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How Serious Is the Problem of Base Erosion and Profit Shifting?

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Policy Forum: How Serious Is the Problem of Base Erosion and Profit Shifting?

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INTRODUCTION

In recent years, the problem of base erosion and profit shifting (BEPS) by multinational corporations has entered the public consciousness as a potentially important impediment to tax collections. The purpose of this article is to identify the nature of BEPS, consider empirical evidence of its magnitude, and evaluate proposed policy responses.

There is considerable evidence that multinational firms arrange their affairs in a tax-sensitive manner, from which it is easy—indeed, perhaps a little too easy—to infer that BEPS is a serious problem. There are journalistic accounts of apparently spectacular international tax-avoidance schemes used by multinational corporations, though these stories commonly omit or misrepresent important legal and economic elements, making it difficult to know what, if any, conclusion to draw from them. On a serious level, the US Joint Committee on Taxation was recently charged by the US Congress with identifying extreme examples of BEPS among US corporate taxpayers, and produced a report[1] that included six such examples. And

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1 United States, Staff of the Joint Committee on Taxation, *Present Law and Background Related to Possible Income Shifting and Transfer Pricing*, JCX-37-10 (Washington, DC: Joint Committee on Taxation, July 20, 2010).

statistical studies consistently indicate that multinational corporations report higher profit rates in low-tax jurisdictions than in high-tax jurisdictions, a pattern that is consistent with BEPS.

How important is the problem of BEPS from the standpoint of tax collections? The statistical evidence consistently indicates that the impact on tax revenues is only modest in magnitude. Some of the latest evidence[2] suggests that the semi-elasticity of income reporting is roughly 0.4, which means that a corporation that is located in a country with a 25 percent tax rate, and that has the opportunity to reallocate some of its taxable income to a country with a 15 percent tax rate, will typically arrange its financial and other affairs to reallocate 4 percent of its income to the lower-rate country. Other, rather more persuasive, evidence suggests that multinational firms earning profits in high-tax countries find ways to reallocate 2 percent of those profits to low-tax foreign jurisdictions.[3] For various reasons to be discussed, even these 2 or 4 percent figures probably overstate the potential tax revenue to be had by eradicating BEPS, but on its own terms the potential tax revenue from 2 or 4 percent of pre-tax incomes of multinational corporations would make an extremely modest contribution to the government finances of most countries. The average member country of the Organisation for Economic Co-operation and Development (OECD) in 2011 raised 8.8 percent of its total tax revenue from taxes on corporate profits, only a portion of which represented taxes on multinational corporations,[4] 2 percent of which would be two-tenths of 1 percent of tax revenue. Even if one were to double, or quintuple, this figure, it would amount to less than 1 percent of tax revenue. From this standpoint, it appears that even a complete solution to the problem of BEPS, were one available and implementable, would have little direct impact on government finances.

That the level of concern expressed about the problem of BEPS is inconsistent with the implications of the available statistical evidence suggests either that the problem has been vastly overstated in popular discussion or that there is something amiss with the body of careful empirical work on this issue. Further consideration of even simple pieces of evidence points again, however, in the direction of BEPS being a much smaller problem than is commonly appreciated. The fact that governments

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2 See Theresa Lohse and Nadine Riedel, *Do Transfer Pricing Laws Limit International Income Shifting? Evidence from European Multinationals*, Oxford University Centre for Business Taxation Working Paper no. 13/07 (Oxford: University of Oxford, Saïd Business School, Centre for Business Taxation, September 2013); and Dhammika Dharmapala, *What Do We Know About Base Erosion and Profit Shifting? A Review of the Empirical Literature*, Illinois Public Law and Legal Theory Research Paper Series no. 14-23 (Urbana-Champaign: University of Illinois, College of Law, December 2013). Dharmapala's survey of the literature indicates that more recent studies tend to report smaller magnitudes of BEPS.

3 Dhammika Dharmapala and Nadine Riedel, "Earnings Shocks and Tax-Motivated Income-Shifting: Evidence from European Multinationals" (2013) 97:1 *Journal of Public Economics* 95-107.

4 See Organisation for Economic Co-operation and Development, *OECD.StatExtracts* (http://stats.oecd.org).

of high-tax-rate countries collect considerable revenue from taxing the profits of their resident multinational corporations itself indicates that tax avoidance is not as easy or cost-effective as some fear that it is. If firms were able to arrange their affairs in ways that would easily reallocate pre-tax income earned in high-tax locations to alternative locations with zero or very low tax rates, then most would surely do so, and even those corporations without an international business presence would quickly establish operations in low-tax foreign locations in order to reduce their tax obligations. That corporations persist in paying taxes to governments of high-tax countries does not reflect lack of imagination or insufficient profit motive; it reflects the fact that enforcement makes tax avoidance difficult and costly.

