries that they observe occur only between relatively open economies, and argue that this implies that these interactions cannot be explained by either of two alternative theories—“yardstick competition” (under which voters evaluate their political representatives relative to those in neighbouring jurisdictions) or common intellectual trends, such as a move toward broader tax bases and lower rates.

interest expense, MNEs have considerable freedom in allocating revenues to low-tax countries and deductions to high-tax countries—in addition to the tax advantages offered by deferring repatriation of income held in low-tax jurisdictions, including tax havens. Although governments have attempted to minimize their revenue losses from these manipulations by using various tools (such as advance pricing agreements, thin capitalization rules, interest allocation rules, and special treatment of passive investment income), revenue losses due to income shifting still pose a serious problem for most countries. This in turn puts downward pressure on statutory corporate income tax rates—the rates that are relevant for income shifting because they determine the value of deductions and the tax cost of revenues—since any country with a relatively high tax rate will receive a disproportionately large share of worldwide deductions or lose its fair share of worldwide revenues. Alternatively, from the perspective of the taxing country, a lower corporate income tax rate is advantageous (beyond the conventional effect of attracting investment through a lower cost of capital) because it may increase tax revenues by encouraging firms to engage in manipulations that allocate revenue to the taxing country and expenses elsewhere. Similarly, a lower tax rate may have an independent effect in attracting FDI to a country, since having investments in low-tax countries facilitates such tax-avoidance manipulations.⁶⁷ Yet a third argument for a low statutory corporate income tax rate is the “headline tax rate” argument. Specifically, MNEs may, at least in the initial stages of choosing among competing locations, focus on a comparison of statutory tax rates across the locations, independent of special provisions that might lower the METR, such as accelerated CCAs, investment tax credits or other investment allowances, and other investment tax preferences, which are considered only in a subsequent evaluation of countries that make the short list of potential investment locations. All of these factors suggest that the revenue costs associated with a reduction in the corporate tax rate will be less than implied by an analysis that assumes a constant tax base, and indeed they raise the possibility that at a sufficiently high tax rate, a rate reduction will actually increase revenues.

Several recent papers have identified conditions under which statutory tax rate reductions are desirable, even if they must be accompanied by base-broadening measures that increase METRs. For example, Haufler and Schjelderup⁶⁸ consider the case in which MNEs earn above-normal profits and can use transfer pricing to shift those profits to low-tax countries; they assume that for political or other reasons the government must raise a fixed amount of revenue from the corporate income tax. Haufler and Schjelderup show that the optimal corporate income tax policy in these

67 Joel Slemrod, “The Taxation of Foreign Direct Investment: Operational and Policy Perspectives,” in James M. Poterba, ed., *Borderline Case: International Tax Policy, Corporate Research and Development, and Investment* (Washington, DC: National Academy Press, 1997), 11-38.

68 Andreas Haufler and Guttorm Schjelderup, “Corporate Tax Systems and Cross Country Profit Shifting” (2000) vol. 52, no. 2 *Oxford Economic Papers* 306-25.

circumstances can be to lower statutory rates and broaden the corporate tax base, even at the cost of raising the METR on new investment.⁶⁹ Fuest and Hemmelgarn⁷⁰ obtain a similar result in a model in which firms earn only normal profits, as they demonstrate that a rate-lowering, base-broadening policy may be optimal if firms can reallocate debt to minimize their tax liability. Becker and Fuest⁷¹ show that in the presence of differentially mobile firms, corresponding loosely to relatively mobile MNEs and relatively immobile domestic firms, a rate-lowering, base-broadening reform will be desirable if the marginal highly mobile firm is more profitable than the average firm in the country. In this case, a lower statutory tax rate induces the high-profitability mobile firms to remain in the country, since their profits are taxed relatively lightly, while the broader tax base implies that more revenues are collected from the low-profitability immobile firms. In the Canadian context, Mintz⁷² estimates that the revenue-maximizing corporate income tax rate is in the neighbourhood of 28 percent.

Empirical research confirms conclusively that MNEs engage in the tax-avoidance manipulations described above, including shifting revenues to low-tax countries, shifting deductions (including interest expense) to high-tax countries, and arranging to defer repatriations subject to tax. For example, many tests of the extent of tax-motivated transfer pricing examine differences in profitability across host countries with varying tax rates; Hines⁷³ provides a review of this literature. Normally, one would expect before-tax profits to be relatively low in low-tax host countries, since the host-country tax burden is relatively low. However, numerous studies have found that after-tax profitability tends to be high in low-tax countries, suggesting that firms are shifting profits to such countries, especially tax havens.⁷⁴ For example,

69 Base broadening is modelled as reducing depreciation allowances. In the absence of opportunities for transfer pricing, the optimal policy is to allow expensing (a consumption-based business tax), in which case normal returns are untaxed while above-normal returns are taxed at the statutory rate.

70 Clemens Fuest and Thomas Hemmelgarn, "Corporate Tax Policy, Foreign Firm Ownership and Thin Capitalization" (2005) vol. 35, no. 5 *Regional Science and Urban Economics* 508-26.

71 Becker and Fuest, *supra* note 31.

72 Mintz, *supra* note 13.

73 Hines, *supra* note 21.

74 Harry Grubert and Jack Mutti, "Taxes, Tariffs and Transfer Pricing in Multinational Corporate Decision Making" (1991) vol. 73, no. 2 *Review of Economics and Statistics* 285-93; David Harris, Randall Morck, Joel Slemrod, and Bernard Yeung, "Income Shifting in U.S. Multinational Corporations," in Alberto Giovannini, R. Glenn Hubbard, and Joel Slemrod, eds., *Studies in International Taxation* (Chicago: University of Chicago Press, 1993), 277-302; James R. Hines Jr. and Eric M. Rice, "Fiscal Paradise: Foreign Tax Havens and American Business" (1994) vol. 109, no. 1 *Quarterly Journal of Economics* 149-82; and Julie Collins, Greg Geisler, and Douglas Shackelford, "The Effects of Taxes, Regulatory Capital, Earnings, and Organizational Form on Life Insurers' Investment Portfolio Realizations" (1998) vol. 24, no. 3 *Journal of Accounting and Economics* 337-61.

Hines and Rice⁷⁵ find that a tax rate differential of 1 percentage point is associated with a 2.3 percent differential in before-tax profitability. More recently, Grubert⁷⁶ shows that tax-minimizing choices regarding the location of intangible income and the allocation of debt explain all the observed differences in profitability across countries with high and low statutory tax rates. Moreover, increasing economic integration, especially the greater intra-firm trade that now accounts for nearly 40 percent of all US international trade,⁷⁷ suggests that such tax-motivated income shifting is likely to become more prevalent over time. This conjecture is supported by empirical evidence presented in Grubert⁷⁸ and Altshuler and Grubert,⁷⁹ who find dramatic increases in income shifting over time; indeed, the Altshuler-Grubert estimates imply that on average in 2000 the ratio of profits to pre-tax earnings in a country with a 10 percent corporate tax rate is almost twice that in a country with a 40 percent tax rate.

The most striking results are obtained in two recent studies that examine income shifting directly. Bartelsman and Beetsma⁸⁰ estimate the extent of income shifting due to changes in transfer prices on intra-firm transactions in the manufacturing sector in response to national tax differentials for a sample of industrial sectors in a group of OECD countries. They find evidence of significant income shifting: a 1 percent increase in a country's tax rate leads to a decline in reported before-tax income of 2.7 percent. Their estimates suggest that the revenue increase from a unilateral tax increase is reduced by more than 65 percent because of income shifting solely in the form of transfer pricing (that is, their estimate of the degree of income shifting does not include reallocation of debt in response to the tax increase). Similarly, Clausing⁸¹ finds that prices for intra-firm imports and exports are strongly affected by international tax differentials. Her estimates indicate that relative to goods that are not traded within the firm, a reduction in a country's statutory tax rate of 1 percentage point results in changes in the prices of intra-firm traded goods of roughly 2 percent in the directions predicted by a tax-minimization strategy.

In addition, several studies find that deductible interest payments (and in some cases rents and royalties) tend to be made by subsidiaries in high-tax countries, while non-deductible dividend payments tend to be made in low-tax countries. For

75 Hines and Rice, *supra* note 74.

76 Harry Grubert, "Intangible Income, Intercompany Transactions, Income Shifting, and the Choice of Location" (2003) vol. 56, no. 1, Part 2 *National Tax Journal* 221-42.

77 Kimberly A. Clausing, "Tax-Motivated Transfer Pricing and U.S. Intrafirm Trade Prices" (2003) vol. 87, no. 9 *Journal of Public Economics* 2207-23.

78 Grubert, *supra* note 35.

79 Altshuler and Grubert, *supra* note 28.

80 Eric J. Bartelsman and Roel M.W.J. Beetsma, "Why Pay More? Corporate Tax Avoidance Through Transfer Pricing in OECD Countries" (2003) vol. 87, no. 9-10 *Journal of Public Economics* 2225-52.

81 Clausing, *supra* note 77.

example, Altshuler and Grubert⁸² show that the financial structure of US-controlled foreign corporations is a highly negative function of local statutory tax rates; similar results are obtained by Hines and Hubbard⁸³ and Grubert.⁸⁴ Most recently, Huizinga, Laeven, and Nicodème⁸⁵ construct a model in which an MNE chooses its allocation of debt across the parent firm in its home country and its subsidiaries in all the other countries in which it operates to optimize its capital structure, taking into account the relative tax advantages in all countries as well as non-tax factors, such as limiting the likelihood of bankruptcy and constraining tendencies for over-investment by empire-building firm managers. Their model indicates that an MNE's indebtedness in a particular country is a function not only of the own-country tax rate but also of the difference between the own-country tax rate and foreign tax rates. They test their model using a sample of MNEs with investments in 33 European countries and find that the level of indebtedness in a country is fairly sensitive to tax-rate differentials. For example, for an MNE with two establishments of the same size in two separate countries, a 10 percent tax increase in one country increases the leverage ratio by 2.44 percent.⁸⁶ Finally, Buettner and Wamser⁸⁷ examine the use of intercompany loans by a large set of German MNEs over the period 1996–2004. They find strong evidence of the use of intercompany loans to lower tax liability; however, the revenue effects of the associated profit shifting are relatively small, suggesting that the costs of adjusting capital structure in order to shift profits may be substantial.

Similarly, there is evidence that MNEs reduce their combined tax liabilities by substituting deductible royalties for non-deductible dividends in host countries with

82 Rosanne Altshuler and Harry Grubert, "Repatriation Taxes, Repatriation Strategies, and Multinational Financial Policy" (2002) vol. 87, no. 1 *Journal of Public Economics* 73-107.

83 James R. Hines Jr. and R. Glenn Hubbard, "Coming Home to America: Dividend Repatriations by U.S. Multinationals," in Assaf Razin and Joel Slemrod, eds., *Taxation in the Global Economy* (Chicago: University of Chicago Press, 1990), 161-200.

84 Harry Grubert, "Taxes and the Division of Foreign Operating Income Among Royalties, Interest, Dividends and Retained Earnings" (1998) vol. 68, no. 2 *Journal of Public Economics* 269-90.

85 Harry Huizinga, Luc Laeven, and Gaëtan Nicodème, *Capital Structure and International Debt Shifting*, European Economy Economic Paper no. 263 (Brussels: European Commission, 2006).

86 Huizinga, Laeven, and Nicodème, *ibid.*, also find that the relevant tax rates are the source-country tax rates, rather than residence-based tax rates on worldwide income. They suggest that this is largely because the home-country tax can be deferred indefinitely (consistent with the "new view" of the effects of dividend taxation, discussed below). In addition, they find that withholding taxes are largely irrelevant to determining debt policy, because MNEs can generally avoid such taxes—for example, by routing dividend payments through a conduit company in a third country.

87 Thiess Buettner and Georg Wamser, *Intercompany Loans and Profit Shifting—Evidence from Company-Level Data*, CESifo Working Paper no. 1959 (Munich: Center for Economic Studies and Ifo Institute for Economic Research, 2007).

high tax rates.⁸⁸ Hines and Hubbard⁸⁹ and Desai, Foley, and Hines⁹⁰ find that US MNEs are more likely to defer repatriation if its tax costs are relatively high. Research and development (R & D) expenses and other intangible inputs also create opportunities for income shifting. For example, Hines⁹¹ estimates that the allocation of R & D expenditures is highly sensitive to international tax differentials; Altshuler and Grubert⁹² find that low-tax countries are becoming much more important destinations for intangibles initially produced in the United States; and Mutti and Grubert⁹³ estimate that less than half of the contribution of parent R & D expenditures to subsidiary income is reflected as royalties. Taken together, these results strongly support the widely held perception that many MNEs aggressively engage in various forms of international tax-avoidance activity.

Several studies examine the behaviour of Canadian firms specifically, and their results are also consistent with significant profit shifting. Mintz and Smart⁹⁴ examine income shifting in Canada in response to differences in provincial corporate tax rates. They estimate that the elasticity of taxable income with respect to statutory tax rates for groups of affiliated corporate firms that are not allowed to consolidate income for tax purposes and thus can engage in income shifting is more than twice as large as the elasticity for firms with limited opportunities for income shifting because they are subject to formula apportionment (4.9 versus 2.3).⁹⁵ This estimate, however, may not be directly applicable to international profit shifting, which is presumably somewhat more difficult than profit shifting within a country. Jog and Tang⁹⁶ examine income shifting in the form of debt reallocation in the context of the tax changes that occurred in the United States and Canada in the mid-1980s, a period during which (among many other changes) statutory rates in both countries

88 Grubert, Randolph, and Rousslang, supra note 47; and Grubert, supra note 84.

89 Hines and Hubbard, supra note 83.

90 Mihir A. Desai, C. Fritz Foley, and James R. Hines Jr., "Repatriation Taxes and Dividend Distortions" (2001) vol. 54, no. 4 *National Tax Journal* 829-51.

91 James R. Hines, "Taxes, Technology Transfer, and the R & D Activities of Multinational Firms," in Martin Feldstein, James R. Hines, and R. Glenn Hubbard (eds.), *The Effects of Taxation on Multinational Corporations* (Chicago: University of Chicago Press, 1995), 225-52.

92 Altshuler and Grubert, supra note 26.

93 John Mutti and Harry Grubert, "New Developments in the Effect of Taxes on Royalties and the Migration of Intangible Assets Abroad," paper presented at the NBER-CRIW Conference on International Services Flow (National Bureau of Economic Research—Conference on Research in Income and Wealth), Bethesda, Maryland, April 28-29, 2006.

94 Jack Mintz and Michael Smart, "Income Shifting, Investment, and Tax Competition: Theory and Evidence from Provincial Taxation in Canada" (2004) vol. 88, no. 6 *Journal of Public Economics* 1149-68.

95 Mintz and Smart also note that firms reduce the effective burden of relatively high tax rates through income shifting, thus dampening their negative effects on real investment.

96 Vijay Jog and Jianmin Tang, "Tax Reforms, Debt Shifting and Tax Revenues: Multinational Corporations in Canada" (2001) vol. 8, no. 1 *International Tax and Public Finance* 5-25.

declined, but by sufficiently less in Canada that it changed from being the relatively low-tax jurisdiction to the relatively high-tax jurisdiction. They estimate that Canadian tax revenues from foreign-controlled corporations would have been significantly larger had not their debt-to-asset ratios increased in response to the reform by between 45 and 120 percent. They caution that relatively high Canadian corporate income tax rates give rise to reallocations of debt that put pressure on the Canadian corporate tax base.

A Case for Subsidization

The Role of Imperfect Competition

Judd⁹⁷ extends the standard case for zero source-based taxation of capital income to argue that the optimal tax rate for capital income is negative—that is, capital income should be subsidized. The essence of Judd’s argument is that a significant number of markets in a modern economy are not perfectly competitive, as assumed in the standard model, but rather are characterized by market power and thus by prices that exceed marginal costs. This includes the market for capital goods if capital income is taxed, since such taxation effectively raises the price of capital goods above marginal cost, or if, as is the case in some Canadian provinces, indirect taxes are applied to capital goods. In principle, the distortions attributable to imperfect competition are best addressed through anti-trust policies focused on increasing competition. In the absence of such policies, however, a capital subsidy may be desirable to offset the monopolistic price distortion. Moreover, the well-known production efficiency theorem of Diamond and Mirrlees⁹⁸ implies that intermediate inputs, such as capital goods, should not be taxed.⁹⁹ Judd shows that this generally implies that capital income taxes are especially distortionary and capital income should be subsidized even if the revenues to finance the subsidy must be raised from distortionary taxes on consumption or labour supply.

In order to obtain a sense of the magnitudes involved, Judd simulates the optimal capital income subsidy in his model for a variety of values of the monopoly markup,

97 Kenneth L. Judd, *The Optimal Tax Rate for Capital Income Is Negative*, NBER Working Paper no. 6004 (Cambridge, MA: National Bureau of Economic Research, 1997); and Kenneth L. Judd, “The Impact of Tax Reform in Modern Dynamic Economies,” in Kevin A. Hassett and R. Glenn Hubbard, eds., *Transition Costs of Fundamental Tax Reform* (Washington, DC: AEI Press, 2001), 5-23.

98 Peter A. Diamond and James A. Mirrlees, “Optimal Taxation and Public Production I: Production Efficiency” (1971) vol. 61, no. 1 *The American Economic Review* 8-27, and “. . . II: Tax Rules” (1971) vol. 61, no. 2 *The American Economic Review* 261-78.

99 That is, Diamond and Mirrlees argue that consumption distortions are always preferable to production distortions. It is important to note, however, that this result obtains only if an optimal set of commodity taxes is available and utilized efficiently, and economic profits are taxed at a 100 percent tax rate; if these conditions are not met, then capital income taxation may be desirable to indirectly tax commodities that are not taxed optimally or to indirectly tax economic profits. The issue of taxation of economic rents is discussed further below.

the distortionary costs of alternative taxes on consumption or labour supply, and the extent of profit taxation. His optimal subsidies range from 10 percent to nearly 70 percent, with the largest subsidies corresponding to cases in which the markup is large, the distortionary costs of alternative taxes are low, and profits are taxed at a relatively high rate. One important result is that the optimal policy is almost always a subsidy, even if the distortionary costs of alternative taxes are relatively high. Judd also argues that the empirical evidence in the United States is consistent with larger differences between price and marginal cost in equipment industries than in structures. This implies that tax preferences favouring investment in equipment, such as an investment tax credit available only for equipment, are desirable on efficiency grounds.

The relevance of this argument for Canada clearly depends on the extent of monopolistic pricing in imperfectly competitive markets and the size of the resulting distortions in the form of excesses of price over marginal cost and economic rents. As discussed above, some markets are likely to be characterized by MNEs that earn firm-specific rents, and relatively easy access to the US domestic market and a long history of mutually beneficial trade suggests the potential for location-specific economic rents. At the same time, however, because Canada is a relatively small open economy, international competition is likely to limit economic rents in the markets for many tradable goods. Thus, the importance of this argument can be resolved only with empirical evidence on the importance of economic rents—sustained above-normal returns other than those attributable to dynamic innovation—in the key sectors of the Canadian economy with a significant multinational presence. In addition, although the capital subsidies implied in Judd's relatively simple analysis are relatively large, it is not clear whether similar results would be obtained in a more realistic fully developed general equilibrium model.