Further evidence is available from the location of foreign business activities. Studies consistently find that multinational firms locate more employment, property, plant, and equipment in low-tax locations, and less in high-tax locations, than the structures of these economies would ordinarily warrant. This business activity pattern is itself a form of base erosion from the standpoint of high-tax countries, albeit of a rather mundane form, since it is hardly surprising that high tax rates discourage business activity, whereas low tax rates attract it. From the standpoint of profit shifting, however, this pattern makes it clear that firms are unable to reallocate pre-tax income with impunity. If it were easy to reallocate taxable income, there would be no benefit to locating real business activity in a low-tax country. The profit-maximizing strategy would be to locate business activity wherever it generates the highest pre-tax profits, and use financial or other means to reallocate taxable income to an affiliate located in a zero-tax location. It would be a mistake to let tax rates influence where pre-tax profits are actually earned, since doing so reduces the amount that is ultimately destined to be reported as income by the affiliate in a tax haven. In fact, this is not what firms do: the evidence consistently indicates that multinational firms tend to locate greater real business activity in countries with low tax rates than would otherwise be expected. This is consistent with maximizing after-tax profits only if it is difficult to shift pre-tax income.

Finally, there is evidence from the use of tax haven affiliates by multinational corporations. The tax havens are the countries with the lowest tax rates, and so are the destinations of choice (if one has unfettered choice) for profits to be reallocated from high-tax countries. Among large US multinational firms from 1982 to 1999, only 38 percent had tax haven affiliates,[5] and among German multinational firms from 2002 to 2008, only 20 percent had tax haven affiliates.[6] The majority of US and German firms obviously did not reallocate taxable income to tax havens, since they had no method of doing so, given the absence of legal presence in those countries.

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5 Mihir A. Desai, C. Fritz Foley, and James R. Hines Jr., "The Demand for Tax Haven Operations" (2006) 90:3 *Journal of Public Economics* 513-31.

6 Anna Gumpert, James R. Hines Jr., and Monika Schnitzer, *The Use of Tax Havens in Exemption Regimes*, NBER Working Paper no. 17644 (Cambridge, MA: National Bureau of Economic Research, December 2011).

The most noteworthy feature of this evidence is that there is nothing that prevents a US or German multinational firm from establishing a tax haven affiliate. The reason not to do so is that it is not worth it—and the reason it is not worth it is that it is too difficult or costly to reallocate taxable income from high-tax countries to tax haven countries.

Consequently, one is left with a puzzle. There is clearly scope for BEPS to reduce tax liabilities, and ample evidence that multinational firms arrange their affairs in a tax-sensitive manner. The empirical puzzle is why there is not more tax avoidance than appears to be the case. The sections that follow review some of the available evidence, which may deepen rather than resolve the puzzle.

FINANCING OF MULTINATIONAL CORPORATIONS

Successful BEPS entails locating taxable income in low-tax jurisdictions and deductible expenses in high-tax jurisdictions. The most straightforward way to be able to report earning taxable income in low-tax jurisdictions is to concentrate economic activity there. To a certain degree this occurs as a matter of course, since, all other things being equal, high tax rates discourage economic activity by reducing after-tax rewards. As a result, economic activity tends to flourish in low-tax environments to a greater degree than in high-tax environments, even in the absence of multinational firms and opportunities to substitute low-tax activities for high-tax activities. In addition, there is the opportunity for such substitution, so one should expect there to be disproportionate income production in low-tax environments. And the available evidence consistently indicates that there is much more multinational activity in low-tax locations than would ordinarily be predicted on the basis of other economic characteristics.[7]

Concern over BEPS is usually directed not at the location of economic activities, but at the location of taxable income contingent on economic activities. Taxable income is the difference between revenues and expenses, and corporate financing operations can offer relatively straightforward methods of placing expenses where they generate the largest tax benefits. Corporations can be financed with either debt or equity, debt offering the advantage that interest payments are generally deductible in calculating taxable income, whereas dividend payments to shareholders are