The Role of Imperfect Information

Gordon and Bovenberg¹⁰⁰ argue that information asymmetries provide an additional rationale for the subsidization of capital income. Specifically, they suggest that foreign investors are poorly informed, relative to domestic investors, regarding prospective investment returns, because they face an information disadvantage not only in predicting market outcomes but also in other areas such as understanding the nuances of the legal system and local customs, especially those concerning labour relations. As a result, they require a premium on the returns earned by investments in foreign countries. In these circumstances, Gordon and Bovenberg argue that countries attempting to attract such investments can effectively create such a premium with a capital income subsidy. If set correctly, this subsidy will offset the effects of the informational disadvantage faced by foreign investors.

100 Roger H. Gordon and A. Lans Bovenberg, "Why Is Capital So Immobile Internationally? Possible Explanations and Implications for Capital Income Taxation" (1996) vol. 86, no. 5 *The American Economic Review* 1057-75.

The Gordon-Bovenberg argument, however, appears to be relevant primarily for countries without well-developed accounting and legal systems. Its relevance for Canada seems to be limited, especially for investments by US MNEs, where a long tradition of cross-border investment exists and informational disadvantages seem to be minimal. Accordingly, the case for subsidizing capital income in Canada to offset informational disadvantages will not be considered further in this article.

QUALIFICATIONS

Of course, notwithstanding the arguments detailed in the previous section, the corporate income tax is still an important source of revenues in most developed and developing countries. A variety of arguments have been offered in support of its continued use,¹⁰¹ all of which qualify the argument that a small open economy should either exempt or subsidize capital income. Since all of these qualifications have at least some validity, they potentially provide support for the taxation of capital income—although it is exceedingly difficult to determine their quantitative importance relative to the case for capital income exemption or subsidization. Nevertheless, the pervasiveness of such taxation suggests that these qualifications have been taken seriously in virtually all countries. The following discussion examines these qualifications, reviews the empirical data on their relative importance, and attempts to gauge their importance in the Canadian context.

Openness of the Economy and Perfect Substitutability of Imports

The argument for tax exemption or subsidization of capital income assumes that the economy is sufficiently small that it faces a perfectly elastic supply of capital—a fixed, internationally determined rate of return—which implies that domestic residents, primarily labour, ultimately bear the burden of the capital income tax. In addition, the standard analysis assumes that in the markets for tradable goods, domestically produced goods and competing imports are perfect substitutes.

These two assumptions have been challenged by Gravelle and Smetters,¹⁰² who argue that, at least in the US context, some market power in the international capital market and/or imperfect substitutability between domestically produced traded goods and imports implies that much of the burden of a source-based tax on capital

101 Jack Mintz, “The Corporation Tax: A Survey” (1995) vol. 16, no. 4 *Fiscal Studies* 23-68; Peter Birch Sørensen, “Changing Views of the Corporate Income Tax” (1995) vol. 48, no. 2 *National Tax Journal* 279-94; Richard M. Bird, *Why Tax Corporations?* Department of Finance, Technical Committee on Business Taxation, Working Paper no. 96-2 (Ottawa: Department of Finance, 1996); Alfons Weichenrieder, *Why Do We Need Corporate Taxation?* CESifo Working Paper no. 1495 (Munich: Center for Economic Studies and Ifo Institute for Economic Research, 2005); Auerbach, supra note 32; Sørensen, supra note 54; and Zodrow, supra note 48.

102 Jane G. Gravelle and Kent A. Smetters, “Does the Open Economy Assumption Really Mean That Labor Bears the Burden of a Capital Income Tax?” (2006) vol. 6, no. 1 *Advances in Economic Analysis and Policy* 1-42.

income is borne by capital rather than labour. Moreover, even when capital does not bear the burden of such a tax, much of the burden is exported to foreign capital owners rather than borne by imperfectly mobile domestic labour. The Gravelle-Smetters argument thus presents a fundamental challenge to the standard tax exemption or subsidization result, because a source-based taxation of capital income is no longer necessarily counterproductive for the relatively immobile residents of a country.

The Gravelle-Smetters argument has two components. The first is fairly standard: if the economy is not small in the sense that it can affect the rate of return to capital earned in international markets, then some source-based taxation of capital income may be desirable. Specifically, if the country is a capital importer, taxation of capital income will reduce the demand for capital imports and improve domestic welfare by driving down the equilibrium rate of return to capital—that is, the cost of imported capital. In such a situation, the share of the tax burden borne by domestic capital is approximately equal to the share of world output produced by the domestic economy (with the rest of the tax burden borne by domestic labour), and the optimal tax rate on capital income is a function of the inverse of the elasticity of supply of international capital to the domestic economy.¹⁰³

The second element of the argument—and the point stressed by Gravelle and Smetters—is that whether or not the country faces a perfectly elastic supply of international capital, source-based capital income taxation may be desirable if

103 Variations of this argument are that a country that presents unique investment opportunities may impose a source-based capital income tax as a means of “charging” for the risk-spreading services it provides to multinationals (see Roger H. Gordon and Hal Varian, “Taxation of Asset Income in the Presence of a World Securities Market” (1989) vol. 26, no. 314 *Journal of International Economics* 205-26), and that a country with market power in its export markets may utilize a source-based capital income tax as an indirect means of driving up the world price of its exports (see David F. Burgess, “On the Relevance of Export Demand Conditions for Capital Income Taxation in Open Economies” (1988) vol. 21, no. 2 *Canadian Journal of Economics* 285-311). It seems unlikely that these arguments would be of quantitative significance for Canada. Bird (supra note 101) offers three other potential but less compelling economic justifications for a corporate income tax. First, a corporate tax might be used to offset other production inefficiencies (see David G. Hartman, *On the Optimal Taxation of Income in the Open Economy*, NBER Working Paper no. 1550 (Cambridge, MA: National Bureau of Economic Research, 1986); and Christopher Findlay, “Optimal Taxation of International Income Flows” (1986) vol. 62, no. 177 *Economic Record* 208-14); in practice, however, it would be difficult to structure the tax to do so effectively. Second, given the results presented above on the incidence of a source-based tax on capital income in a small open economy, such a tax may be a means of increasing taxes on immobile local factors beyond the level politically possible through the direct individual tax system (Sørensen, supra note 101) if such increases are deemed desirable and cannot be implemented through alternative means. Third, a corporate tax facilitates government intervention in the economy in the form of corporate tax preferences for various types of activities, which, if implemented for economically justifiable reasons (such as demonstrable external benefits to additional research and development activity) rather than for purely politically advantage, may be socially desirable; however, direct government expenditures can achieve the same goal in a more transparent fashion and without incurring the distortions of the corporate tax.

imported products are less than perfectly substitutable for domestically produced goods. If traded goods are imperfect substitutes, then some of the burden of a source-based tax on capital income can be shifted forward to domestic consumers, including the owners of domestic capital, who experience a reduction in purchasing power and thus bear some of the burden of the tax.

Gravelle and Smetters examine the incidence of a tax on capital income within the context of a four-sector (corporate and non-corporate tradable goods and corporate and non-corporate non-tradable goods) general equilibrium simulation model of the US economy similar to that described by Harberger.¹⁰⁴ With perfect substitutability between domestic goods and imports, the share of the tax burden borne by domestic labour is approximately equal to 1 minus the domestic share of world output (which implies a domestic labour tax burden share of about 70 percent in the case of the United States, but over 97 percent in the case of Canada). Moreover, the labour share falls dramatically as the substitutability between domestic goods and imports falls. For example, if the elasticity of substitution in consumption between traded corporate domestic goods and imports is reduced to 3.0, the share of the tax burden on domestic labour falls to 38 percent. In addition, Gravelle and Smetters argue that their result is reinforced if capital is imperfectly mobile, which also tends to decrease the share of the tax burden borne by domestic labour. For example, if domestic and imported goods are perfect substitutes but the elasticity of portfolio substitution between domestic and foreign capital with respect to the ratio of domestic and foreign rates of return is 3.0 (rather than infinite, as in the case of a perfectly elastic supply of foreign capital), the share of the tax burden on domestic labour falls to 28 percent. If both the portfolio substitution elasticity and the product elasticity equal 3.0, the domestic labour share of the tax burden falls to 18 percent. Gravelle and Smetters argue that empirical estimates suggest that the values of both elasticities are 3.0 or less. They stress, however, that even if capital is perfectly mobile, a reasonable degree of imperfect substitutability between domestic goods and imports leads to a significant share (typically exceeding 50 percent) of the burden of the tax being borne by capital rather than labour.

The Gravelle-Smetters argument thus potentially undermines the standard small open economy argument for tax exemption or subsidization of capital income, because it implies that domestic labour does not necessarily bear the full burden of a source-based tax on capital income.¹⁰⁵ However, the relevance and importance of this argument for the Canadian case are far from clear for several reasons.

104 Harberger, "The ABCs of Corporate Tax Incidence" and "Corporate Tax Incidence," *supra* note 52.

105 Of course, taxation of capital income may not be desirable even if domestic capital owners bear much of the burden of the tax. Although the issue is still contentious, much of the academic literature suggests that the normal returns to capital should be exempt from tax in order to avoid extremely costly distortions of present-future consumption decisions: see Zodrow, *supra* note 54. A review of these arguments is beyond the scope of this article, since it is assumed here that the basic structure of income taxation is retained.

Most obviously, the Gravelle-Smetters results are for the US economy, and it is clear that, all else constant, the labour share of the burden of a source-based tax on capital income in Canada is significantly larger because of the relatively smaller size of the Canadian economy, whose GDP is approximately one-tenth that of the United States and accounts for roughly 2.5 percent of world output.¹⁰⁶ The importance for Canada of the Gravelle-Smetters argument can thus be determined only with an explicit general equilibrium analysis of the Canadian economy, but it is reasonable to assume that its impact is far smaller than in the case of the United States.

A second issue is that although capital is not perfectly mobile internationally, increasing globalization and the accompanying increase in capital mobility in general¹⁰⁷ suggest that tax policy in Canada should be based on the assumption of a relatively highly elastic supply of international capital, especially in light of the high degree of mobility of capital between the United States and Canada. For example, Cummins¹⁰⁸ and Altshuler and Cummins¹⁰⁹ estimate that for Canadian firms investing in the United States, the elasticity of substitution between domestic and foreign capital in the United States exceeds 1. Cummins¹¹⁰ concludes that “U.S. and Canadian fixed capital are relatively easy substitutes at the firm level.” Similarly, Mintz¹¹¹ stresses that Canadian capital markets are becoming increasingly integrated with international markets. For example, he notes that after-tax rates of return on equity for firms listed on the Toronto Stock Exchange are not correlated with either current or five-year-average Canadian corporate income tax rates, suggesting that the Canadian corporate income tax is not borne by capital owners for such firms.¹¹²

Some indirect evidence regarding the elasticity of supply of capital to Canada is provided by the assumptions that various researchers have made in constructing computational general equilibrium models (CGE) of the Canadian and world

106 World Bank, *World Development Indicators 2006* (Washington, DC: World Bank, 2006).

107 Charles L. Ballard, “International Aspects of Fundamental Tax Reform,” in George R. Zodrow and Peter Mieszkowski, eds., *United States Tax Reform in the 21st Century* (Cambridge, UK: Cambridge University Press, 2002), 109-39; and Harberger, “Corporate Tax Incidence,” *supra* note 52.

108 Jason G. Cummins, *The Effects of Taxation on U.S. Multinationals and Their Canadian Affiliates*, Working Paper no. 96-4 (Ottawa: Department of Finance, Technical Committee on Business Taxation, 1997).

109 Rosanne Altshuler and Jason Cummins, *Tax Policy and the Dynamic Demand for Domestic and Foreign Capital by Multinational Corporations*, Working Paper no. 97-31 (New York: C.V. Starr Center for Applied Economics, 1997).

110 Cummins, *supra* note 108, quoted from abstract.

111 Mintz, *supra* note 1.

112 Mintz also notes some empirical results that indicate that Canadian stock prices, especially those of smaller firms that do not borrow on international markets, are partly dependent on Canadian savings behaviour. This suggests that some market segmentation still exists, but that larger firms, especially MNEs, are likely to be quite mobile.

economies. The CGE tax model used by Canada's Department of Finance typically assumes an elasticity of foreign-owned capital with respect to relative interest rates in Canada and abroad of 1.0, although more recently it has been argued that an elasticity in the range of 1.3 to 2.5 would be more appropriate.¹¹³ Among CGE studies that have analyzed the effects of recent trade agreements in North America, Roland-Holst, Reinert, and Shiells¹¹⁴ assume capital supply elasticities that range from 0.3 to 1.1, while Cox and Harris¹¹⁵ and Cox¹¹⁶ assume that capital is perfectly mobile between Canada and the rest of the world economy.¹¹⁷

Finally, note that even if the supply of foreign capital is not highly elastic, it is not clear that high corporate tax rates are desirable, since they would discourage domestic saving and investment, including by the smaller entrepreneurial firms that are often among the most dynamic elements of an economy. Beyond the traditional arguments favouring low or zero tax rates on saving, independent of international considerations (reviewed by Zodrow),¹¹⁸ Gordon¹¹⁹ notes that the importance of entrepreneurial activity in promoting innovation and sparking productivity growth may justify a tax preference for such activities on the grounds that they generate positive externalities and should be encouraged by the tax system. In practice, this encouragement could take the form of implicitly providing entrepreneurs with the opportunity to convert labour income into business income and then taxing the latter at relatively low rates. (Of course, such a policy would be perceived as inequitable and would encourage tax avoidance not related to productive entrepreneurial activity.) Moreover, some recent empirical evidence suggests that high taxes, especially high statutory tax rates that impose a significant burden on above-normal returns to successful entrepreneurial ventures, act as an important deterrent to entrepreneurial

113 This information was provided by John Lester of the Department of Finance.

114 David W. Roland-Holst, Kenneth A. Reinert, and Clinton R. Shiells, "A General Equilibrium Analysis of North American Economic Integration," in Joseph F. Francois and Clinton R. Shiells, eds., *Modeling Trade Policy: Applied General Equilibrium Assessments of North American Free Trade* (Cambridge, UK: Cambridge University Press, 1994), 47-82.

115 David Cox and Richard Harris, "Trade Liberalization and Industrial Organization: Some Estimates for Canada" (1985) vol. 93, no. 1 *Journal of Political Economy* 115-45; and David J. Cox and Richard G. Harris, "North American Free Trade and Its Implications for Canada: Results from a CGE Model of North American Trade" (1992) vol. 15, no. 1 *The World Economy* 31-44.

116 David J. Cox, "Some Applied General Equilibrium Estimates of the Impact of a North American Free Trade Agreement on Canada," in *Modeling Trade Policy*, supra note 114, 100-23.

117 H.E. Sobarzo, "A General Equilibrium Analysis of the Gains from Trade for the Mexican Economy of a North American Free Trade Agreement" (1992) vol. 15, no. 1 *The World Economy* 83-100, also assumes perfectly mobile capital.

118 Zodrow, supra note 54.

119 Roger H. Gordon, "Can High Personal Tax Rates Encourage Entrepreneurship?" (1998) vol. 45, no. 1 *IMF Staff Papers* 49-60.

activity,¹²⁰ although this role is tempered by the additional risk sharing that such rates provide.¹²¹

Third, the importance of the elasticity of substitution in consumption between domestic and imported goods in determining the extent to which local factors of production avoid the corporate tax is unclear. Randolph¹²² extends the Gravelle-Smetters model to allow a domestic corporate sector that produces two types of traded goods—some that are perfect substitutes for imports and others that are imperfectly substitutable. He shows that this plausible extension of the model dramatically affects its results. For example, if the capital intensities in the two corporate tradable goods sectors are identical, the incidence of the corporate income tax is independent of the degree of import substitutability in the second sector; and, if capital is perfectly mobile, domestic labour bears slightly more than 70 percent of the corporate tax burden in the United States. If the tradable goods corporate sector with perfect import substitutability is more capital-intensive than the other tradable goods corporate sector, the share of tax burden borne by domestic labour increases moderately, as it does if capital is perfectly mobile. In addition, and most relevant in the Canadian context, Randolph shows that the labour share of the tax burden depends significantly on the size of the domestic economy; in a typical simulation, domestic labour bears more than 100 percent of the burden of tax if the domestic economy produces less than 5 percent of world output.

In any case, the appropriate value for the elasticity of substitution between domestic goods and imports is far from clear. Gravelle and Smetters argue that for the United States, most empirical estimates suggest a relatively low elasticity ranging from 0.5 to 3.0; they argue that an elasticity of 1 is a reasonable benchmark. For example, one often-cited study is Reinert and Roland-Holst,¹²³ who report elasticities that range from 0.04 to 3.0. More recently, Gallaway, McDaniel, and Rivera¹²⁴ estimate an average long-run import substitution elasticity in the United States of 1.55, with a range of 0.52 to 4.83. In Canada, Shiells and Reinert¹²⁵ report even

120 William M. Gentry and R. Glenn Hubbard, "Tax Policy and Entrepreneurial Entry" (2000) vol. 90, no. 2 *The American Economic Review* 283-87.

121 Julie B. Cullen and Roger H. Gordon, *Taxes and Entrepreneurial Activity: Theory and Evidence for the U.S.*, NBER Working Paper no. 9015 (Cambridge, MA: National Bureau of Economic Research, 2002.)

122 William C. Randolph, *International Burdens of the Corporate Income Tax*, CBO Working Paper (Washington, DC: Congressional Budget Office, 2006).

123 Kenneth A. Reinert and David W. Roland-Holst, "Armington Elasticities for United States Manufacturing Sectors" (1992) vol. 14, no. 5 *Journal of Policy Modeling* 631-39.

124 Michael P. Gallaway, Christine A. McDaniel, and Sandra A. Rivera, "Short-Run and Long-Run Industry-Level Estimates of U.S. Armington Elasticities" (2003) vol. 14, no. 1 *North American Journal of Economics and Finance* 49-68.

125 Clinton R. Shiells and Kenneth A. Reinert, "Armington Models and Terms-of-Trade Effects: Some Econometric Estimates for North America" (1993) vol. 26, no. 2 *Canadian Journal of Economics* 299-316.

lower elasticities, ranging from 0.1 to 1.5.¹²⁶ Turning to CGE models of Canada and the world economy, Roland-Holst, Reinert, and Shiells¹²⁷ assume an import substitution elasticity that varies from 0.1 to 1.5, while Cox and Harris¹²⁸ and Cox¹²⁹ assume import substitution elasticities that vary from 1.0 to 4.8.¹³⁰

However, McDaniel and Balistreri¹³¹ note that many trade economists are skeptical of these relatively low estimates of import substitution elasticities and believe that imports and domestic goods are much more substitutable than these estimates imply. Similarly, Harberger¹³² argues persuasively that such relatively low elasticities of substitution between domestic and imported products imply an implausibly large degree of market power for domestic producers, who in many cases appear in fact to have relatively little market power.¹³³ This observation appears to be relevant in the case of Canada to the extent that domestic and international competition is sufficiently great to limit the market power of domestic firms.

Moreover, several recent studies have obtained significantly higher elasticities on average, as well as a wide range of elasticities, thus providing some justification for the structure of the Randolph model, which has two corporate tradable goods sectors with different import substitution elasticities. For example, Erkel-Rousse and Mirza¹³⁴ estimate an overall import substitution elasticity of 3.8, with many industries characterized by elasticities between 6.5 and 7.0 and some as high as 13.0. Hertel et al.¹³⁵ focus on the import substitution elasticity in their study of CGE analyses of free trade agreements. They argue that earlier estimates tend to understate the true

126 In addition, Wirjanto estimates demand elasticities for imported goods that vary from 1.1 to 1.9: Tony S. Wirjanto, "Estimation of Import and Export Elasticities," report prepared for the Economic and Fiscal Policy Branch at the Department of Finance (University of Waterloo: Department of Economics, 1999).

127 Roland-Holst, Reinert, and Shiells, *supra* note 114.

128 Cox and Harris, "North American Free Trade and Its Implications for Canada," *supra* note 115.

129 Cox, *supra* note 116.

130 Sobarzo, *supra* note 117, assumes import substitution elasticities that vary from 0.375 to 3.0.

131 Christine A. McDaniel and Edward J. Balistreri, *A Discussion on Armington Trade Substitution Elasticities*, U.S. International Trade Commission Office of Economics Working Paper no. 2002-01-A (Washington, DC: International Trade Administration, 2002).

132 Harberger, "Corporate Tax Incidence," *supra* note 52.

133 In addition, Randolph, *supra* note 122, notes that most empirical estimates of the import substitution elasticity are relatively short-run, and would presumably be larger, perhaps significantly so, in the long run (as confirmed in the review of this literature by McDaniel and Balistreri, *supra* note 131).

134 Hélène Erkel-Rousse and Daniel Mirza, "Import Price Elasticities: Reconsidering the Evidence" (2002) vol. 35, no. 2 *Canadian Journal of Economics* 282-306.

135 Thomas Hertel, David Hummels, Maros Ivanic, and Roman Keeney, *How Confident Can We Be in CGE-Based Assessments of Free Trade Agreements?* Center for Global Trade Analysis Working Paper no. 26 (West Lafayette, IN: Purdue University, 2004).

elasticity because they do not properly account for quality variation among imports and domestic goods and inappropriately use fixed-weight import price series data, which overweight relatively high foreign prices and underweight relatively low foreign prices. Their average estimated import substitution elasticity for 40 different products is 7.0, with estimates that exceed 10 in some cases. In two recent examinations of US-Canada trade, Head and Ries¹³⁶ estimate import substitution elasticities that range from 7.9 to 11.4, while Clausing's estimates¹³⁷ are slightly under 10.

These results suggest that the results of the Gravelle-Smetters study should be interpreted cautiously in the Canadian context. Although it is clear that neither the supply elasticity of capital nor the import substitution elasticity are infinite, both the structural model of Randolph¹³⁸ and several recent econometric estimates suggest that one should exercise great caution before assuming that the relatively high corporate income tax rates in Canada are not largely borne by local factors. Moreover, even if domestic capital bears a significant portion of the burden of the corporate income tax, it is far from clear that such a tax is desirable, given its efficiency costs and negative effects on saving and investment, entrepreneurial activity, productivity, and growth.

The Personal Income Tax Backstop Argument

From a domestic standpoint, the traditional rationale for a corporate income tax is that it is essential to protect the revenue base of the personal income tax. At the most basic level, the backstop argument simply reflects the administrative advantages of withholding tax at source, especially for the purpose of ensuring that the capital income of wealthy individuals is subject to tax. For example, Gordon and Li¹³⁹ argue that the reliance of developing countries on corporate income taxation, especially on firms that make use of the financial sector, simply reflects the inability of those countries to effectively collect personal income taxes. The relevance of this argument for Canada appears to be limited.

More important, however, in the absence of a corporate tax—and especially if capital gains are untaxed or taxed preferentially—individuals could incorporate and defer personal income tax on labour income by retaining the earnings in corporate form. Indeed, they can avoid tax altogether if the capital gains tax at death can also be avoided owing to a sufficiently large exclusion, such as the \$750,000 exclusion

136 Keith Head and John Ries, "Increasing Returns Versus National Product Differentiation as an Explanation for the Pattern of U.S.-Canada Trade" (2001) vol. 91, no. 4 *The American Economic Review* 858-76.

137 Kimberly A. Clausing, "The Impact of Transfer Pricing on Intrafirm Trade," in *International Taxation and Multinational Activity*, supra note 23, 173-94.

138 Randolph, supra note 122.

139 Roger H. Gordon and Wei Li, *Tax Structure in Developing Countries: Many Puzzles and a Possible Explanation*, NBER Working Paper no. 11267 (Cambridge, MA: National Bureau of Economic Research, 2005).

available under Canadian law for capital gains on small business shares.¹⁴⁰ Alternatively, capital gains in excess of the exclusion may be taxed at preferential rates, or only partially included in income, as is the case in Canada, where only 50 percent of gains are included in the tax base. As funds accumulate in the untaxed corporation, personal consumption can be financed by personal loans from the corporation. Note that this argument does not imply that only domestic corporations must be taxed. If foreign corporations do not face the same corporate income tax as domestic firms, individuals and firms can establish corporations that are nominally foreign (for example, in a tax haven) and again avoid domestic liability on their corporate income.¹⁴¹ Shifting between the business and individual tax bases is also possible if one changes the level of debt finance in a closely held corporation (since interest income is deductible to the firm and taxed at the individual level), or if one changes the mix of compensation between salaries and stock options.

Note, however, that the overall importance of this backstop function of the corporate income tax should not be overstated, since it applies only to self-employed individuals and the owners of closely held corporations. Moreover, such income (reported as corporate income or as business income on an individual return) is typically underreported to a significant extent in any case, limiting the effectiveness of the corporate tax as a backstop to the personal income tax. For example, recent estimates of the degree of underreporting of self-employment income in Canada range from 11 to 24 percent.¹⁴²

An additional issue is the extent to which any income shifting attributable to a tax rate differential between the corporate and individual income taxes represents a permanent loss of revenue or simply deferral of tax, since the revenue and equity problems in the latter case are considerably smaller. In particular, equity problems are less severe because the Canadian Income Tax Act¹⁴³ currently provides many

140 There is no estate tax in Canada, although accrued capital gains are taxable upon death. In addition, Canada taxes investment income earned by a private corporation on a current basis, with a refund when taxable dividends are distributed.

141 Roger H. Gordon and Jeffrey K. MacKie-Mason, "Why Is There Corporate Taxation in a Small Open Economy? The Role of Transfer Pricing and Income Shifting," in Martin Feldstein, James R. Hines Jr., and R. Glenn Hubbard, eds., *The Effects of Taxation on Multinational Corporations* (Chicago: University of Chicago Press, 1995), 67-91; and Roger H. Gordon and Joel Slemrod, "Are 'Real' Responses to Taxes Simply Income Shifting Between Corporate and Personal Tax Bases?" in Joel Slemrod, ed., *Does Atlas Shrug? The Economic Consequences of Taxing the Rich* (New York and Cambridge, MA: Russell Sage Foundation and Harvard University Press, 2000), 240-80.

142 Rolf Mirus, Roger S. Smith, and Vladimir Karoleff, "Canada's Underground Economy Revisited: Update and Critique" (1994) vol. 20, no. 3 *Canadian Public Policy* 235-52; Herb J. Schuetz, "Profiles of Tax Non-Compliance Among the Self-Employed in Canada: 1969 to 1992" (2002) vol. 28, no. 2 *Canadian Public Policy* 219-38; and Lindsay M. Tedds, "Nonparametric Expenditure-Based Estimation of Income Under-Reporting and the Underground Economy" (manuscript, University of Manitoba, 2006).

143 RSC 1985, c. 1 (5th Supp.), as amended.

other options for deferral. Given the \$750,000 lifetime capital gains exemption available to business owners, tax exemption is presumably the outcome in many cases. Nevertheless, deferral may also be the relevant result in a significant number of cases; some funds within closely held corporations are eventually paid out as taxable dividends and interest (or as future wages), or as taxable capital gains, especially if it is relatively difficult to borrow against corporate assets or if the interest rates on such loans are typically relatively high. The Canadian corporate and personal income tax systems are very nearly fully integrated, which implies that labour income within a closely held corporation will eventually be taxed at personal income tax rates. Indeed, to the extent that earnings retained within a closely held corporation grow at the average rate of return on investment, the present value of government revenues will not be affected by deferral, except to the extent that the tax rates that apply to dividends and capital gains are lower than those that apply to labour income.¹⁴⁴ In addition, some income shifting, especially if the gain is primarily a deferral, may be deemed acceptable as a means of encouraging entrepreneurial activity, although this will be perceived as problematical on equity grounds. The backstop function of the corporate income tax is thus a strong argument against creating a huge differential between corporate and individual tax rates, although the magnitude of an acceptable differential is difficult to ascertain.

Nevertheless, in the absence of a business-level tax in Canada (or if business rates were significantly below personal rates), the potential for tax avoidance and evasion could be significant, implying serious equity and perception problems. This is especially so because recent empirical work by Gordon and Slemrod¹⁴⁵ suggests that the degree of income shifting between the corporate and individual tax bases, at least in the United States, could be large; indeed, they estimate that a 1 percentage point reduction in the difference between individual and corporate tax rates increases reported labour income by 3.4 percent.¹⁴⁶ It is of course not obvious that this result translates to the Canadian context, especially given the much higher level of integration of the personal and corporate income tax systems relative to the US tax system. Although no studies of such income shifting in Canada are available, the estimates of the elasticity of taxable income with respect to changes in marginal income tax rates—which includes income shifting between individual and corporate tax bases,

144 Owing to a wide variety of tax preferences, including very favourable tax treatment of retirement savings vehicles such as pension plans and registered retirement savings plans (tax postpaid plans subject to contribution limits), the average tax rate applied to capital income at the individual level is likely to be quite low in Canada. On the other hand, since the personal income tax is not indexed (beyond the indexation of income brackets), the effective tax rates applied to capital income that is subject to tax can be quite high, especially for interest income that reflects a relatively low real rate of return.

145 Gordon and Slemrod, *supra* note 141.

146 Somewhat surprisingly, Gordon and Slemrod find that the top 1 percent of the population is only slightly more responsive to the difference in personal and corporate tax rates (a response of 3.64 percent) than the rest of the population (3.27 percent).

but many other factors as well—obtained by Sillamaa and Veall,¹⁴⁷ which are around 0.25, are significantly smaller than those obtained in most studies of US behaviour, which tend to cluster around 0.4 or higher.¹⁴⁸ However, Sillamaa and Veall also report that the taxable income elasticity of self-employment income exceeds 1, raising the possibility that some of this sizable response is due to income shifting.

The relative size of the small business sector is also important because it is a primary determinant of the extent to which labour income shifting is potentially a problem. The small business sector is fairly sizable in the Canadian economy. For example, in 2004-2005, small Canadian-controlled private corporations (CCPCs) accounted for 18.5 percent of net revenues under the corporate income tax. Finally, although the backstop argument provides a rationale for some business-level tax, it does not necessarily require a corporate income tax. In particular, most of the anti-avoidance, anti-evasion backstop characteristics of the corporate tax could be achieved with a corporate cash flow tax assessed at the top individual rate, which would remove the incentives for conversion of labour income into corporate income while taxing economic rents and exempting ordinary returns to capital.¹⁴⁹

The Implications of Tax-Avoidance Activities

As discussed above, the potential for tax avoidance and income shifting in general provides another argument for lowering corporate income tax rates—to minimize the extent to which relatively high statutory rates create an incentive for MNEs to shift revenues out of, and deductions into, a country. However, possibilities for tax avoidance by MNEs also suggest that the negative impact of relatively high statutory and effective tax rates on FDI may be significantly muted if MNEs are easily able to mitigate their effects on the cost of capital with tax planning. Indeed, the availability of strategies for tax planning that are available only to MNEs suggests an interesting “optimal capital income tax” strategy that might be pursued by countries attempting to attract FDI at minimal revenue cost. Specifically, to the extent that MNEs are more mobile than domestic firms (and neglecting the higher administrative and compliance costs of differential taxation), optimal tax theory suggests that the former should be taxed at relatively lower rates—indeed, as described above, at a zero rate if they are perfectly mobile.¹⁵⁰ In practice, political considerations preclude the

147 Mary-Anne Sillamaa and Michael R. Veall, “The Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1988 Tax Flattening in Canada” (2001) vol. 80, no. 3 *Journal of Public Economics* 341-56.

148 Seth H. Giertz, *Recent Literature on Taxable Income Elasticities*, Congressional Budget Office Technical Paper no. 2004-16 (Washington, DC: Congressional Budget Office, 2004).

149 R. Glenn Hubbard, “Capital Income Taxation in Tax Reform: Implications for Analysis of Distribution and Efficiency,” in *United States Tax Reform in the 21st Century*, supra note 107, 89-108; George R. Zodrow and Charles E. McLure Jr., “Implementing Direct Consumption Taxes in Developing Countries” (1991) vol. 46, no. 4 *Tax Law Review* 405-87; and Zodrow, supra note 48.

150 Elisabeth Gugl and George R. Zodrow, “International Tax Competition and Tax Incentives for Developing Countries,” in James Alm, Jorge Martinez-Vasquez, and Mark Rider, eds., *The Challenges of Tax Reform in a Global Economy* (New York: Springer, 2006), 167-91.

taxation of foreign firms at rates lower than those applied to domestic firms. However, the same result can be achieved if host countries allow MNEs to have access to tax-avoidance devices (for example, through explicit regulations or lax enforcement) that are not available to domestic firms. Indeed, Hong and Smart¹⁵¹ argue that tax havens should be “praised” for allowing this flexibility; they also note, as discussed above, that the existence of tax havens implies that real FDI will be less sensitive to tax rate differentials, thus allowing higher corporate tax rates in host countries to be welfare-increasing for their citizens.¹⁵²

Altshuler and Grubert¹⁵³ argue that this phenomenon provides an important explanation of the behaviour of host countries in recent years, as tax competition among countries increasingly takes the form of allowing tax avoidance, most commonly in the form of allowing income shifting to low-rate tax havens, rather than the explicit reductions in statutory or effective tax rates stressed in the traditional tax competition literature.¹⁵⁴ Furthermore, they argue that home countries, including the United States, face an incentive to allow or even facilitate tax avoidance by MNEs if they believe that the gains from increased competitiveness of their MNEs outweigh the associated revenue losses. The prime example of such behaviour is the adoption of the US check-the-box regulations in 1997, which allowed affiliated firms to choose their tax status as a subsidiary subject to separate taxation, or as a branch taxed on a passthrough basis to the parent firm, and greatly facilitated various tax-avoidance schemes.

Altshuler and Grubert provide several examples of tax-avoidance activity made easier by the check-the-box rules. In general, these strategies involve circumvention of the controlled foreign corporation (CFC) rules that require current taxation of funds transferred to tax havens. For example, the new rules for the first time permit US firms to utilize tax haven finance subsidiaries, which allows the injection by the US parent of equity funds to an affiliated company in a low-rate tax haven that in turn loans the funds to another affiliated company in a high-tax country. Under the former regulations, the payment of interest to the company in the tax haven would have been taxable currently under the CFC rules. With the new regulations, however, the company in the high-tax host country can be a hybrid entity—one that is

151 Qing Hong and Michael Smart, *In Praise of Tax Havens: International Tax Planning and Foreign Direct Investment*, CESifo Working Paper no. 1942 (Munich: Center for Economic Studies and Ifo Institute for Economic Research, March 2007).

152 Similarly, Grubert and Mutti, *supra* note 24, argue that because taxes due on repatriation can be easily avoided (for example, through arbitrage transactions involving a conduit company in a third country), the distortionary (and revenue) impacts of such taxes are relatively small (although the resources devoted to avoiding them are clearly wasted). However, Altshuler and Grubert, *supra* note 28, acknowledge that the sixfold increase in inflows of repatriated funds into the United States in response to the recently enacted temporary rate reduction for repatriated funds calls this view into question.

153 Altshuler and Grubert, *supra* note 28.

154 Zodrow and Mieszkowski, *supra* note 51; and Wilson, “A Theory of Interregional Tax Competition,” *ibid.*

treated as a corporation in the host country but as an unincorporated branch of the company in the tax haven by the United States—so that transfers between them are intercompany transfers and thus not subject to the CFC rules. As a result, the company in the high-tax country gets a deduction for interest at a relatively high rate, but the associated interest income is either tax-exempt or taxed at a very low rate in the tax haven, with US tax deferred, perhaps indefinitely.

Hybrid entities made possible through the check-the-box rules can also be used to shift dividends to holding companies in countries with low or no withholding taxes coupled with extensive treaty networks that ensure low dividend taxes on repatriations without invoking CFC rules taxing intercompany dividends. Similarly, a hybrid entity in a tax haven can receive royalty payments from patents and other intellectual property utilized in high-tax countries without being subject to the CFC rules. If the cost share of the tax haven company in developing the intellectual property is understated and its royalties are overstated, much of the income attributable to the intellectual property can be shifted to the tax haven country.¹⁵⁵

Altshuler and Grubert, examining various phenomena before and after the 1997 tax change, provide several pieces of empirical evidence to support their view that international tax competition increasingly takes the form of allowing tax avoidance. First, they examine changes in AETRs, which continued to decline over the period 1992-2002, although at a slower rate than the decline documented in the studies cited above. They conclude that after 1998, tax-avoidance behaviour was much more important in explaining these declines in host-country effective tax rates than the declines in statutory tax rates that occurred over the same period, as the correlation between effective and statutory tax rates declined significantly. Second, the extent to which the reported profitability of subsidiaries in low-tax countries exceeded that in high-tax countries grew considerably after 1997, as would be expected if profits were increasingly being shifted to low-tax jurisdictions. Third, Altshuler and Grubert show that intercompany tax payments and holding company income grew considerably after 1997, as would occur with the various strategies described above that are designed to shift income to lower-tax countries. They estimate that in 2002, US MNEs saved \$7 billion per year, or 15 percent of their total foreign tax burden, by using these techniques.

To sum up, although increasing tax avoidance provides a rationale for a lower corporate tax rate in order to reduce incentives for income shifting, it also implies that the deleterious effects of relatively high corporate tax rates may be mitigated, especially if the avoidance is facilitated by the home country, as occurred with the check-the-box rules in the United States. This in turn provides an argument for keeping corporate income tax rates high in order to tax relatively immobile domestic firms, especially those earning economic rents at such rates, while taxing relatively mobile MNEs at a lower rate by allowing or even facilitating tax avoidance.

155 In addition, similar effects can be obtained through the use of hybrid securities—instruments that are considered to be debt by the host country but are treated as equity by a tax haven country or a country that exempts dividends and through which dividends are routed.

The Treasury Transfer Argument

Perhaps the most prominent rationale for a corporate income tax, at least in the international context for capital-importing countries, is the so-called treasury transfer argument. The United States, as well as several important capital-exporting countries, including the United Kingdom and Japan, tax their MNEs on a residence basis but allow FTCs for taxes paid abroad, up to the amount of the domestic tax that would be assessed on such income. In certain circumstances, the existence of FTCs creates a strong incentive for the imposition of a corporate income tax by countries that import significant amounts of capital from credit-granting countries, since a host-country tax rate increase (to any rate below or equal to the home-country rate) costlessly transfers revenues from the home to the host country without creating any disincentives for investment in the host country. In marked contrast to the zero tax argument presented above, this rationale suggests that the government of a capital importer should institute a corporate income tax with a rate equal to that of its main source of capital imports, adjusted for the special rules used to compute the amount of tax creditable, or perhaps some weighted average of the tax rates of its primary sources of capital imports.

The treasury transfer rationale for higher corporate income taxes has considerable appeal, as would any “free” source of tax revenues. Nevertheless, it is of limited relevance in certain circumstances that are applicable in Canada to varying degrees, making an evaluation of the importance of this argument difficult. Each of these arguments is discussed in the following subsections. In addition, some general support for the position that the importance of the treasury transfer effect is relatively moderate is provided by empirical evidence that largely, though not entirely, supports the idea that home-country tax rates are relatively unimportant in determining the levels of FDI in host countries.