7 See, for example, James R. Hines Jr. and Eric M. Rice, "Fiscal Paradise: Foreign Tax Havens and American Business" (1994) 109:1 *Quarterly Journal of Economics* 149-82; James R. Hines Jr., "Altered States: Taxes and the Location of Foreign Direct Investment in America" (1996) 86:5 *American Economic Review* 1076-94; 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; James R. Hines Jr., "Tax Sparing and Direct Investment in Developing Countries," ibid., 39-66; Mihir A. Desai, C. Fritz Foley, and James R. Hines Jr., "Foreign Direct Investment in a World of Multiple Taxes" (2004) 88:12 *Journal of Public Economics* 2727-44; and Salvador Barrios, Harry Huizinga, Luc Laeven, and Gaëtan Nicodème, "International Taxation and Multinational Firm Location Decisions" (2012) 96:11-12 *Journal of Public Economics* 946-58.

typically not deductible. Since the benefits of interest deductibility rise with tax rates, it follows that firms in higher-tax locations should be expected to use greater amounts of debt than do firms in lower-tax locations, whether or not they substitute borrowing in one location for borrowing in another. In addition, the ability of multinational firms to choose the location of borrowing gives even greater scope for arranging financing in order to locate interest deductions where they will be most valuable.

Governments of high-tax countries are well aware of the benefits of interest deductibility, and have implemented several measures that limit the ability of taxpayers to benefit from strategic debt-location choices. These measures include thin capitalization rules that deny interest deductions once interest expenses are deemed excessive by some (typically rather crude) measure; interest expense allocation rules that require domestic-based multinational companies to allocate a portion of domestic interest expense against foreign income, thereby effectively reducing available foreign tax credits; and controlled foreign corporation rules that subject to home-country taxation certain interest income received by foreign affiliates. Taxpayers often attempt to plan around these rules, but doing so can be costly, a constraint that may explain why multinational firms do not make even more use of borrowing arrangements to reduce their tax obligations.

There is considerable evidence that borrowing by multinational firms is sensitive to local tax rates. Desai et al.[8] offer evidence that among the foreign affiliates of US multinationals from 1982 to 1994, 10 percent higher local tax rates were associated with 2.8 percent higher debt:asset ratios. Huizinga et al.[9] document a similar pattern among the foreign affiliates of European multinationals from 1994 to 2003. Buettner et al.[10] find that, as expected, thin capitalization rules dampen the effect of tax-rate differences on the borrowing behaviour of European multinationals from 1996 to 2004. Froot and Hines[11] consider the impact of the US Tax Reform Act of 1986 on borrowing by US multinational firms. The 1986 Act required US firms to allocate a portion of domestic interest expense against foreign income, effectively removing the tax benefit of domestic interest deductions for firms with excess foreign tax credits; the evidence indicates that the affected firms responded by significantly reducing their domestic borrowing. Tax rates appear to influence many aspects of a

8 Mihir A. Desai, C. Fritz Foley, and James R. Hines Jr., "A Multinational Perspective on Capital Structure Choice and Internal Capital Markets" (2004) 59:6 *Journal of Finance* 2451-87.

9 Harry Huizinga, Luc Laeven, and Gaëtan Nicodème, "Capital Structure and International Debt Shifting" (2008) 88:1 *Journal of Financial Economics* 80-118.

10 Thiess Buettner, Michael Overesch, Ulrich Schreiber, and Georg Wamser, "The Impact of Thin-Capitalization Rules on the Capital Structure of Multinational Firms" (2012) 96:11-12 *Journal of Public Economics* 930-38.

11 Kenneth A. Froot and James R. Hines Jr., "Interest Allocation Rules, Financing Patterns, and the Operations of U.S. Multinationals," 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), 277-307.

multinational firm's borrowing behaviour, including implicit borrowing that takes the form of delaying payment for purchases.[12]

How should one think about the role of corporate borrowing in BEPS activity by multinational firms? Since governments generally permit firms to deduct interest payments in calculating taxable income, these policies acknowledge—at least tacitly—that permitting a tax deduction for some portion of interest expense is acceptable, maybe even desirable. The BEPS concern presumably lies with the abusive use of debt contracts, which is a subset of overall use. In this context, it is perhaps striking that multinational firms do not make better strategic use of debt than they do—that interest deductions are not even more concentrated in high-tax countries.[13] Countries have the ability to impose thin capitalization rules and other methods of limiting the strategic use of debt, and it may be that the rules currently in place account for the limited extent to which multinational firms are able to use interest deductions to reduce their taxable incomes in high-tax countries. These rules could be further strengthened, but this would come at the cost of discouraging corporate activity, reducing the associated employment and other economic benefits that it brings. Consequently, the financing portion of BEPS may represent reasoned trade-offs on the part of taxing authorities around the world.