Territorial Countries

First, the treasury transfer argument clearly does not apply to MNEs based in territorial countries, including Australia, France, Germany, and the Netherlands, that exempt foreign-source income from home-country taxation.¹⁵⁶ However, the United States, which is a residence-based FTC country, accounts for a significant fraction of FDI in Canada. For example, in 2005, FDI from the United States of \$266.5 billion

156 Moreover, for some host countries, the argument may not apply to home countries such as Japan and the United Kingdom, which grant FTCs but also have tax-sparing provisions that in some cases allow their MNEs to benefit from host-country tax incentives (see James R. Hines Jr., “Tax Sparing’ and Direct Investment in Developing Countries,” in *International Taxation and Multinational Activity*, supra note 23, 39-66); however, these countries have no tax-sparing agreements with Canada. Note that in some cases special treatment provided to certain countries under tax treaties blurs the distinction between residence-based countries that offer FTCs and territorial countries that exempt foreign earnings. For example, Germany extends tax exemption only through treaties.

represented 64 percent of the total stock of FDI in Canada of \$415.6 billion. In addition, the United Kingdom and Japan, which are also FTC countries, are also important investors in Canada: FDI from the United States, the United Kingdom, and Japan accounted for 74 percent of total FDI. Moreover, the share of the United States, the United Kingdom, and Japan in FDI in the relatively “footloose” or highly mobile manufacturing sector was even higher, at 82 percent.¹⁵⁷ Thus, given current trading patterns, the argument that FTCs are irrelevant to MNEs from territorial countries is applicable only for a very modest fraction of total FDI in Canada.

Firms in Excess FTC Positions

Second, MNEs from FTC-granting countries can be in an excess FTC position—that is, they already have more FTCs than they can use currently. Provided that such a firm remains in an excess FTC position, it will—in marked contrast to the treasury transfer argument—be negatively affected by a tax increase in the host country, since the firm will accumulate more excess FTCs rather than benefit from an offsetting reduction in domestic tax liability. Alternatively, a tax reduction in the host country will confer a benefit on the US MNE in an excess FTC position, since it allows the company to use some of its excess FTCs and thus avoid any offsetting domestic tax increase.

In general, US MNEs are more likely to be in an excess FTC position if they tend to invest heavily in relatively high-tax-rate countries. However, two additional factors—tax-avoidance techniques and the current US rules on expense allocations—have recently increased the prevalence of firms in an excess FTC position and thus mitigated the importance of the treasury transfer effect as a factor encouraging higher corporate income taxes in host countries.

TAX-AVOIDANCE TECHNIQUES

First, US MNEs have successfully devised techniques that effectively separate foreign taxes paid, which can be credited currently, from the associated foreign-source income, which can then be deferred—perhaps indefinitely, provided that the MNE does not need to repatriate the funds to the United States—from US tax liability. As a result, it is possible that FTCs can effectively be manufactured in sufficient quantities to shield from US tax any income that is repatriated to a US parent. In this case, the treasury transfer effect is inoperative, since lower host-country taxes are simply reflected in more tax-avoidance activity by the US MNE rather than higher domestic tax liabilities. In these circumstances, the source-country corporate income tax is once again the primary tax liability assessed on the income from foreign direct investment by US MNEs.

This separation of foreign taxes paid from the associated income was also facilitated by the 1997 check-the-box regulations, described above, which allow US MNEs

157 Statistics Canada CANSIM Table 376-0051.

to designate their affiliates either as separate corporate entities (subsidiaries) or as passthrough or disregarded entities (branches) simply by checking the appropriate box on their tax forms. This measure makes it simple to create a hybrid entity (a company that is treated as a passthrough entity for US tax purposes but as a corporation for foreign tax purposes) and a reverse hybrid entity (a company that is treated as a corporation for US tax purposes but is treated as a passthrough entity for foreign tax purposes). A typical arrangement for separating foreign taxes from foreign income using such entities might be structured as follows.

A US parent (USP) owns a foreign holding company (FHC), which in turn owns a foreign operating company (FOC). FHC is structured as a hybrid entity (a foreign corporation but a US passthrough entity), while FOC is structured as a reverse hybrid entity (a foreign passthrough entity but a US corporation). The two entities are located in a foreign country in which the tax laws specify that the tax liability of FOC is legally considered to be the tax liability of FHC, so that the IRS deems FHC to be the taxpayer because it meets the requirements of the “technical taxpayer rule” in the United States, even though the associated income was earned by FOC. As a result, because FHC is a passthrough entity for US tax purposes, all the tax liability flows through to USP. However, because FOC is a separate corporate entity for US tax purposes, the associated income is deferred until it is repatriated to USP, achieving the desired result of current FTCs coupled with deferral, perhaps indefinitely, of the associated income.¹⁵⁸

Of course, such opportunities to generate FTCs for separating foreign taxes from the associated income may not last forever. Indeed, regulations proposed by the US Treasury department and the IRS would shut down the reverse hybrid technique described above by requiring that the reverse hybrid be assumed to have liability for foreign taxes in proportion to its share of the associated income—although it should be noted that these regulations follow an initial set of regulations that proved ineffective.¹⁵⁹ However, until such provisions are enacted and experience proves that they can be enforced effectively (and if alternative techniques that achieve the same results are not devised), the use of such tax-avoidance techniques significantly reduces the extent to which the treasury transfer effect provides an effective counterargument

158 A similar result can be obtained with a foreign consolidated group if the tax regime in the foreign country treats the tax liability of the group as the sole responsibility of the parent, as is the case, for example, in Luxembourg. A court ruling in the case *Guardian Industries v. United States*, 65 Fed. Cl. 50 (2005), specified that a US corporation that owned a parent holding company in Luxembourg (a passthrough entity for US tax purposes) could claim the full FTCs of the consolidated group, even though the associated income earned by the corporate subsidiaries of the Luxembourg holding company was not subject to current income taxation in the United States. See Joseph M. Calianno and J. Michael Cornett, “Guardian Revisited: Proposed Regs Attack Guardian and Reverse Hybrids” (2006) vol. 44, no. 4 *Tax Notes International* 305-16; and Jeffrey L. Rubinger, “Proposed ‘Technical Taxpayer’ Regulations Shut Down Guardian and Reverse Hybrid Structures” (2007) vol. 81, no. 2 *Florida Bar Journal* 44-48.

159 Calianno and Cornett, *supra* note 158; and Rubinger, *ibid.*

to the use of lower corporate income tax rates by host countries attempting to attract FDI from US MNEs.

EXPENSE ALLOCATION RULES

A second factor that has increased the prevalence of firms in an excess FTC position is the rules currently used by the United States to allocate expenses to foreign-source income. These include R & D expenditures, general and administrative expenses, and, most important, interest expense, which will be the focus of this discussion. As noted above, the amount of FTC available to a US MNE on foreign-source income is limited to the amount of tax that would be paid in the United States on that income, calculated using rules specified by the United States. In particular, since the 1970s (with a significant reform enacted in the Tax Reform Act of 1986),¹⁶⁰ some domestic expenses of US MNEs, including interest expense, have been allocated to foreign-source income. The effect of this provision is to reduce the amount of foreign-source income as defined for US tax purposes and thus reduce the amount of FTC allowed for any given level of foreign tax paid, increasing the likelihood that excess FTCs will be generated. As a result, even if the treasury transfer effect were fully operative, the statutory tax rate in the host country would have to be lower than the statutory tax rate in the United States if excess FTCs and thus the potential for double taxation are to be avoided.

In general, the interest allocation rules operate as follows.¹⁶¹ The rules recognize the fungibility of money and allocate domestic interest expense proportionately to all assets based on asset value (as determined for tax purposes) rather than to particular assets—even if a specific debt was incurred to purchase a specific asset and that asset is being used as collateral for the debt. Although the general principle underlying such an allocation is eminently reasonable given the fungibility of money, its application under current law to foreign-source income is widely perceived to be inappropriate (and has recently been changed, effective in 2009, as discussed below). Current regulations use a water's-edge apportionment approach, which treats as fungible the interest expense of affiliated domestic corporations, but does not include the interest expense of foreign corporations that are members of the same group. That is, while the interest expense of domestic affiliates is apportioned between US-source and foreign-source income based on asset values as calculated for book purposes (the tax basis of each asset), the interest expense of foreign affiliates is ignored in this calculation.¹⁶² Thus, 100 percent of foreign interest is effectively

160 Pub. L. no. 99-514, enacted on October 22, 1986.

161 For further details, see Kevin M. Cunningham, "The U.S. Worldwide Interest Apportionment Rules: Ready, Set, Wait" (2006) vol. 42, no. 8 *Tax Notes International* 719-29; and Steven P. Hannes and James A. Riedy, "Worldwide Apportionment of Interest Revisited" (2003) vol. 100, no. 1 *Tax Notes* 73-84.

162 To further complicate matters, taxpayers may elect to apportion interest on the basis of the fair market values of domestic and foreign assets.

allocated to foreign-source income, in addition to any domestic interest expense that is allocated to the same income on the basis of the assets' book value as described above. As long as any interest expense is incurred abroad, this approach will result in overallocation of interest expense to foreign-source income (relative to a worldwide allocation of all the firm's domestic and foreign interest expense), lower calculated foreign-source income for US tax purposes, and thus a lower level of allowable FTCs (that is, a lower FTC limitation). The inappropriately small FTCs that result from this calculation in turn may imply double taxation of foreign-source income, raising the effective tax rate on such income.¹⁶³ For the same reason, if the tax rates in the United States and the host country are the same, the MNE will accumulate excess FTCs, given the artificially low FTC limitation. To avoid this result, the host country could reduce its statutory rate, with the size of the reduction increasing with the amount of debt assumed by the MNE in the host country.

The discussion thus far has implicitly assumed that all foreign-source income earned by a foreign subsidiary is repatriated to the domestic parent in the United States. If the foreign subsidiary retains the earnings, there can be no current double taxation of foreign-source earnings. However, current regulations require that the amount of retained earnings be added to the basis of the assets of the foreign subsidiary for the purposes of calculating the allocation of domestic interest in future years, so that the basis of foreign assets grows and the allocation of interest to foreign-source income increases—until the foreign subsidiary eventually repatriates the earnings, which will then be subject to double taxation.

Given the resulting harsh treatment of foreign-source income, the interest allocation rules have been the object of severe and justifiable criticism in the United States. For example, Hannes and Riedy¹⁶⁴ conclude that “the current water's edge system of interest apportionment . . . unfairly and adversely affects companies through the foreign tax credit in ways that appear contrary to U.S. tax policies as well as the best interests of the U.S. economy.” They argue that the current system is distortionary, that it is arbitrary in its application of the principle of fungibility because foreign interest is ignored, that it creates competitiveness problems for US firms owing to double taxation, and that it was adopted solely to raise revenue rather than to be consistent with sound tax policy.

Although the interest allocation rules potentially have a significant impact, their overall implications for corporate income tax policy are not clear for at least three

163 As pointed out by Rosanne Altshuler and Jack M. Mintz, “U.S. Interest-Allocation Rules: Effects and Policy” (1995) vol. 2, no. 1 *International Tax and Public Finance* 7-35, the effect on the US MNE depends on whether it is in an excess FTC or an excess limit position. If the firm is in an excess limit position (with a residual US tax on its foreign-source income), the lower tax on its foreign-source income resulting from the interest allocation to such income will be offset by the higher tax on its domestic-source income. However, if the firm is in an excess credit position (where no additional US tax is due on its foreign-source income), the allocation of interest to foreign-source income only will increase its excess FTCs while simultaneously increasing its tax liability on domestic income.

164 Hannes and Riedy, *supra* note 161, at 73.

reasons. First, as described above, MNEs increasingly have access to, and pursue, tax-planning strategies that mitigate the deleterious effect on investment incentives that the interest allocation rules would otherwise have. At some level, the interest allocation rules can be viewed as a revenue-raising offset to the revenue losses that the United States is experiencing owing to a surge in aggressive tax planning.

Second, to some extent, the impact of the interest allocation rules can be eliminated without resorting to more aggressive tax-planning strategies—or to the more drastic strategies of converting subsidiaries to branches (in which case foreign interest is included in the calculation of the interest expense calculation) or financing foreign ventures entirely with equity. Instead, as outlined by Cunningham,¹⁶⁵ the effects of the interest allocation rules can be negated with a relatively simple technique: an intercompany loan from the subsidiary to the parent (assuming that such a loan does not run afoul of foreign thin capitalization rules or other limitations on borrowing). Specifically, if such a loan is on the same terms as the third-party foreign loan, the interest income on the intercompany loan can be used by the subsidiary to pay the interest expense on the foreign loan, resulting in net interest of zero, and the interest expense of the US parent will be used in the allocation of interest to foreign-source income. This technique effectively converts foreign interest to domestic interest, thus avoiding the problems with the interest allocation rules described above. Although the US Treasury issued proposed regulations that would have eliminated the benefits of the intercompany loan strategy outlined above, they met with severe criticism and were never adopted. Thus, under current regulations intercompany loans can achieve the results outlined above unless they are deemed to be “abusive” (that is, the debt-equity ratios of both the US parent and the foreign subsidiary have increased relative to historical averages).¹⁶⁶

Finally, and most important, the vociferous and sustained criticisms of the current interest allocation rules in the United States have recently resulted in legislative action. The American Jobs Creation Act of 2004¹⁶⁷ allows taxpayers, effective in 2009, to make a one-time irrevocable election to use worldwide apportionment of interest rather than the current water’s-edge apportionment approach. Although all of the details of the regulations supporting this legislation are not yet clear, the basic worldwide apportionment approach requires that all worldwide interest expense (rather than just domestic interest expense, as under the water’s-edge approach) be allocated according to the book values of the assets held by the US parent and its subsidiaries.

More specifically, Cunningham¹⁶⁸ describes the allocation calculation as a five-step process. (1) The worldwide group consisting of the US parent and its foreign subsidiaries determines the ratio of its foreign assets to its total assets, using book

165 Cunningham, *supra* note 161.

166 *Ibid.*

167 Pub. L. no. 108-357, enacted on October 22, 2004.

168 Cunningham, *supra* note 161.

values. (2) The group calculates its combined interest expense. (3) The combined interest expense is tentatively apportioned between US-source and foreign-source income, using the asset ratios determined in the first step. (4) The interest expense of the foreign members is then allocated among foreign-source and US-source income based on asset book values; in most cases, the foreign subsidiaries will have no US income or assets, so that all their interest will be foreign-source. (5) The net amount of interest expense to be allocated to foreign-source income is calculated as the difference between the amount tentatively apportioned in step 3 and the actual foreign-source interest expense determined in step 4.

The net result is that as long as the assets of the foreign members of a worldwide group are leveraged to the same extent as the US parent, no interest allocation will occur. In contrast, if the assets of the foreign members are underleveraged, interest allocation will occur to the point that worldwide fungibility will be attained (all domestic and foreign interest is allocated to all domestic and foreign-source income on the basis of asset book values). However, total worldwide fungibility is not achieved, since no interest allocation occurs if the assets of the foreign members of the group are overleveraged relative to the US parent. That is, the United States will not reallocate interest expense to the US parent even if such a reallocation would be called for under full worldwide fungibility. Nevertheless, the worldwide interest allocation represents a significant improvement over the current water's-edge interest allocation approach, and it should in most cases attain or approximate worldwide fungibility.

Thus, when the new rules apply, their implications for the treasury transfer effect, at least for interest expense, will be much less than the current water's-edge approach. An interest allocation will still occur if the assets of the foreign subsidiary are underleveraged relative to the US parent. But the extent of interest allocation, and the associated reductions in foreign-source income and the FTC limitation will be smaller, as will the reduction in the statutory corporate income tax rate in the host country required to avoid generating excess FTCs. If the assets of the foreign subsidiary are overleveraged relative to the US parent, the only expense allocation that will occur will be due to the allocation of non-interest expenses, such as R & D expenditures and administrative and general expenses.

To sum up, the current US expense allocation rules reduce the amount of foreign-source income for US tax purposes and thus reduce the amount of FTC available, increasing the likelihood that excess FTCs will be generated. As a result, even if the treasury transfer effect were fully operative, the statutory tax rate in the host country would have to be lower than the statutory tax rate in the United States if excess FTCs and thus the potential for double taxation are to be avoided. However, the level of this threshold rate for Canada will be reduced in 2009 by the new worldwide interest allocation rules adopted recently in the United States.

NET EFFECTS ON FTC POSITIONS

Historically, the net effect of these factors and others has been that a significant fraction of US firms have been in an excess FTC position. On the one hand, one would

expect that this fraction would decline over time, for at least two reasons. First, the rate reductions that have occurred around the world in recent years imply that the United States is now a high-tax country relative to the countries in which it invests (including Canada). Second, the increasing use of the tax-avoidance techniques described above suggests that MNEs will increasingly be able to shift income out of high-tax countries, thereby reducing the likelihood that they will be in an excess FTC position.

On the other hand, the previous discussion suggests that the relatively new tax-avoidance techniques that allow the “manufacturing” of FTCs—for example, as described above, through the use of reverse hybrid entities to separate FTCs from the associated income and deduct the credits currently while deferring tax on the income—would result in an increased availability of FTCs created to shield repatriated income from US taxation. Furthermore, the income allocation rules in the United States increase the amount of US expenses, including interest expense, allocated to foreign-source income for the purposes of defining such income and taxes available for the credit, and thus increase the likelihood that US firms will be in an excess FTC position.

Evidence provided by the US Treasury sheds some light on this issue. In particular, a recent estimate, which assumes 2005 law with only passive and active income baskets and the new interest allocation rules that will be in effect in 2009 (which thus reduces the likelihood that excess FTCs will arise in the calculation), suggests that in the manufacturing sector (not including petroleum-related industries), which accounts for 51.3 percent of foreign-source income in the United States, roughly 36.7 percent of foreign-source income is earned by companies in an excess FTC position. Virtually all companies in petroleum-related industries, which account for 17.8 percent of foreign-source income, are estimated to be in an excess FTC position, as are 24.8 percent of companies in the finance industry (6.9 percent of foreign-source income) and 53.5 percent of companies in the “other industries” category (23.9 percent of foreign-source income).¹⁶⁹ Thus, a significant fraction of US firms are still in an excess FTC position, raising the possibility that the FTC-reducing effects of lower host-country tax rates (relative to the US rate) and income shifting out of high-tax countries may have been offset by US MNEs’ increased use of tax-planning strategies that effectively create FTCs as needed to shield income repatriated to the United States from domestic taxation.

Deferral of Credits Until Repatriation

Third, and most important, because home-country taxes and credits are typically not assessed at the time that foreign taxes are paid but rather are deferred until the

169 In an earlier study based on 1992 data on foreign-source income for US corporations, Grubert, Randolph, and Rousslang, *supra* note 47, estimated that 35 percent of general basket foreign-source income was attributable to firms in an excess credit position; they also found that virtually all US firms engaged in the petroleum and mineral extracting industries were in an excess FTC position. Although not directly comparable, these figures do not suggest that the number of firms in an excess FTC position is declining significantly.

income is repatriated to the parent firm, the host-country tax is often the primary tax burden on investment by the MNE. Indeed, it is important to note that Hartman¹⁷⁰ and Sinn¹⁷¹ have constructed models in which the home-country repatriation tax is entirely irrelevant to investments financed with the retained earnings of the subsidiary, which are thus affected only by the host-country tax. The basic argument is that for investment financed with retained earnings, the present value of the tax savings obtained by avoiding the repatriation tax equals the present value of future taxes paid upon eventual repatriation. This argument is, of course, the same as that of the “trapped equity” or “new” view of the effects of domestic dividend taxation, which similarly holds that dividend taxes at the individual level are irrelevant for investments financed with retained earnings; the “traditional” view of dividend taxes holds that they significantly increase the cost of investments financed with retained earnings.