PROFIT REALLOCATION

International tax avoidance takes many forms, of which tax-motivated cross-border loans represent just one. Other methods of tax avoidance include making tax-sensitive adjustments to the transfer prices used to record transactions between related parties, corporate reorganizations designed to relocate corporate residence to attractive tax jurisdictions, and careful timing of income repatriation to reduce the cost of home-country taxation of foreign income.

Multinational firms generally have incentives to reallocate taxable income from high-tax locations to low-tax locations, since $1 of pre-tax income is obviously more valuable if lightly taxed than if heavily taxed. Firms located in countries that exempt foreign income from taxation face the clearest incentives to relocate taxable income. Suppose, for example, that a firm located in a country with a 30 percent tax rate earns $100 of income at home, where it would normally be subject to tax at 30 percent, but the firm has the opportunity to attribute $50 of that income to its foreign affiliate in a location with a 20 percent tax rate. If the home country does not tax foreign income, then the reallocation reduces domestic tax liabilities by $15 and

12 Mihir A. Desai, C. Fritz Foley, and James R. Hines Jr., *Trade Credit and Taxes*, NBER Working Paper no. 18107 (Cambridge, MA: National Bureau of Economic Research, May 2012).

13 Others have noted the puzzle that corporations generally could benefit from the tax savings associated with greater use of debt, but for some reason persist in issuing large amounts of equity. See, for example, John R. Graham, "How Big Are the Tax Benefits of Debt?" (2000) 55:5 *Journal of Finance* 1901-41.

increases foreign tax liabilities by $10, for a net saving of $5. Income reallocation is unlikely to be costless, but if the tax saving of $5 exceeds the after-tax cost of income reallocation, then it will be in the interest of the firm to move taxable income from the high-tax to the low-tax location.

How would the firm in this example reallocate taxable income? In addition to adjusting the volume and location of borrowing, it is possible for firms to adjust the pricing of intercompany transactions. An excessively transparent method of doing so would be to sell a paper clip from the affiliate in the 20 percent tax-rate location to the parent company in the 30 percent tax-rate location, charging a price of $1 million. This transaction would create a tax deduction of $1 million in the home country and taxable income of $1 million in the foreign country, thereby reducing total global tax obligations. Cognizant of these incentives, governments have adopted arm's-length pricing rules dictating that, for tax purposes, the prices used for intercompany transactions must be the same as those that would have been chosen by unrelated parties transacting at arm's length. While the arm's-length pricing standard addresses the problem of $1 million paper clips, there is widespread concern that the difficulty of applying the standard to many ordinary cases, not to mention complex transactions involving sophisticated financial instruments or intangible property such as patents and trademarks, leaves ample opportunity for tax avoidance. Governments, particularly those of high-tax countries, are perfectly well aware of the potential of transfer price manipulation to erode tax collections, and devote considerable resources to enforcing the arm's-length standard, though it is an open question just how effective they are in doing so.

Empirical studies of tax avoidance fall into two general categories. The first category consists of studies that compare reported profit rates in countries with differing tax rates. The idea, of course, is to measure the extent to which unusually high rates of profit are reported in low-tax jurisdictions. This immediately raises the question of what rate of profit should be expected in the absence of tax-motivated income reallocation, and this question has multiple components. There is no presumption that profits measured as a fraction of sales, assets, or some other metric of business activity should be the same in all foreign jurisdictions. As a general matter, one might expect pre-tax profit rates to be lower in low-tax jurisdictions than in high-tax jurisdictions, since after-tax marginal profits of capital will often be lower; but even this presumption confuses marginal and average conditions, and is based on steady-state properties of models that may not be valid for large numbers of taxpayers.

The second category of empirical study in this area investigates observable aspects of specific activities undertaken by taxpayers to reduce their tax liabilities, as well as reactions to changing conditions. These observable aspects include suspicious prices of transactions between related parties, or greater numbers of these transactions; apparently tax-motivated trade imbalances between related parties; relocation of corporate tax homes to tax-advantaged jurisdictions; location of valuable intangible property in low-tax jurisdictions; and dividend repatriation (or the alternative of deferring dividend repatriation) by foreign affiliates of firms located in countries that impose taxes on repatriated profits.

The available evidence points consistently in the direction of tax-rate differences exerting significant influence over the behaviour of multinational firms. Reported profit rates are higher in low-tax jurisdictions than in high-tax jurisdictions, and firms appear to devote significant efforts to activities designed to facilitate income reallocation.

What are the costs of tax avoidance? The costs include administrative and compliance costs, among them the potential penalties that might be imposed by governments that maintain that taxpayers fail to report taxable income accurately. But surely the largest cost is that of business activity undertaken to facilitate income reallocation. Profit reallocation technology entails establishing business operations in locations that firms would otherwise not choose but for the opportunity that is thereby created to reallocate taxable income.

The first generation of modern empirical studies of income reallocation[14] considered the determinants of average profit rates. In theory, low tax rates should be associated with high pre-tax profit rates if firms allocate taxable income to avoid tax liabilities. Hines and Rice[15] find that US multinational firms in 1982 reported significantly higher (pre-tax) profits in low-tax countries than in high-tax countries, after controlling for business inputs of labour and capital, and after controlling for measurable aspects of local economic conditions. There have been many subsequent studies of this variety, most using firm-level data that have many advantages over the aggregate data for US firms used by Grubert and Mutti[16] and Hines and Rice[17] (and more recently by Clausing).[18] Huizinga and Laeven[19] likewise find that reported profit rates are lower in high-tax countries, though their estimated effect—that a 10 percent higher tax rate is associated with 13 percent reduced reported profitability of European firms—is somewhat smaller than the effect reported by Hines and Rice.[20] Lohse and Riedel[21] calculate the effect of tax-rate differences on reported profitability of European firms from 1999 to 2009, controlling more comprehensively for the economic effects of affiliate location, and find profit reallocation

14 For example, Harry Grubert and John Mutti, "Taxes, Tariffs and Transfer Pricing in Multinational Corporate Decision Making" (1991) 68:2 *Review of Economics and Statistics* 285-93; and Hines and Rice, supra note 7.

15 Hines and Rice, supra note 7.

16 Grubert and Mutti, supra note 14.

17 Hines and Rice, supra note 7.

18 Kimberly A. Clausing, "Multinational Firm Tax Avoidance and Tax Policy" (2009) 62:4 *National Tax Journal* 703-25.

19 Harry Huizinga and Luc Laeven, "International Profit Shifting Within Multinationals: A Multi-Country Perspective" (2008) 92:5-6 *Journal of Public Economics* 1164-82.

20 Hines and Rice, supra note 7.

21 Lohse and Riedel, supra note 2.

effects that are smaller than those reported by Huizinga and Laeven: 10 percent higher tax rates are associated with 4 percent reduced reported profitability in Lohse and Riedel's data. Other recent studies, reviewed in Dharmapala,[22] come to similar conclusions.

An important recent contribution to this literature is Dharmapala and Riedel,[23] which looks at the propagation of profits throughout a multinational firm. The idea behind this study is that, in the absence of profit-shifting behaviour, a change in the economic environment that affects a parent company's profitability should have no systematic effect on the reported profitability of the company's foreign affiliates located in low-tax jurisdictions. Consequently, if it is possible to identify economic changes that affect parent company profitability without directly affecting the profitability of foreign affiliates, the extent of profit reallocation can be measured by the contemporaneous effect of the economic changes on reported profitability of tax haven affiliates. For example, a parent company that mines coal might become more profitable if the world price of coal rises, but if the company's shipping affiliate in a tax haven also becomes more profitable, it starts to look as though profits are being reallocated from the parent company. Dharmapala and Riedel report that the profitability of affiliates in low-tax countries does appear to be influenced by events that change the profitability of parent companies, but that the effect is quite small, with something in the neighbourhood of 2 percent, or possibly as much as 4 percent, of parent profits being reallocated to low-tax affiliates.

There is considerable supporting evidence of methods used by multinational firms to avoid reporting profits in high-tax countries. Clausing[24] finds that the foreign affiliates of US multinational firms report trade imbalances with their US parent companies that look suspiciously tax-motivated: affiliates in countries with 10 percent lower tax rates run 4.4 percent higher trade surpluses with their parent companies. In a later study, Clausing[25] offers other suggestive evidence of possible mispricing of commodities traded between related parties, noting systematic differences between prices reported by US companies in trade with related and unrelated parties. Dischinger and Riedel[26] provide evidence that European multinational firms are more likely to hold intellectual property in low-tax than in high-tax locations, and this may facilitate profit reallocation. Further evidence of tax-motivated behaviour

22 Dharmapala, supra note 2.

23 Dharmapala and Riedel, supra note 3.

24 Kimberly A. Clausing, "The Impact of Transfer Pricing on Intrafirm Trade," in *International Taxation and Multinational Activity*, supra note 7, 173-94.