The debate over the validity of these views is still raging in the literature. In particular, although most of the early empirical evidence favoured the traditional view,¹⁷² several recent studies support the new view, including Auerbach and Hassett,¹⁷³ Desai and Goolsbee;¹⁷⁴ and Harris, Hubbard, and Kemsley.¹⁷⁵ Moreover, the primary rationales for dividends under the traditional view in a domestic context—that dividends provide an important signal regarding current and future profits, and that the payment of dividends provides a constraint on the empire-building tendencies of non-profit-maximizing firm managers—appear to be significantly less relevant in an international context, where the profits and managerial decisions of subsidiaries are more readily observable by the parent firm. These arguments suggest that the level of FDI, at least in the empirically significant category of investment financed with retained earnings, is determined primarily by the host-country tax rather than the home-country tax, regardless of any crediting arrangements. For example, reinvested

170 David G. Hartman, “Tax Policy and Foreign Direct Investment” (1985) vol. 26, no. 1 *Journal of Public Economics* 107-21.

171 Hans-Werner Sinn, *Capital Income Taxation and Resource Allocation* (Amsterdam: North-Holland, 1987).

172 George R. Zodrow, “On the ‘Traditional’ and ‘New’ Views of Dividend Taxation” (1991) vol. 44, no. 4, Part 2 *National Tax Journal* 497-509.

173 Alan J. Auerbach and Kevin A. Hassett, “On the Marginal Source of Investment Funds” (2003) vol. 87, no. 1 *Journal of Public Economics* 205-32; Alan J. Auerbach and Kevin A. Hassett, *The 2003 Dividend Tax Cuts and the Value of the Firm: An Event Study*, NBER Working Paper no. 11449 (Cambridge, MA: National Bureau of Economic Research, 2005); and Alan J. Auerbach and Kevin A. Hassett, *Dividend Taxes and Firm Valuation: New Evidence*, NBER Working Paper no. 11959 (Cambridge, MA: National Bureau of Economic Research, 2006).

174 Mihir A. Desai and Austan D. Goolsbee, “Investment, Overhang, and Tax Policy” (2004) vol. 35, no. 2 *Brookings Papers on Economic Activity* 285-338.

175 Trevor S. Harris, R. Glenn Hubbard, and Deen Kemsley, “The Share Price Effects of Dividend Taxes and Tax Imputation Credits” (2001) vol. 79, no. 3 *Journal of Public Economics* 569-96.

earnings accounted for roughly 40 percent of total FDI inflows used to finance new investment in Canada in 2005.¹⁷⁶

The Treasury Transfer Effect: Empirical Evidence

Several studies have examined the importance of the treasury transfer effect by investigating whether FDI is responsive to home-country tax rates. On the one hand, if the treasury transfer effect is operative, then the home-country tax rate will be the primary tax determinant of initial investment decisions by MNEs. On the other hand, if the various factors that mitigate this effect are sufficiently important, then home-country taxes should not have much of an effect on FDI, which is determined primarily by host-country taxes. Slemrod¹⁷⁷ finds that host-country tax effects on FDI in the United States are little affected by whether the MNE is based in a country that allows FTCs or exempts foreign income, lending support to the latter view.¹⁷⁸ This interpretation is reinforced by earlier evidence that FDI financed with retained earnings is more sensitive to host-country taxes than investments financed with debt or equity transfers from the parent to the subsidiary;¹⁷⁹ de Mooij and Ederveen¹⁸⁰ obtain a similar finding. Grubert and Mutti¹⁸¹ find that repatriation taxes do not seem to have an effect on location choices among alternative countries. The issue is not clearcut, however. Slemrod¹⁸² also finds that only FDI in the United States that is financed with parent transfers (and not FDI that is financed with retained earnings) is responsive to US taxes, and de Mooij and Ederveen caution that their results are not statistically significant and that there are numerous econometric problems with the early studies cited above.

These results, while not definitive, suggest that most of the relevant empirical evidence implies that great caution should be exercised in putting significant weight on the treasury transfer effect when designing corporate income tax policy

176 These figures do not include the amount of FDI accounted for by sales of existing interests to foreigners; taking this into account, retained earnings accounted for roughly 25 percent of total FDI.

177 Joel Slemrod, "Tax Effects on Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison," in *Taxation in the Global Economy*, supra note 83, 79-122.

178 As noted above, a similar result is reported by Huizinga, Laeven, and Nicodème, supra note 85.

179 David G. Hartman, "Tax Policy and Foreign Direct Investment in the United States" (1984) vol. 37, no. 4 *National Tax Journal* 475-87; Michael J. Boskin and William G. Gale, "New Results on the Effects of Tax Policy on the International Location of Investment," in Martin S. Feldstein, ed., *The Effects of Taxation on Capital Accumulation* (Chicago: University of Chicago Press, 1987), 201-19; and Kan H. Young, "The Effects of Taxes and Rates of Return on Foreign Direct Investment in the United States" (1988) vol. 41, no. 1 *National Tax Journal* 109-21.

180 De Mooij and Ederveen, supra note 22.

181 Grubert and Mutti, *ibid.*

182 Slemrod, supra note 177.

in Canada. More generally, it seems likely that in many cases the cumulative effect of the three qualifications described above will greatly diminish the importance of the treasury transfer effect. This is the conclusion drawn by Gordon and Hines, who argue that in general “it is difficult to argue that tax-crediting arrangements have much effect on equilibrium corporate tax rates in host countries.”¹⁸³ This view is by no means universally shared. In particular, Bird¹⁸⁴ argues that the worldwide prevalence of corporate income taxes with creditability implies that any relatively small country cannot deviate very far from the norm of utilizing a “conventional” corporate income tax without incurring large revenue losses. Note, however, that Bird’s argument was made before the passage of the US check-the-box regulations, which greatly facilitated the use of reverse hybrid entities and other structures to create FTCs as needed by separating tax credits from the associated income.

The Benefits of Taxing Location-Specific Economic Rents

In addition to the firm-specific rents discussed above, both multinational and domestic corporations may have investments that generate location-specific economic rents. In addition to resource rents, location-specific rents may arise as a result of factors such as lower transport costs, local economies of agglomeration, inexpensive but relatively productive local factors of production, productive government infrastructure, and easier access to customers,¹⁸⁵ in addition to the ability of corporations to avoid trade barriers such as tariffs and quotas. In particular, economies of agglomeration, attributable to factors such as reduced costs of transporting inputs or technological and knowledge spillovers, play an important role in the literature on the new economic geography. For example, Baldwin and Krugman¹⁸⁶ argue that agglomeration economies lead to spatial concentration of manufacturing and high-end services in advanced high-income “core countries,” whose residents demand high levels of public services and support relatively high tax rates on capital income. These relatively high rates are sustainable because agglomeration economies create location-specific economic rents that can be taxed—as long as the tax rates are not so high that they drive out capital even in the presence of agglomeration rents.¹⁸⁷

More generally, taxing location-specific rents of both domestic and foreign firms provides an efficient and thus highly desirable (not to mention politically popular)

183 Gordon and Hines, *supra* note 20, at 1955.

184 Bird, *supra* note 101.

185 For economies of agglomeration to occur, the benefits of agglomeration must be sufficiently large to outweigh any crowding effects attributable to more competition within a single geographical area.

186 Baldwin and Krugman, *supra* note 42.

187 Andreas Haufler and Ian Wooton, “Country Size and Tax Competition for Foreign Direct Investment” (1999) vol. 71, no. 1 *Journal of Public Economics* 121-39.

means of raising tax revenue.¹⁸⁸ Moreover, increasing globalization implies that foreign ownership of domestic corporations is increasing over time, so that the taxation of domestic firms may also imply the taxation of some economic rents that would otherwise accrue to foreigners.¹⁸⁹

Political Realities

Political realities may make some form of corporate income taxation inevitable. In particular, especially in light of the long history of business taxation in most countries, taxing both domestic and foreign “rich” corporations may be indispensable from a political viewpoint, irrespective of the arguments against such taxation, and no matter how compelling those arguments may be to economists.¹⁹⁰ In addition, in an international context, source countries often assert a sovereign right to tax the income generated within their boundaries, beyond any natural resource royalties. This argument is tenuous because it depends on the validity of claims related to territorial sovereignty or the provision by the host country of a suitable investment environment and access to local markets. Nevertheless, it is believed to be compelling, at least in many quarters, and it thus provides another rationale for source-based taxation of capital income.¹⁹¹

Finally, the corporate income tax is an excellent example of a hidden tax—one whose burden is not readily apparent to Canadian citizens, and indeed, as suggested by the discussion above, is still a contentious issue among public finance specialists. Public choice theorists argue that hidden taxes are especially undesirable because they promote the overexpansion of the public sector (assuming that other factors, such as international tax competition, do not result in the underprovision of public services). From a political standpoint, however, hidden taxes are extremely attractive because they allow politicians to claim credit for highly visible public services while effectively disguising their costs. It is difficult to assess the importance of these arguments in the Canadian context; they presumably provide some support for the existing corporate income tax, but recent reforms suggest that that may be of decreasing importance as the spectre of increasing globalization and international tax competition receives more attention in public discussion of tax policy.

188 Mintz, *supra* note 101.

189 Harry Huizinga and Soren Bo Nielsen, “Capital Income and Profit Taxation with Foreign Ownership of Firms” (1997) vol. 42, no. 1 *Journal of International Economics* 149-65. Note, however, that increased foreign ownership may imply that income shifting to the corporate tax base from the personal income tax base will be less of a problem, creating a tendency for lower corporate tax rates. See Fuest and Hemmelgarn, *supra* note 70.

190 Bird, *supra* note 101.

191 Peggy B. Musgrave, “Interjurisdictional Equity in Company Taxation: Principles and Applications to the European Union,” in Sijbren Cnossen, ed., *Taxing Capital in the European Union: Issues and Options for Reform* (Oxford: Oxford University Press, 2000), 46-77.

IMPLICATIONS FOR CORPORATE INCOME TAXATION IN CANADA

The discussion thus far demonstrates clearly that policy makers in Canada face a difficult problem in setting the parameters of the corporate income tax, especially given the importance of attracting FDI from large MNEs based in the United States and in other countries.¹⁹² On the one hand, international tax competition for highly mobile capital, including capital that generates firm-specific economic rents, coupled with aggressive efforts by MNEs to reduce their tax liabilities by shifting revenues and costs across jurisdictions, results in considerable downward pressure on both marginal and statutory corporate income tax rates, a tendency that is reinforced by a natural reluctance to use a tax instrument that is highly distortionary, even if it were assessed only on domestic firms. On the other hand, these tendencies are mitigated by several other factors that support a significant level of capital income taxation. These factors include a desire to appropriate both domestic and foreign economic rents, especially location-specific economic rents earned by foreign-owned MNEs; the potential to take advantage of the treasury transfer effect when possible (for example, to the extent that it is not limited by the US accounting rules, the rules for expense allocation, or the other qualifications discussed above); the desire to limit tax

192 As noted above, the options considered in this article are limited to reforms within the structure of an income tax. In particular, alternative consumption-based direct taxes, such as corporate cash flow tax or the ACE (allowance for corporate equity) tax, are excluded from consideration; for discussions of these options, see Charles E. McLure Jr. and George R. Zodrow, "A Hybrid Consumption-Based Direct Tax Proposed for Bolivia" (1996) vol. 3, no. 1 *International Tax and Public Finance* 97-112; George R. Zodrow, "Alternative Forms of Direct Consumption Taxes: The Croatian Approach," in Michael Ahlheim, Heinz-Dieter Wenzel, and Wolfgang Wiegand, eds., *Tax Policy: Theoretical Foundations and Practical Applications* (Heidelberg: Springer, 2003), 391-413; and Zodrow, *supra* note 48. In addition, the analysis generally assumes that political and administrative considerations imply that the same corporate income tax system must be applied to both domestic and foreign corporations; that is, differential treatment of foreign corporations, even if the foreign corporations are perceived to be significantly more mobile than domestic firms, is not permitted. (A short discussion of the advantages and disadvantages of a preferential tax rate for the manufacturing sector in order to attract relatively mobile capital to that sector is provided below.) In particular, the analysis rules out tax holidays (or other tax preferences) designed solely for investments by MNEs. For a discussion of the problems associated with tax holidays, see Jack M. Mintz, "Tax Holidays and Investment," in Anwar Shah, ed., *Fiscal Incentives for Investment in Developing Countries* (Washington, DC: World Bank, 1995), 165-94; George R. Zodrow, "Income Tax Reform and Investment Incentives," in Zeljko Bogetic and Arye Hillman, eds., *Financing Government in Transition: Bulgaria* (Washington, DC: World Bank, 1995), 71-96; Robin W. Boadway and Anwar Shah, "Perspectives on the Role of Investment Incentives in Developing Countries," in Anwar Shah, ed., *Fiscal Incentives for Investment and Innovation* (Oxford: Oxford University Press, for the World Bank, 1995), 94-102; and Howell H. Zee, Janet G. Stotsky, and Eduardo Ley, "Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries" (2002) vol. 30, no. 9 *World Development* 1497-1516. For theoretical discussions of the differential tax treatment of mobile and immobile capital, see Becker and Fuest, *supra* note 31; and Gugl and Zodrow, *supra* note 150.

avoidance under the personal income tax; and the need to satisfy political demands for corporate taxation. In addition, these concerns must be coupled with uncertainty about the extent to which the burden of taxes on international capital is shifted to local factors of production (as is assumed in most theories of international tax competition), and the extent to which the availability to MNEs of various tax-avoidance techniques may limit the deleterious effects otherwise associated with relatively high host-country corporate income tax rates.

The following discussion attempts to identify the implications of the analysis for corporate income tax reform in Canada, weighing the relative importance of the various arguments discussed at length above. It begins with a necessarily somewhat subjective general discussion that reviews how the arguments might be weighed. It then draws on this discussion to evaluate the recently enacted corporate income tax rate reductions in Canada. The analysis then turns briefly to more drastic reform options, including the implementation of a Nordic dual income tax, and discusses several variations on these themes. The basic conclusions are that (1) the international tax competition, income shifting, and efficiency cost considerations stressed in the analysis thus far provide considerable support for the traditional prescription of a base-broadening, rate-lowering reform of the corporate income tax structure, even in light of the various qualifications to the basic argument, and (2) a weighing of the various arguments suggests that the corporate rate reductions recently enacted (a reduction in the federal corporate income tax rate to 15 percent, which implies a combined federal-provincial statutory tax rate of 27.6 percent in 2012, with an ultimate target of a combined rate of 25 percent, to be achieved by further provincial rate reductions) were a desirable direction for tax reform. As detailed above, these changes imply that the taxation of capital income in Canada will be the lowest of the G7 nations and will be relatively competitive with the smaller developed countries and the emerging and transitional economies, especially those most likely to be serious competitors for potential FDI in Canada and investment by Canadian MNEs. Absent offsetting changes in the corporate income taxes in other countries, these rate reductions should enhance the efficiency of the Canadian economy, resulting in increased investment by both domestic and international firms, including investment by MNEs that tend to generate firm-specific rents, as well as the associated increases in wages and in returns to relatively immobile factors. The reform should also generate increased revenues by reducing tax incentives for income shifting out of Canada.

The primary potential concerns about the recent rate-reducing reform are fourfold, as will also be discussed in detail below. First, lower corporate tax rates necessarily imply lower taxation of location-specific economic rents, including those earned in the natural resource and banking sectors, some of which are earned by foreigners. Second, rate reductions may raise the possibility of revenue losses due to the treasury transfer effect. Third, the positive impact of rate reductions in terms of attracting new FDI may be reduced to the extent that firms are now mitigating the negative effects of corporate income taxes with aggressive tax planning. Finally, the reform creates some potential for tax avoidance by the owners of closely held corporations

who may convert labour income to undistributed corporate earnings in order to take advantage of relatively low corporate rates while deferring a higher personal tax liability; that is, as corporate rates fall relative to personal rates, the corporate tax may no longer completely fulfill its role as a backstop to the personal income tax.

Weighing the Arguments: A General Discussion

In the absence of a fully specified general equilibrium model of Canada, the United States, and the rest of the world—one that would include perfectly and imperfectly competitive firms with the latter generating both firm-specific and location-specific rents, a treatment of the complex interactions between Canadian and foreign tax systems, an analysis of the possibilities for income shifting by both MNEs and domestic entrepreneurs, and accurate empirical estimates of the relevant key parameters—it is difficult to systematically weigh the various arguments presented above. The following represents my personal weighing of the relative importance of these arguments in the Canadian context.

As a first step, it seems reasonable to assume that Canada should be treated as a relatively open economy, and thus to take seriously the basic arguments for limiting the taxation of capital income. That is, even if capital is less than perfectly mobile, and even if tax exemption or subsidization of capital income is not desirable, Canada must set its tax policy in a world economy in which international tax competition is increasingly the norm.

The tax competition argument applies to the traditional case for low METRs as the primary determinants of the level and allocation of marginal investments, and to the more recent arguments for low statutory tax rates and AETRs as the primary determinants of the location of investments that generate firm-specific economic rents and the extent to which the tax system encourages tax avoidance in the form of income shifting by MNEs.

Lowering corporate statutory tax rates is an attractive option on many fronts. It simultaneously produces lower METRs; reduces the taxation of highly mobile firm-specific economic rents; reduces incentives for income shifting in the form of transfer pricing, debt reallocation, and other financial accounting manipulations; and reduces reliance on a relatively highly distortionary tax instrument. Moreover, because empirical evidence, especially in the most recent studies, suggests that such financial reallocations are relatively easy to accomplish—in comparison with reallocations of physical capital—the case for lower statutory rates becomes more compelling.

In particular, it should be noted that the alternative policy of reducing METRs while holding constant or increasing statutory tax rates—for example, by introducing investment tax preferences such as investment tax credits or other investment allowances—has some distinct disadvantages. In particular, it is difficult to design investment tax preferences that are neutral across business assets and sectors; tax preferences create opportunities for tax avoidance and evasion and add complexity to both tax administration and compliance; and differential treatment creates the perception, and arguably the reality, of unfair treatment of existing capital. Of course, the combination of investment tax preferences and higher statutory tax rates

has some advantages. In particular, higher statutory rates are applied to relatively immobile firms that earn location-specific rents, although, as discussed further below, an alternative to higher general statutory rates in this case is the application of special taxes in the sectors that generate location-specific rents—at least to the extent that such sectors can be readily identified and segregated. Nevertheless, lower statutory rates under the corporate income tax necessarily imply less taxation of location-specific rents, including those accruing both to domestic firms that earn such rents (for example, those in the natural resource sector and perhaps those in the protected financial services sector) and to MNEs that find Canada an especially attractive location to serve the US market (in addition to the Canadian market). This disadvantage of lower rates must be weighed against the advantages described above, including the fact that lower tax rates attract highly mobile investments that generate firm-specific rents. In addition, the alternative of lowering statutory rates implies that the returns to old capital—that is, investments that were made under the high-tax regime, presumably under the assumption of roughly constant statutory rates—will receive a windfall gain, while the government will sustain revenue losses. This topic is discussed further below.

Empirical evidence on the relative importance of such location-specific rents in Canada would be especially helpful in gauging the importance of this argument. For example, it would be useful to know whether Canadian firms that primarily export to the US market generate sustained above-normal returns to capital relative to those in the same industry that serve only the domestic Canadian market; such an analysis should attempt to account for any differential returns that represent a return to other factors, including firm-specific advantages such as the ownership and internalization advantages commonly attributed to MNEs.

The arguments for low (or zero) taxation of capital income are strengthened to some extent by contentions that capital income should actually be subsidized to indirectly offset some of the price distortions attributable to imperfect competition and to compensate for imperfect information on the part of potential investors regarding the economic and legal environment in Canada; however, these arguments seem to be of limited importance. The argument that capital income should be subsidized to offset market imperfections assumes the existence of 100 percent taxation of the economic rents attributable to market power; since Canada does not have such a confiscatory profits tax, a corporate income tax is clearly a way to partially achieve this goal. In addition, both the public financial accounting system and the legal system in Canada are sufficiently well developed that the asymmetric information problem should be relatively unimportant.

In their extreme form, the arguments discussed thus far imply tax exemption or even subsidization of capital income. How important are the various qualifications to this strong result in Canada?

Taxing Economic Rents

Some taxation of both domestic and especially foreign rents—especially those that can be classified as location-specific—is surely desirable, particularly since the

increasing cross-ownership of MNEs associated with globalization implies that an increasing fraction of these rents will accrue to foreigners. A significant fraction of these rents is likely concentrated in the resource sector. Under current law, the only way the federal government can tax resource rents is through the corporate income tax. However, to the extent that location-specific rents are concentrated in the resource sector, they might be taxed with alternative instruments (for example, mineral production taxes and royalties) if such measures were politically feasible.¹⁹³ In the absence of such changes, however, resource rents, rents in the protected financial sector, and other rents generated outside the resource and financial sectors, such as location-specific rents earned on investments made in Canada in order to obtain relatively easy access to the US market, are an attractive source of revenues that is lost with lower statutory tax rates. The resulting tendency toward higher corporate income tax rates in order to capture location-specific rents, however, is tempered by concerns over taxing the highly mobile firm-specific economic rents associated with the investments that are the most likely to generate significant positive externalities for the Canadian economy. An additional moderating factor is that the presence of location-specific rents is one indicator of monopoly power; thus, the Judd¹⁹⁴ argument that capital income should be subsidized to reduce distortions in the monopoly market assumes some relevance.

The Treasury Transfer Argument

The treasury transfer argument has some validity in certain circumstances and thus may provide a rationale for some taxation of capital income in Canada. Although it is difficult to evaluate the importance of the argument, several factors suggest that at current tax rates, including the recent rate reductions, the treasury transfer effect is of limited relevance in Canada.

Of course, as explained above, the treasury transfer argument is irrelevant for investment from countries that have a territorial tax system or allow tax sparing.

193 Beyond traditional approaches such as severance taxes and royalties, the resource sector might be subjected to taxation on economic rents; for example, Denmark and Norway recently proposed taxing rents in the petroleum sector with an ACE tax: see Diderik Lund, "Petroleum Tax Reform Proposals in Norway and Denmark" (2002) vol. 23, no. 4 *Energy Journal* 37-56. Firms in the resource sector could be made subject to a supplementary cash flow tax, often referred to as a "resource rent tax," such as that utilized in Australia: see George Fane and Ben Smith, "Resource Rent Tax," in C.D. Trengrove, ed., Centre of Policy Studies, *Australian Energy Policies in the 80's* (Sydney: Allen and Unwin, 1986), 209-41; and Ben Smith, "The Impossibility of a Neutral Resource Rent Tax" (manuscript, Australian National University, 1999). Similarly, the financial sector could be subject to a special tax on net cash flow, as sometimes discussed in the context of the "tax prepaid" form of consumption-based taxation: see, for example, the report of the President's Advisory Panel on Federal Tax Reform, *Simple, Fair, and Pro-Growth: Proposals To Fix America's Tax System* (Washington, DC: US Government Printing Office, 2005).

194 Kenneth L. Judd, "Corporate Income Taxation in a Modern Economy" (manuscript, Hoover Institution, Stanford University, 2006).

However, since the vast majority of foreign investment in Canada is from countries that operate credit systems, this argument is of little importance.

In addition, even for investment from the United States, which operates a residence-based system with an FTC and no tax sparing, the treasury transfer argument is of minimal importance for firms with excess FTCs. In 2000, 61 percent of all foreign-source income in the “general” income basket of US MNEs was earned by firms in an excess FTC position.¹⁹⁵ (This figure fluctuates considerably; these data indicate that the fraction was 49 percent in 1996, but 65 percent in 1990.) Not surprisingly, virtually all of the firms in the petroleum industry are in an excess FTC position; however, even if one excludes the petroleum industry, slightly over one-half of income in the general basket is attributable to US MNEs in an excess credit position.¹⁹⁶ However, a 1996 estimate suggests that the fraction of Canadian-source income earned by US MNEs in an excess credit position is significantly smaller at 36 percent.¹⁹⁷ Since these data are quite old and thus of marginal relevance, more recent Canadian-specific data on this issue would be useful in gauging the importance of the treasury transfer effect.

In addition to the considerable variation in these estimates, these data are difficult to interpret owing to the possibility that a significant number of companies counted as excess credit firms, at least outside the resource sector, may be close to the boundary between excess and deficit credit positions, and thus likely to exhaust their credits in the near future.¹⁹⁸ This is an issue that can be resolved only with detailed empirical investigation of specific US MNEs that invest in Canada. Even if this is the case, however, it may be largely irrelevant to the extent that US MNEs are increasingly able to engage in tax-planning activities to “manufacture” excess tax credits when they are needed and thus are able to maintain an excess FTC position virtually at will; as discussed above, this result can be achieved, for example, by separating FTCs from the associated income by using reverse hybrids and using the credits currently while deferring US tax on the income, perhaps indefinitely.

The relevance of the treasury transfer effect is also diminished to a significant extent by the details of its operation, at least with respect to the United States. In the simplest models, the treasury transfer effect operates as soon as the host-country rate drops below the tax rate faced by an MNE based in the United States. In practice, however, the US rules for granting FTCs significantly reduce their availability for two reasons.

195 This estimate was provided by Canada’s Department of Finance and was based on IRS data.

196 However, less than 25 percent of the income in the financial services basket is attributable to firms in an excess FTC position.

197 This estimate was prepared by PricewaterhouseCoopers, “Canada-U.S. Treaty Interest Withholding Rates: Revenue and Policy Considerations” (manuscript, 1999), using IRS data.

198 In private conversation, Harry Grubert of the US Treasury department has indicated that there is some evidence that this is in fact the case.

First, income earned abroad must be defined using US generally accepted accounting practices to determine foreign earnings and profits (E & P), which are then used to determine the amount of creditable taxes. These rules imply that E & P is typically greater than taxable income as defined under the Canadian tax system, primarily because capital consumption allowances are more generous under the latter. In these circumstances, the United States calculates “deemed taxes paid” such that the effective tax rate on repatriated dividends equals the ratio of actual taxes paid (including withholding taxes) to E & P. Thus, deemed taxes paid under the Canadian corporate income tax are less than actual taxes paid, both because E & P is greater than taxable income and because actual taxes paid include withholding taxes. This in turn implies that excess FTCs are generated even if the Canadian statutory rate equals the US statutory rate. Alternatively, the Canadian statutory tax rate must be lower than the US rate in order to avoid excess FTCs and the prospect of double taxation of income earned in Canada by US MNEs.

Second, as described above, taxable income in Canada as defined for US tax purposes is adjusted for certain types of expenses incurred in the United States but allocated to Canada, including interest expense, R & D expenditures, and administrative and overhead expenses. Again, this allocation has the effect of increasing taxable income in Canada and thus reducing the amount of FTC that can be claimed against the domestic liability of US firms. As noted previously, effective in 2009 the original extremely stringent water’s-edge rules for allocating interest (which currently make up roughly 30 percent of allocated expenses) will be replaced with the more favourable (to Canada) worldwide allocation rules. Nevertheless, the remaining expense allocations will still increase the likelihood that a US parent will have excess FTCs and be subject to double taxation.

Finally, it is important to note that both theoretical models and some (although not all) empirical results suggest that the treasury transfer argument is largely irrelevant for investments financed with earnings retained by Canadian subsidiaries of US MNEs, which make up a significant fraction of FDI in Canada by US firms. Although the economic theory underlying this argument—the new view of dividend taxation—is still a subject of contention, a considerable amount of the most recent empirical evidence supports this interpretation of the economic effects of dividends, including the central result that the taxation of dividends does not effect marginal investment decisions. Moreover, the two primary competing theories that underlie the alternative traditional view of the effects of dividend taxes in the context of domestic corporate managers and firm shareholders—that dividends are required as a signal of profitability or as a constraint on the empire-building tendencies of corporate managers—are much less relevant in the context of a Canadian subsidiary and its US parent, where such issues should be much less critical.

This discussion implies the existence of a large number of important qualifications to the treasury transfer argument. Accordingly, it is far from clear that the treasury transfer argument provides an important argument for keeping Canadian corporate income tax rates at high levels, especially at current corporate income tax rates.

The Role of Tax Avoidance

Allowing or even facilitating tax avoidance could be used as a means of reducing the impact of relatively high statutory rates on mobile international capital while maintaining the taxation of relatively immobile domestic capital and the taxation of location-specific economic rents at relatively high rates. For example, rules designed to limit tax avoidance, such as the thin capitalization rules or the transfer-pricing rules under current Canadian law, could be relaxed explicitly, or enforcement could be allowed to become lax. The importance of this argument for Canada depends primarily on two factors. First, would such a policy be perceived as favouritism toward MNEs, and, if so, would it be politically acceptable or would it be perceived as unacceptably inequitable to the shareholders of primarily or exclusively domestic firms? Second, how important is this effect in the Canadian context? The results of Altshuler and Grubert¹⁹⁹ indicate that tax avoidance reduces the tax burden of US MNEs by roughly 15 percent. Such a reduction is certainly important but it is not huge, which suggests that higher corporate tax rates still have a significant impact on the cost of capital—a result that is reinforced by evidence that suggests that FDI is still sensitive to effective tax rates (calculated without taking into account tax-avoidance possibilities). Finally, note that one potential way to help gauge the importance of tax avoidance in Canada would be to replicate the Altshuler-Grubert analysis solely for US MNEs that invest in Canada to determine the extent to which Canadian tax burdens on US MNEs are reduced by tax avoidance. Another useful analysis would be to determine whether the tax sensitivity of FDI in Canada has declined over time (as suggested by increasing tax avoidance) or has increased over time (owing to increasing capital mobility and increased tax competition).²⁰⁰

The Backstop Argument

Finally, the traditional “backstop to the personal income tax” argument provides a convincing rationale for some form of business taxation. However, the relevance of the argument in assessing the desirability of the recent rate reductions depends on many factors, such as the extent to which the corporate statutory rate falls below the top personal rate and the degree of responsiveness of income shifting to this tax rate differential. Since the small business sector is fairly sizable in the Canadian economy, with small CCPCs accounting for nearly 20 percent of net revenues under the corporate income tax, the problem is certainly a relevant one. Given that the business

199 Altshuler and Grubert, *supra* note 28.

200 Another important issue is whether the United States will change the rules that facilitate tax avoidance, especially the check-the-box” rules discussed above. Given the popularity of these rules, as well as an overriding concern with the competitiveness of US MNEs in the international marketplace, it seems unlikely that the status quo will change soon. However, anything is possible, especially if the 2008 election results in a Democratic administration committed to eliminating advantages for businesses that invest abroad rather than in the United States.

and individual taxes are roughly fully integrated, the backstop problem is not an important issue for distributed earnings. For earnings that are retained in the corporation, a key issue is the extent to which the income shifting attributable to the tax differential represents a permanent loss of revenue or simply a deferral of tax, in which case labour income within a closely held corporation would eventually be taxed at individual income tax rates with little revenue loss in present value terms. Thus, although the backstop function of the corporate income tax provides an argument against creating a huge differential between corporate and individual tax rates, it does not provide a compelling argument against the recent corporate income tax rate reductions.

Political Arguments

Political realities may argue for a significant degree of corporate income taxation, but the recent reforms involving rate reductions in both the federal and provincial corporate income taxes are indicative of popular support for these measures. This support is perhaps prompted by greater realization of the prevalence and increasing importance of globalization, international capital mobility, and international tax competition. Another potential factor is the increasing awareness of the remarkable performance of some countries that have apparently succeeded in stimulating FDI and economic growth with tax policies that tax capital income very lightly, with Ireland being perhaps the most prominent example.²⁰¹ However, large differences in initial conditions, especially with respect to capital per worker and openness to foreign investment, suggest that any potential gains would necessarily be smaller if such policies were adopted in Canada.

The Gravelle-Smetters Arguments

As suggested above, the arguments presented by Gravelle and Smetters,²⁰² which assert that capital income taxes are not ultimately borne by local factors of production as assumed in the derivation of the “zero tax” result described above, do not seem compelling for at least four reasons. (1) Canada is a much smaller force in international markets than the United States is, which is the sole focus of the Gravelle-Smetters empirical analysis. (2) The increasing integration of the Canadian economy with the rest of the world as part of the ongoing process of globalization, coupled with empirical evidence of increasing capital mobility over time consistent with globalization and the increasing sensitivity of FDI to tax factors, suggests that tax policy in Canada should be based on the assumption of a high degree of international capital mobility. (3) The work of Randolph²⁰³ demonstrates that the crucial role of the elasticity of substitution between imports and domestic goods in supporting a high

201 Walsh, *supra* note 3.

202 Gravelle and Smetters, *supra* note 102.

203 Randolph, *supra* note 122.

level of capital income taxation in the Gravelle-Smetters model is much diminished in a more general model of international trade. In any case, recent empirical estimates of this import substitution elasticity have been relatively large and, as stressed by Harberger,²⁰⁴ small values imply an implausibly large degree of market power for domestic producers. (4) Finally, even if the Gravelle-Smetters analysis is correct and capital bears a significant portion of the burden of the capital income taxation in an open economy, it is far from clear that a high level of taxation of domestic savers and investors is desirable.

Summary

The arguments for a low level of taxation of capital income are certainly relevant in the context of Canada, especially in an environment of increasing globalization and international capital mobility. Although the various qualifications to these arguments are of sufficient importance to preclude tax exemption in the form of complete elimination of the corporate income tax, they are not strong enough to override the presumption that the level of taxation of capital income should be relatively low in Canada.

The Recent Rate-Reducing Corporate Income Tax Reform

The recently legislated reduction in the federal corporate income tax rate to 15 percent in Canada implies a combined statutory tax rate of 27.6 percent in 2012, with an ultimate target of a combined rate of 25 percent, to be achieved by further provincial rate reductions. A natural question is whether the analysis in this article suggests that this reduction was desirable and whether further reductions might be appropriate.

The extreme form of the tax competition argument outlined above suggests that non-benefit-related source-based taxes applied to capital income should be zero (or, in certain circumstances, that capital income should be subsidized), which would imply that the recent reductions were a move in the right direction. However, the various qualifications noted above, as well as international experience, suggest that some positive taxation of capital income is desirable. As also noted above, in principle one could construct a general equilibrium model of the Canadian economy in the world economy and attempt to discern an optimal corporate income tax rate. However, in the absence of such an explicit analysis of the welfare optimizing tax rate, a more modest analysis is required. For example, a tax environment that results in roughly the same or a somewhat lower tax burden than that imposed by a country's competitors for mobile capital is a reasonable goal.²⁰⁵

204 Harberger, "Corporate Tax Incidence," supra note 52.

205 Of course, no country should utilize a corporate income tax rate in excess of the revenue-maximizing rate—the rate at which the revenue gain from a higher tax rate is just offset by the revenue loss attributable to the associated reduction in the tax base. Mintz, supra note 13, estimates that the revenue-maximizing tax rate in Canada is approximately 28 percent.

The next step in the analysis must be a determination of a country's primary competitors for internationally mobile capital. At the most abstract level, international tax competition takes place with all countries, since internationally mobile capital can in principle be invested anywhere in the globalized economy—taking into account all of the factors that affect the productivity of the investment, including taxes but myriad other factors as well. In this context, all countries are potential competitors, and a country should be careful not to attach too much importance to current investment and trading patterns, since they will not necessarily reflect future patterns, especially as the smaller developed economies and emerging and transition economies continue to grow.

Nevertheless, the set of countries that can reasonably be viewed as Canada's primary competitors for internationally mobile capital, at least for a significant period of time, can be delimited considerably. For example, direct competition with very small and extremely low-tax jurisdictions is likely to be undesirable because it would result in significant revenue losses with relatively little additional FDI. The same is true for competition with the relatively small countries that have special low-tax regimes for highly mobile financial capital.

Instead, existing and likely future trade and investment patterns provide information that in practice is highly relevant in determining a country's competitors for internationally mobile capital. For example, given that nearly 85 percent of Canadian exports are to the United States, Canada's prime suppliers of mobile capital are likely to be MNEs from countries that plan to produce in Canada in order to serve the US market as well as the Canadian market. This consideration reinforces the conventional view that tax competitiveness with the United States is a critical minimal requirement, but these MNEs also have the choice between producing at home and producing in alternative locations close to the US market. An inspection of inbound FDI flows indicates that Canada's key non-US investors are the United Kingdom, the Netherlands, Brazil, Switzerland, and Germany, which together accounted for almost 40 percent of Canada's inbound FDI over 2001-2006. (The United States accounted for approximately half of the inbound FDI flows over this five-year period.) Potential alternative locations from which to serve the United States are other countries in North and South America, particularly Mexico and Brazil. Note that some of Canada's inbound FDI serves as a substitute for domestic production coupled with exports to Canada rather than as a platform for exports to the United States, but it is not possible to distinguish between the two motivations for undertaking FDI simply by inspecting the data. Finally, Canada must compete to keep its own MNEs investing at home, with current investment patterns suggesting that the most important competitor other than the United States and the United Kingdom is France; over time, one would also expect that the emerging economies of China, India, and Russia will become increasingly important in this dimension.

The recent rate reductions imply that Canada will become competitive with most of these nations, with the only exceptions being the relatively small countries of Mexico, the Netherlands, and Switzerland, where METRs are roughly 7 percentage points lower than the corresponding rate in Canada. The Netherlands and

Switzerland together account for about 15 percent of inbound FDI (and less than 1 percent of outbound FDI), and Mexico's tax advantage is likely to be offset by less developed infrastructure and a less educated work force; therefore, reducing taxes far enough to compete with those three nations is unlikely to generate substantial additional FDI per dollar of revenue forgone. Thus, in this context, the recent reduction to a planned combined federal and provincial corporate income tax rate of 25 percent seems eminently reasonable.

Of course, one could extend this line of reasoning to argue that—at least for goods with relatively low transport costs, including goods that can be partially or fully digitized—international tax competition extends beyond the group of countries defined above to the entire group of smaller developed economies and emerging and transition economies that are also competitors in the market for international capital. According to the 2007 tax competitiveness report,²⁰⁶ Canada's METR in 2012 (which will be 23.7 percent, assuming a 25 percent statutory rate) will be higher than that of most smaller developed countries in the OECD, which have a median METR of about 18 percent. While Canada's METR will be substantially lower than the METRs in the four key emerging markets (Brazil, Russia, India, and China), it will be higher than the METRs in all the European emerging economies, which have a median METR of about 12 percent. From this viewpoint, the recent corporate income tax rate reductions are still quite desirable; however, as discussed above, further rate decreases may result in significant revenue losses with little offsetting increases in FDI and tax base.

This conclusion is reinforced by several of the arguments made above. In particular, a lower statutory tax rate will reduce incentives for income shifting and encourage FDI (and domestic investment) that generate firm-specific rents. At the same time, the potential counterarguments to the rate-reducing reforms are not especially strong, given the rates currently planned. In addition, the reduction in the effectiveness of the corporate income tax as a backstop to the individual income tax was not seriously impaired by the recent reductions. The most relevant potential disadvantages of the recent rate reduction are (1) that it reduces the taxation of location-specific economic rents (although if this is perceived to be a serious problem, it could be addressed, at least in the resource and financial sectors, by new special sector taxes); and (2) that the availability of tax-avoidance mechanisms may mitigate the negative effects of relatively high taxes, reducing the need for rate reductions (although existing evidence has not yet demonstrated that this is an important consideration). On balance, the recent reductions seem highly desirable.

It is also useful to note that the case for the recent rate reductions presented above is generally consistent with the traditional base-broadening, rate-lowering prescription for income tax reform that has often been recommended around the world, including in Canada—for example, by the Carter report²⁰⁷ and by the Mintz

206 Mintz, *ibid.*

207 Canada, *Report of the Royal Commission on Taxation* (Ottawa: Queen's Printer, 1967).

report.²⁰⁸ The basic thrust of this approach is to introduce structural changes in the measurement of the tax base so that it will reflect real economic income as accurately as possible. In general, this involves eliminating business tax preferences such as preferential rates, sector-specific preferences, investment tax credits and allowances, and accelerated depreciation deductions (other than acceleration designed to offset the effects of inflation in the absence of explicit inflation indexing), and using the resulting revenues to lower the (uniform) tax rate applied to both domestic and foreign firms. As noted previously, much of the reduction in statutory tax rates that has occurred in OECD countries in recent years has been accompanied by such base-broadening reforms.²⁰⁹

The standard argument for such a reform is that it is an economically neutral approach to business tax reduction and, at least in certain circumstances, minimizes the inter-asset and inter-sectoral economic distortions associated with taxing corporate income²¹⁰ while simultaneously simplifying tax administration and compliance and the perceived fairness of the tax system. It results in a positive tax burden on both the normal and the inframarginal returns to investments by MNEs, a burden that is determined primarily by the level of the statutory tax rate (and the method of finance). At the same time, the base-broadening, rate-lowering approach avoids distorting the tax system applied to domestic firms that in many cases will be facing intense international competition. It may also be less susceptible to political favouritism to the extent that uniform and comprehensive taxation is perceived to be the rule.²¹¹ In addition, by avoiding special provisions and thus the problems of determining who qualifies for them and enforcing limitations on their use, a broad-based low-rate uniform tax structure simplifies both compliance with and administration of the corporate income tax. Thus, the traditional arguments for base-broadening, rate-lowering corporate income tax reform significantly strengthen the case for such a reform based on the international considerations discussed at length in this article.

A remaining question is whether the recent rate reductions should be accompanied by further broadening of the tax base to the maximum extent that it is politically

208 Canada, *Report of the Technical Committee on Business Taxation* (Ottawa: Department of Finance, 1997).

209 Devereux, Griffith, and Klemm, *supra* note 29; Gorter and de Mooij, *supra* note 31; and Devereux, *supra* note 30.

210 Although uniform or neutral taxation of all business activities is not theoretically optimal in all circumstances, it is likely to approximate the efficient outcome, especially when the administrative and political costs of differential tax treatment are taken into account: see Alan J. Auerbach, "The Deadweight Loss from 'Non-Neutral' Capital Income Taxation" (1989) vol. 40, no. 1 *Journal of Public Economics* 1-36.

211 On the other hand, some public choice theorists argue that enactment of a base-broadening, rate-lowering reform merely creates new opportunities for special interest lobbying for preferential tax treatment. See, for example, James M. Buchanan, "Tax Reform as Political Choice" (1987) vol. 1, no. 1 *Journal of Economic Perspectives* 29-35.

feasible. Although there is some scope for such reforms (see Wilson²¹² for a summary of potential base-broadening measures identified in the Mintz report), that scope appears to be fairly limited. For example, adjustments to CCAs in recent budgets, including increased rates for computers, manufacturing plants, other non-residential buildings, natural gas distribution lines, and liquefied natural gas facilities, have addressed many of the problems with insufficient CCAs identified in the careful estimates of economic depreciation in Canada by Patry,²¹³ but have narrowed rather than broadened the tax base; the primary potential base broadener is lower CCAs for some machinery and equipment used in manufacturing. Existing credits for R & D expenditures are also fairly generous, but some preferences for R & D are defensible on economic grounds to the extent that R & D generates positive externalities in the form of technological advances that are appropriated by other firms and stimulate economic growth.²¹⁴ Several base-broadening changes in the treatment of international income, including limiting the deductibility of interest expense for investment in foreign affiliates, were also proposed in the 2007 Canadian budget. Another possibility proposed by the Mintz report is a 25 percent dividend distribution tax against which corporate income tax paid would have been creditable, a provision designed to ensure that distributions to shareholders subject to shareholder credits have in fact paid tax at the corporate level.²¹⁵

The treatment of inflation is always an issue under an income tax. Because inflation is not currently a serious problem and full inflation indexing is reasonably complicated, inflation adjustment need not be provided explicitly, with ad hoc adjustments such as appropriately accelerating CCAs in a way that is uniform across all assets (although such an approach comes at the cost of additional complexity in the treatment of asset sales). The exact nature of the appropriate inflation adjustment of CCAs is not entirely clear. The appropriate degree of acceleration depends, of course, on the rate of inflation; the figure of 2 percent—the midpoint of the Bank of Canada's target range—assumed by the Department of Finance seems reasonable.²¹⁶ Even at

212 Wilson, *supra* note 7.

213 André Patry, *Economic Depreciation and Retirements of Canadian Assets: A Comprehensive Empirical Study*, Statistics Canada Working Paper (Ottawa: Statistics Canada, 2005).

214 On political grounds, the current rate preference for small corporations might also be maintained, although the economic rationale for such treatment is questionable.

215 For example, Mintz details how firms can use conduit entities in low-tax countries to effectively deduct interest expense twice: Jack Mintz, "Conduit Entities: Implications of Indirect Tax-Efficient Financing Structures for Real Investment" (2004) vol. 11, no. 4 *International Tax and Public Finance* 419-34.

216 Canada, Department of Finance, *supra* note 10. Note, however, that an obvious issue is that any degree of acceleration of CCAs will be accurate only for a specific rate of inflation. Accurate income measurement in the presence of varying rates of inflation can occur only under an appropriately designed system of inflation indexing; for a description of alternative approaches to inflation indexing, see Victor Thuronyi, "Adjusting Taxes for Inflation," in *Tax Law Design and Drafting* (The Hague: Kluwer, 2000), 434-76.

a fixed rate of inflation, however, the appropriate degree of acceleration of capital consumption allowances is ambiguous because the effects of inflation depend on the financial structure of the firm. In an inflationary environment, investment costs are understated because capital consumption allowances are based on historical cost. However, for the debt-financed component of an investment, this effect is offset (typically more than fully) because full deductions are allowed for nominal interest expense, including the inflationary component of interest; by comparison, there is no corresponding offset for the equity-financed component of an investment.

One approach to dealing with this problem is to set capital consumption allowances so that the METR on an investment that is 100 percent debt-financed is the same as that which would occur with full inflation indexing of both capital consumption allowances and interest expense. (Indeed, since all returns are paid out as deductible interest on a marginal investment, the METR attributable to the corporate income tax equals zero in this case, although the METR will still be positive owing to provincial and sales taxes on purchases of capital goods.) In these circumstances, however, the METR on the equity component of any investment that is partially equity-financed—surely the realistic situation—will exceed the statutory rate. Alternatively, as illustrated by the Department of Finance,²¹⁷ CCAs can be further accelerated so that the METR on a typical investment, financed with 40 percent debt and 60 percent equity, is the same as that which would occur with full inflation indexing, including full deductibility of real interest expense. This approach has the advantage of resulting in economic neutrality with respect to inflation for a typical investment. However, it also results in corporate income tax subsidies to investments that are fully or largely debt-financed.

Accordingly, CCAs should at a minimum meet the first criterion—economic neutrality with respect to an inflation rate of 2 percent for a 100 percent debt-financed investment. But more reasonable would be the acceleration of CCAs to the point where the METR on a typical investment, financed with 40 percent debt and 60 percent equity with full deductibility of nominal interest, is the same as that which would occur with full inflation indexing with full deductibility of real interest expense. Finally, LIFO (last-in, first-out) inventory accounting should be allowed as an option to mitigate the problems of inflation adjustment and accounting for the cost of goods sold, a reform that the Department of Finance estimates would lower the average METR by about two percentage points.²¹⁸

The treatment of losses, which is often critical, especially for startup enterprises that are unlikely to generate taxable profits in their first few years of operation, also should be adjusted. For such small firms, a generous carryforward of losses, perhaps with a nominal after-tax rate of interest, is essential to ensure competitiveness with established firms that can write off their losses on new ventures against the income

217 Canada, Department of Finance, *supra* note 10.

218 *Ibid.* Note, however, that such a change may be difficult to implement, since the Canadian Institute of Chartered Accountants does not endorse LIFO accounting.

from existing profitable investments. The case for the generous treatment of losses, however, must be tempered by a concern that such treatment will attract losses as MNEs manipulate transfer prices and the allocation of debt to locate losses where they will be treated relatively generously. This suggests that, as a rough compromise, the most generous loss offset provisions should be limited to small domestically owned firms, although the effect of such an approach will clearly be harsh for larger firms experiencing real economic losses.

Another critical area in which further reductions are warranted is in the provincial taxation of capital income outside the corporate income tax, where, as argued by Chen and Mintz,²¹⁹ capital taxes²²⁰ and especially the sales taxation of capital inputs should be eliminated. Indeed, because sales taxes on capital goods have a haphazard impact across industries and thus distort the allocation of capital (in addition to reducing overall capital accumulation), they are highly distortionary, even relative to the corporate income tax. Thus, reducing provincial sales taxes, or converting them to taxes on value added that would avoid taxing capital inputs, would be even more efficiency-enhancing than lowering corporate income tax rates (although more difficult to achieve). Indeed, these provincial taxes significantly affect METRs; Department of Finance estimates for 2012 show that provincial sales taxes add a significant 7.1 percentage points to the average METR.²²¹ Note in particular that even relatively low-rate indirect taxes that are based on gross purchase prices, such as the provincial sales taxes, have significant impacts on METRs, which are based on net income derived from capital investments.

Additional Issues

The following discussion considers several additional issues related to the reform of corporate income taxation in Canada.

Rate Preferences for the Manufacturing Sector

A rate preference for the manufacturing sector is sometimes recommended on the grounds that the manufacturing sector accounts for a disproportionately large amount of FDI, and that FDI may be especially mobile and thus particularly responsive to tax differentials.

The conventional argument is that such rate differentials should be avoided. They introduce an element of government planning—picking winners and losers—in the allocation of investment. Most economists believe that in the absence of significant externalities for particular, the allocation of investment is better left to the

219 Duanjie Chen and Jack M. Mintz, *How Canada's Tax System Discourages Investment*, C.D. Howe Institute Backgrounder no. 68 (Toronto: C.D. Howe Institute, 2003).

220 All provincial governments have plans to eliminate their general capital taxes by 2012.

221 See 2008 Budget Plan, *supra* note 14.

market. Rate preferences are difficult to administer—for example, it is difficult to determine what qualifies as manufacturing, as demonstrated by recent debates regarding what qualifies for the new US manufacturing deduction (does Starbucks “manufacture” coffee?)—and they create the potential for tax avoidance and evasion (for example, income shifting) as firms attempt to ensure that their activities qualify for the tax preference. Targeted rate reductions can be costly in revenue terms, generating relatively little new investment per dollar of revenue cost and requiring increases in other distortionary taxes. Like all tax preferences, rate preferences also create incentives for rent seeking and the potential for unexpected revenue losses due to aggressive tax planning.

Although all of these are valid arguments against a rate preference for manufacturing, there is a potentially important counterargument. Specifically, as shown by Gugl and Zodrow,²²² an implication of optimal tax theory is that, at least in certain plausible circumstances, if a country faces supplies of capital with different elasticities (and these can be identified), it should tax at a lower rate the capital with the higher supply elasticity (or, in the case they analyze, introduce tax preferences for mobile capital). Gugl and Zodrow also show that tax preferences for mobile capital can reduce the problem of underprovision of public services associated with the taxation of mobile capital.²²³

It is far from clear that these results overturn the traditional presumption against the use of tax preferences, such as a rate preference for manufacturing; most of the arguments outlined above against the use of such incentives, especially the administrative problems and avoidance and evasion opportunities they create, are not considered in the model utilized in the Gugl-Zodrow analysis. Instead, it is clear that such incentives should be used with great caution, as the arguments against them are persuasive. Nevertheless, the Gugl-Zodrow results provide a counterargument to the traditional case against the use of tax preferences for highly mobile capital, and in any case they may provide a partial explanation for their widespread use.

The Dual Income Tax Option

As noted above, one of the problems with a base-broadening, rate-reducing reform at the corporate level is that it creates incentives for labour income shifting by the owners of closely held corporations, providing the benefits of deferral at the cost of current corporate taxation and subsequent individual-level taxation under the integrated business and individual tax system in Canada. Concerns about such shifting limit to some extent the feasible degree of corporate rate reduction. Moreover, with an approximately fully integrated corporate and individual tax system, lowering corporate tax rates does not reduce the tax burden on the return to savings that are distributed to Canadian citizens and fully taxed at the individual level.

222 Gugl and Zodrow, *supra* note 150.

223 See Zodrow and Mieszkowski, *supra* note 51, for a discussion of this problem.

At one level, such an approach may be desirable. For example, Altshuler and Grubert²²⁴ argue that increasing globalization and international capital mobility imply that national governments should endeavour to reduce business-level taxes as much as possible in order to attract FDI and minimize business-income-shifting opportunities, and should concentrate the taxation of capital income at the individual level; the same reasoning played a role in the development of the recent Norwegian reform that provides a rate-of-return allowance at the personal level to shareholders rather than at the business level as under a conventional ACE tax.²²⁵ However, a substantial literature on the relative advantages of consumption versus income taxation—developed largely in the context of closed economies—argues that capital income taxation at the individual level is highly undesirable as well.²²⁶ Accordingly, it may be desirable to lower the taxation of capital income not only at the corporate level, but also at the individual level. One approach to achieving this goal is a dual income tax, an innovation that was implemented in the late 1980s and the early 1990s by the Nordic countries and subsequently by several other countries.²²⁷

The dual income tax adopts a schedular approach to taxing income: capital income is taxed at a relatively low rate under an integrated system of business and individual taxation, while labour income is taxed at progressive rates. This approach contrasts to the more common comprehensive or global approach currently used in Canada, under which both capital and labour income are aggregated and subject to a single tax schedule at the personal level.

Although there are many variants of the approach, a pure dual income tax, as described by Cnossen,²²⁸ has the following features. The essential element is that an extremely comprehensive measure of capital income is taxed at a single proportional rate, typically at the business level but sometimes at the individual level, at a rate equal to the minimum positive tax rate applied to labour income, while labour income is taxed at progressive rates under the individual income tax. Under a typical approach, dividends are not deductible to the firm but are excluded from the individual capital income tax base; capital gains are taxed at the individual level on a realization basis, but shareholders are allowed to write up their basis by net retained earnings so that such earnings are taxed only at the business level. Capital income taxes are often collected via withholding at source, which in the simplest version of the tax (which does not allow capital loss offsets against labour income or apply

224 Altshuler and Grubert, *supra* note 28.

225 Sørensen, *supra* note 16.

226 See Zodrow, *supra* note 55, for a review of these arguments.

227 Bernd Genser, “Moving Towards Dual Income Taxation in Europe” (2007) vol. 42, no. 3 *FinanzArchiv* 116-42.

228 Sijbren Cnossen, “Taxing Capital Income in the Nordic Countries: A Model for the European Union?” in *Taxing Capital in the European Union*, *supra* note 188, 180-213.

personal exemptions or standard deductions against capital income) represents a final tax.²²⁹

The biggest problem with the dual income tax approach—often referred to as its Achilles' heel—is that it creates an obvious incentive for individuals who own small businesses to convert highly taxed labour income into capital income. This problem is especially acute in the Nordic countries, given their relatively steeply progressive taxes on labour income. To combat this problem, the profits of proprietorships and closely held companies are somewhat arbitrarily split into capital and labour income components. The capital income component is typically calculated by applying a presumptive rate of return to the firm's capital, which is then taxed at the proportional rate on capital income; the labour income component is the residual profit, which is passed through to shareholders and taxed at progressive rates under the personal income tax.²³⁰

Among other things, the features of the dual income tax are designed to cope with the tensions, described above, faced by a relatively small country attempting to design its business tax policy to attract multinational investment in the face of international tax competition.²³¹ Most important, the provision of a relatively low but nevertheless positive tax rate on capital income reflects the striking of a balance between the zero tax rate result obtained in the simple small open economy model and the relatively high tax rates suggested by the various counterarguments to this view.²³²

The treatment of proprietorships and closely held companies is of special interest under the dual income tax approach. The method used to split capital and labour income, if effectively enforced, limits the extent to which labour income can be sheltered in a business; that is, the dual income tax, despite its relatively low capital

229 Ibid. For further details, see also Peter Birch Sørensen, "From the Global Income Tax to the Dual Income Tax: Recent Tax Reforms in the Nordic Countries" (1994) vol. 1, no. 1 *International Tax and Public Finance* 57-79; Søren Bo Nielsen and Peter Birch Sørensen, "On the Optimality of the Nordic System of Dual Income Taxation" (1997) vol. 63, no. 3 *Journal of Public Economics* 311-29; and, in the Canadian context, Peter Birch Sørensen, "The Nordic Dual Income Tax: Principles, Practices, and Relevance for Canada" (2007) vol. 55, no. 3 *Canadian Tax Journal* 557-602.

230 Dual income taxes in practice differ to varying degrees from this pure version; see Genser, supra note 15, for a comprehensive discussion of the details of the longstanding dual income taxes in Denmark (enacted in 1987), Sweden (1991), Norway (1992), and Finland (1993), as well as the more recent versions in Austria, Belgium, Italy, Greece, and the Netherlands. Switzerland and Germany are also considering adopting dual income taxes.

231 Sørensen, "From the Global Income Tax to the Dual Income Tax," supra note 229; and Cnossen, supra note 228.

232 Note also that, unlike some of the competing consumption-based tax alternatives, especially the flat tax, the dual income tax meshes well with existing income tax systems around the world. For a discussion of these problems, see Charles E. McLure Jr. and George R. Zdroff, "The Economic Case for Foreign Tax Credits for Cash Flow Taxes" (1998) vol. 51, no. 1 *National Tax Journal* 1-22.

income tax rate, still functions as a backstop for the taxation of labour income under the personal income tax. The experience with this approach, however, has been mixed; in particular, Norway has recently enacted an alternative approach in an effort to curb widespread abuse.²³³

The imposition of a withholding tax at source on interest payments, even at a reduced rate, is also of critical importance.²³⁴ If applied uniformly, such treatment has the same effect as the denial of a deduction at the business level for interest payments coupled with exclusion at the individual level, as proposed under the US Treasury department's preferred business-individual tax integration reform alternative, the comprehensive business income tax (CBIT).²³⁵ Since dividends paid are treated equivalently under the dual income tax, full integration of interest payments and distributed earnings is achieved. The treatment of capital gains described above also achieves integration for retained earnings; however, given the basis adjustment procedure specified, the remaining capital gains tax base appears to be largely purely inflationary gains, so that elimination of the taxation of capital gains at the individual level is a measure worthy of serious consideration. In any case, if coupled with a corporate tax that accurately measured real economic income, the treatment of capital income under the dual income tax would achieve the tax integration goal of ensuring that capital income is taxed comprehensively a single time.

Finally, given the typically limited extent to which interest income is actually taxed under most income tax systems,²³⁶ it seems likely that even with a reduced tax rate, the treatment of interest under the dual income tax would typically result in a relatively small revenue loss, or perhaps even a revenue increase that would permit a modest rate reduction.²³⁷ In the latter case, adoption of the dual income tax would

233 Sørensen, *supra* note 15. Sørensen reports that Norwegian firms would often find enough "passive" investors to ensure that they were no longer classified as closely held businesses subject to mandatory capital/labour income splitting; moreover, generous additional deductions, including some for wages paid to employees, implied that the remaining firms subject to mandatory income splitting often reported negative income. The innovative Norwegian reform replaces the income-splitting method with individual-level taxation of all corporate shares on returns in excess of a normal rate of return (termed "the rate-of-return allowance")—effectively, an ACE tax imposed at the individual shareholder level, coupled with low-rate business-level taxation of normal returns and full integration of business-level taxation of above-normal returns. Note that because the rate-of-return allowance accumulates on assets with unrealized gains, the tax does not distort realization decisions: see Alan J. Auerbach, "Retrospective Capital Gains Taxation" (1991) vol. 81, no. 1 *The American Economic Review* 167-78.

234 However, Cnossen, *supra* note 228, at 199, notes that in practice the level of withholding on interest payments under the Nordic dual income taxes falls considerably short of the ideal of full taxation at the capital income tax rate.

235 United States, Department of the Treasury, *Integration of the Individual and Corporate Tax Systems: Taxing Business Income Once* (Washington, DC: US Government Printing Office, 1992).

236 C. Eugene Steuerle, *Taxes, Loans and Inflation: How the Nation's Wealth Becomes Misallocated* (Washington, DC: Brookings Institution, 1985).

237 The US Department of the Treasury, *supra* note 235, has estimated that adoption of the comprehensive business income tax would allow a rate reduction from 34 to 31 percent.

again somewhat reduce the likelihood of revenue losses from tax-avoidance manipulations by MNEs. In any case, the relatively harsh treatment of debt (in comparison to the standard treatment of full deductibility with limited if any withholding) would discourage MNEs from allocating debt to any country that adopted a dual income tax. Indeed, international experience with withholding taxes on interest income (for example, in Germany) has not been very encouraging, and existing dual income taxes fall short of the ideal of fully taxing interest income at the capital income tax rate.

In summary, by largely separating the taxation of capital income from the progressive income taxation of labour income, the dual income tax approach provides a mechanism for dealing with the many tensions faced by tax policy makers in an open economy that is attempting to attract direct investment from foreign MNEs. Taxing capital income comprehensively but at a relatively low rate provides a means of designing a tax system that is (1) attractive to highly mobile international capital (including investments by firms that are in an excess FTC position), (2) reduces the distortions of the corporate income tax and reduces the distortions of saving under the individual income tax, (3) reduces the exposure of government tax revenues to accounting and financial manipulation by tax-avoiding MNEs, and (4) allows the taxation of labour income to be set independently of the tax rate on capital income in order to better reflect social tastes for government expenditures, including redistributive expenditures. At the same time, the dual income tax (1) raises positive revenue from both marginal returns and firm-specific and especially location-specific economic rents from both foreign and domestic corporations, (2) takes some advantage of any revenues available through the treasury transfer effect, (3) serves as a backstop to the taxation of labour income under the personal income tax, and (4) satisfies political demands for some form of taxation of corporations. The dual income tax approach will not satisfy those who, following the Schanz-Haig-Simons tradition, insist on taxing all income comprehensively under the same rate structure. Nor will it completely eliminate income taxation of highly mobile capital, as is optimal under the zero tax scenario, or achieve consumption-based taxation of domestic savings. Nevertheless, the dual income tax represents a potentially promising compromise to the offsetting tensions that characterize today's fiscal landscape, and, as argued by Mintz²³⁸ and Sorensen,²³⁹ could be considered by Canada as it attempts to design capital income tax policy in the face of increasing capital mobility and international tax competition.

Windfall Gains to Old Capital

As mentioned above, an important problem with a corporate income tax reform involving a reduction in the statutory tax rate is that the lower tax rate applies not only to new investments but also to the returns from existing investments. As a

238 Mintz, *supra* note 1.

239 Sørensen, "The Nordic Dual Income Tax," *supra* note 229.

result, the owners of existing capital receive a windfall gain, and the government loses revenue without an offsetting increase in marginal incentives to invest. Opponents of such reforms argue that it is preferable to maintain a relatively high statutory rate, coupled with investment incentives such as an investment tax credit or accelerated depreciation allowances that apply only to new investment and thus have more bang for the buck—that is, a lower revenue cost per dollar of induced investment. Under this approach, the METR on investment income is significantly lower in the short run than the average tax rate. By comparison, under the base-broadening, rate-lowering approach, marginal rates exceed average rates in the short run, since the statutory rate reduction applies to old investments.

This argument certainly has some validity, and there is no question that the use of investment incentives is widespread around the world. However, many countries have recently focused on statutory rate reduction, often financed with base-broadening elimination of investment incentives, in response to the many disadvantages of a high statutory tax rate, as described at length above. In addition, the incentive approach suffers from a multitude of problems. It is difficult in practice to design an investment incentive system that is neutral across business assets; as a result, incentive schemes are typically characterized by effective tax rate differentials across assets and across business sectors that distort the allocation of investment, and thus reduce the productivity of investment and the rate of economic growth associated with any given level of investment. Tax preferences that apply only to new investment are arguably unfair to—and certainly will be perceived as unfair by—firms that made earlier investments under the previous less generous tax system and now must compete with firms that benefit from the new incentives. This inequity is exacerbated by the fact that incentives that apply only to new investment cause windfall losses on investments made under the previous regime that do not benefit from the incentives.²⁴⁰ Tax preferences also inevitably lead to larger administrative and compliance costs.

Another issue is that investment incentives in practice are seldom combined with loss carryforward with interest; at best, firms receive limited loss carryforward with no interest. Because deductions that are delayed into the future lose value with time, investment incentives often create a tax bias against new and emerging firms (or fast-growing firms within an established industry) that cannot use their deductions currently because they do not have sufficient income from existing investments. In addition, investment incentives typically vary considerably over time—primarily for political rather than countercyclical reasons—and this instability of the tax system creates uncertainty for business investors. For all these reasons, the lowering of statutory rates appears to dominate the alternative policy of maintaining high statutory rates while mitigating their effects with investment incentives.

240 George R. Zodrow, “Transitional Issues in the Implementation of a Flat Tax or a Retail Sales Tax,” in George R. Zodrow and Peter Mieszkowski, eds., *United States Tax Reform in the 21st Century* (Cambridge, UK: Cambridge University Press, 2002), 245-83.

Note, however, that the recent corporate income tax rate reductions were phased in over time (with no additional transitional rules); thus, they should have resulted in relatively modest windfall gains. Nevertheless, if the windfall gains associated with further corporate tax rate reductions in Canada are perceived to be a serious problem that cannot adequately be addressed with phase-ins, it might be possible—although politically quite difficult—to enact some transition rules that would mitigate this problem. The essence of this approach would be to segregate new capital from existing capital and to attempt to ensure that the majority of the benefits from rate reduction would accrue to the former.

For example, one approach would be to attempt to identify new capital, impute a return to that new capital, and allow the rate reduction to apply only to the imputed returns. Such an approach is reminiscent of the American Law Institute's proposal to allow an individual dividend rate reduction to apply only to dividends deemed to be paid from investments financed with new equity (with the allowable amount of tax-preferred dividends calculated by imputing a return to newly issued equity).²⁴¹ Alternatively, an imputed return to existing capital could be subject to tax at pre-reform tax rates; to limit the time that such a provision would be in force, the present value of the transitional tax could be calculated at the time of reform and then spread out over a number of years. Yet another possibility is that Canada might accompany a significant reduction in the corporate income tax rate with a provision similar to the windfall recapture tax proposed by the US Treasury department in the debate leading up to passage of the Tax Reform Act of 1986. That tax would have calculated the deferred income due to accelerated depreciation deductions (defined as those in excess of the deductions allowed under the E & P accounting method) taken before the enactment of reform and effectively taxed that income at the pre-reform tax rate.²⁴² For example, the book value of depreciable tangible assets was approximately 18 percent greater than the tax value in 2006.²⁴³ This value, as well as the book value of intangible assets, could in principle be subject to a windfall profits tax. Any such provisions would be complicated, would be perceived as unfair (partly because they would single out only a single type of windfall gain for a special tax when any reform causes many windfall gains and losses), and would no doubt be very unpopular politically—as the US Treasury proposal was, at least in many quarters. Nevertheless, by reducing the windfall gains associated with any further reductions

241 American Law Institute, *Integration of the Individual and Corporate Income Taxes* (Washington, DC: ALI, 1991).

242 For details on the proposed windfall recapture tax, see United States, Department of the Treasury, *Tax Reform for Fairness, Simplicity, and Economic Growth* (Washington, DC: US Government Printing Office, 1984), and, for an evaluation, see George R. Zodrow, "The Windfall Recapture Tax: Issues of Theory and Design" (1988) vol. 16, no. 4 *Public Finance Quarterly* 387-424.

243 This figure was calculated using the value of deferred income taxes and capital assets shown in table 4-1 of Statistics Canada, *Financial and Taxation Statistics for Enterprises*, Statistics Canada catalogue no. 61-219-XIE (Ottawa: Ministry of Industry, 2008).

in the statutory corporate income tax rate in Canada, such provisions would allow the rate reduction to be larger and would increase its bang for the buck—that is, they would reduce the extent to which the reform lost revenue in the short run due to applying the reduced tax rate to the income from existing capital. Accordingly, as a means of facilitating an otherwise highly desirable reform, such provisions deserve further consideration.

Interprovincial Tax Competition

Given any particular reduction in the federal corporate tax rate, further reductions in the combined federal and provincial taxes on capital income could be achieved with reductions in provincial rates, and in fact were envisioned under the recent reform. Indeed, because provincial corporate income tax rates are relatively high, provincial governments have considerable room for independent rate reduction. Such independence may lead to subnational tax competition, which is a common phenomenon in the United States.²⁴⁴ A large body of literature has examined whether such competition is desirable from a national perspective, and there are many arguments on both sides of the issue.²⁴⁵ However, to the extent that provincial corporate income tax reductions would reflect the movement closer to benefit taxation of mobile capital, such reductions could be viewed as desirable.²⁴⁶ That is, since the provinces are even more likely to be accurately approximated as small open economies and their relatively high levels of corporate taxation are likely to exceed benefit tax levels, the arguments expressed above imply even more strongly that non-benefit taxation of mobile capital is counterproductive from the viewpoint of provincial residents. Thus, reductions in independent provincial corporate income tax rates provide an additional instrument for attracting highly mobile international capital to Canada.

One problem with lowering federal taxes is that the provinces would simply increase their tax rates to offset the federal reductions.²⁴⁷ To some extent, tax competition among the provinces should limit such reactions: the arguments presented above imply that because the benefits of lower provincial rates largely accrue to the

244 Robert S. Chirinko and Daniel J. Wilson, *State Investment Tax Incentives: What Are the Facts?* CESifo Working Paper 2006-49 (Munich: Center for Economic Studies and Ifo Institute for Economic Research, 2006).

245 For reviews of this voluminous literature, see Wilson, “Theories of Tax Competition,” *supra* note 51; Mintz and Chen, *supra* note 36; Zodrow, *supra* note 51; Wildasin and Wilson, *supra* note 51; and Fuest, Huber, and Mintz, *supra* note 51.

246 Zodrow, “Alternative Forms of Direct Consumption Taxes,” *supra* note 192.

247 In general, it is the combined federal and provincial tax rate, net of public service benefits, that affects the investment decisions of MNEs, so that the mix of federal and provincial rates, which would become unusually heavily weighted toward the provincial rates, is not especially important in efficiency terms. However, to the extent that provincial rates are more variable and become a larger fraction of the combined rate, MNEs would face somewhat more uncertainty in their investment decisions.

citizens of the province, such reactions would be counterproductive from their viewpoint. Further, more concrete limitations on the ability of the provinces to raise rates would be difficult to design and implement, as suggested by the difficulties encountered in efforts at tax harmonization in the European Union. It is possible, however, to attempt to devise such approaches—for example, making federal grants explicitly or implicitly conditional on the level of provincial corporate income taxation. Another possibility is suggested by the fact that provincial corporate income taxes are currently not deductible against federal tax liability. In principle, such taxes should be deductible as a legitimate business cost (even if they were to correspond perfectly to the benefits firms receive from public services, which is a highly dubious proposition). Although full deductibility is appropriate, given the existing initial equilibrium, the federal deductibility of provincial corporate income taxes limited to taxes below a ceiling would still be an improvement relative to current law, and it would certainly create a disincentive for provincial tax increases beyond current levels. It is not clear, however, how such a provision could vary across provinces to limit increases from current rates without being perceived as unfair; and, given the relatively low federal corporate income tax rate, disallowing deductibility for rate increases above a ceiling would provide only a modest disincentive for such changes.

Withholding Taxes

Finally, a related question is whether corporate rate reductions should be accompanied by reductions in withholding taxes applied to dividends and interest paid abroad, including dividends and interest paid by a Canadian subsidiary to its foreign parent. Under the current rules, withholding taxes are assessed at the standard rate of 25 percent, with various exceptions, including dividends to US shareholders, which are taxed at rates of 15 percent (portfolio investment) and 5 percent (direct investment); royalties, which are taxed at rates that vary from 0 to 10 percent (except for resource royalties, which are taxed at the full 25 percent rate); and exemption of arm's-length indebtedness, copyright royalties, and interest on government debt.²⁴⁸ In 2005, withholding taxes on interest and dividends accounted for revenues of roughly \$2.8 billion,²⁴⁹ relative to total federal corporate income tax revenues of roughly \$31 billion.

At one level, withholding taxes represent another source-based tax on capital income, so that the same arguments described above apply, suggesting that such taxes should be reduced or eliminated.²⁵⁰ This is especially true in the case of interest, except when Canadian withholding taxes are fully and immediately creditable

248 These rates apply to all other G7 countries except Italy, which faces a 15 percent withholding rate on all interest and dividend payments.

249 See Advisory Panel on Canada's System of International Taxation, *Enhancing Canada's International Tax Advantage* (Ottawa: Queen's Printer, 2008).

250 In addition, withholding taxes reduce opportunities for diversification in portfolio investment.

in the United States. For example, Mintz²⁵¹ estimates that eliminating withholding taxes between Canada and the United States would generate an increase in Canadian incomes (due to the productivity gains from additional investment) that would be more than four times the associated revenue loss; most of this gain is attributable to the elimination of withholding taxes on interest payments.

Note, however, that because withholding taxes on dividends are assessed only upon repatriation of funds, they are less onerous than corporate income taxes. Indeed, the logic underlying the new view of dividend taxation suggests that withholding taxes create tax disincentives only for initial or subsequent infusions of equity by a parent into its subsidiaries, and that they do not distort decisions regarding investments financed with the subsidiary's retained earnings. Moreover, although Sinn²⁵² argues that taxes that are due upon repatriation encourage undercapitalization to avoid the negative impact of the tax on investments financed with equity infusions, this result is vitiated if the firm has sufficient access to debt finance at its initial stages.²⁵³ Accordingly, the distortionary impact of withholding taxes may be relatively small. Finally, reductions in withholding taxes are typically accomplished in bilateral negotiations, so that investors in both countries benefit from simultaneous reductions. Given the relatively small costs of such negotiations, it seems reasonable for Canada to continue to follow this approach rather than engage in unilateral reductions in withholding taxes.

CONCLUSION

This study has extended the analytical framework described in Zodrow²⁵⁴ and applied it to the case of corporate income taxation in Canada. Although the approach is somewhat different, the conclusions—that the recently enacted and planned corporate income tax rate reductions targeting a combined federal and provincial statutory rate of around 25 percent, coupled with base broadening to the extent feasible and consistent with accurate measurement of income, elimination of provincial sales taxes on capital inputs, and reductions in withholding taxes on interest—are broadly similar to earlier recommendations, such as those made by Mintz,²⁵⁵ McLure,²⁵⁶ and

251 Jack M. Mintz, *Withholding Taxes on Income Paid to Nonresidents: Removing a Canadian-US Border Irritant*, C.D. Howe Institute Backgrounder no. 48 (Toronto: C.D. Howe Institute, 2001).

252 Hans-Werner Sinn, "Taxation and the Birth of Foreign Subsidiaries," in Horst Herberg and Ngo Van Long, eds., *Trade, Welfare and Economic Policies: Essays in Honor of Murray C. Kemp* (Ann Arbor, MI: University of Michigan Press, 1993), 325-52.

253 James R. Hines Jr., "Credit and Deferral as Investment Incentives" (1994) vol. 55, no. 2 *Journal of Public Economics* 323-47; and Alfons J. Weichenrieder, "Transfer Pricing, Double Taxation, and the Cost of Capital" (1995) vol. 98, no. 3 *Scandinavian Journal of Economics* 445-52.

254 Zodrow, *supra* note 48.

255 Mintz, *supra* note 1.

256 Charles E. McLure Jr., *Tax Reform and Investment: Will the U.S. Sneezes? Will Canada Catch Cold?* Benefactor's Lecture (Toronto: C.D. Howe Institute, 2005) (online: http://www.cdhowe.org/pdf/benefactors_lecture_2005.pdf).

Poschmann, Robson, and Banerjee.²⁵⁷ Either explicitly or implicitly, all of these studies suggest that a weighing of the various factors discussed in this article leads to the conclusion that even if one does not accept arguments implying that Canada should exempt capital income from taxation, the movement to more uniform corporate income taxation characterized by lower statutory rates was desirable. The reform was, of course, not without its problems. In particular, because the impact of relatively high tax rates in Canada on FDI may be mitigated by tax avoidance by MNEs, the recently enacted lower rates may not generate as significant an increase in FDI as hoped, while reducing the taxation of relatively immobile domestic capital, and location-specific rents earned by foreign MNEs, especially those attributable to proximity to the US market. Nevertheless, on balance, the recent and planned reductions in corporate income tax rates in Canada seem entirely appropriate. Moreover, in the current environment, the case for further reductions is far less compelling—although it will be more so if the other countries that are Canada's competitors for internationally mobile capital, including the United States, reduce their tax rates in the near future.

A more difficult question is whether Canada should be far bolder in setting its corporate income tax policy and follow the lead of Ireland and other countries in dramatically reducing corporate income tax rates. Although a recommendation to follow that path would be premature at this stage, the parallels between the Irish and Canadian cases—especially the widespread use of English, the existence of a well-educated, highly skilled population, and the prospect of serving a large, relatively high-tax and high-income nearby market—suggest that this option should be considered seriously. On the other hand, in the absence of special tax regimes designed to capture economic rents and transition rules, such a dramatic rate reduction would significantly reduce the taxation of location-specific economic rents and result in large windfall gains for the owners of existing capital in Canada, with a significant fraction of both types of gains accruing to foreign owners.

257 Finn Poschmann, William B.P. Robson, and Robin Banerjee, *Fiscal Tonic for an Aging Nation: A Shadow Budget for 2007*, C.D. Howe Institute Backgrounder no. 101 (Toronto: C.D. Howe Institute, 2007).