25 Kimberly A. Clausing, "Tax-Motivated Transfer Pricing and US Intrafirm Trade Prices" (2003) 87:9-10 *Journal of Public Economics* 2207-23.

26 Matthias Dischinger and Nadine Riedel, "Corporate Taxes and the Location of Intangible Assets Within Multinational Firms" (2011) 95:7-8 *Journal of Public Economics* 691-707.

appears in the tax-sensitive extent to which US firms repatriate profits from foreign locations[27] and the relocation of corporate homes for tax purposes.[28]

There is little doubt that multinational firms are motivated to avoid taxes and are aware of the available methods. And there is evidence of a limited degree of international tax avoidance—but the question is why there is not more, given the motive and opportunity. That there is considerable scrutiny of transactions between related parties, with stiff potential penalties for non-compliance, is surely part of the answer; but another part may be that the actions necessary to facilitate tax avoidance are sufficiently costly and cumbersome that it is simply not worth it in return for the modest potential tax savings.

POLICY ALTERNATIVES

Concern over the potential for BEPS has prompted extensive reconsideration of the international regime by which company profits are taxed. One radical reform would be to replace the current system of determining the location of profits earned by multinational firms with a formulary method of assigning profits to jurisdictions based on factors such as employment, sales, and capital in place. Advocates argue that these factors are less capable of being manipulated than are prices used in transactions between related parties. Some of the difficulties with formulary apportionment have been widely noted, including the ability of firms to undertake transactions that manipulate the location of formulary factors; furthermore, the inaccuracy of employment, sales, and capital in place as predictors of firm profitability[29] raises the possibility that the use of formulary methods will introduce its own inaccuracy, arbitrariness, and resulting inefficiency into the taxation of multinational firms.

There is a separate issue, that any international reform that successfully reduces the magnitude of BEPS will almost surely put downward pressure on business tax rates around the world. Countries currently choose their corporate tax rates in an environment in which multinational firms are able to engage in BEPS and thereby avoid a portion of what would otherwise be their tax obligations. Reducing BEPS increases tax burdens but does little, if anything, to reduce the competitive pressures that countries face in attempting to attract and foster business activity; as a result, tax rates are likely to decline—possibly by quite a bit. BEPS effectively permits high-tax

27 Mihir A. Desai, C. Fritz Foley, and James R. Hines Jr., "Repatriation Taxes and Dividend Distortions" (2001) 54:4 *National Tax Journal* 829-51; and Dhammika Dharmapala, C. Fritz Foley, and Kristin J. Forbes, "Watch What I Do, Not What I Say: The Unintended Consequences of the Homeland Investment Act" (2011) 66:3 *Journal of Finance* 753-87.

28 Mihir A. Desai and James R. Hines Jr., "Expectations and Expatriations: Tracing the Causes and Consequences of Corporate Inversions" (2002) 55:3 *National Tax Journal* 409-40; and Johannes Voget, "Relocation of Headquarters and International Taxation" (2011) 95:9-10 *Journal of Public Economics* 1067-81.

29 See James R. Hines Jr., "Income Misattribution Under Formula Apportionment" (2010) 54:1 *European Economic Review* 108-20.

countries to differentiate among corporate taxpayers, imposing heavier tax burdens on domestic firms that may constitute a less elastic tax base than that provided by multinational firms. If BEPS were eradicated and multinational firms were subjected to exactly the same tax burden as domestic firms, many high-tax countries might face serious declines in their multinational business sector, and feel the need to respond by reducing taxes on everyone. Whether this would ultimately result in greater or lower total tax collections is an open question.

The problem of BEPS easily catches the imagination, particularly given the attention that has attached to several distasteful anecdotes of crass tax avoidance. The empirical evidence is quite consistent with BEPS being a real phenomenon, but one that is notably small in magnitude and unlikely to undermine the sustainability of government finance. There are undoubtedly some potential policy reforms that would improve the efficiency and effectiveness of international tax enforcement, but the danger looms that the international community in its desire to combat BEPS might introduce reforms that could significantly undermine economic efficiency or stimulate tax competition, and ultimately reduce government tax collections. It is questionable whether radical reforms are justified by the very modest size of the BEPS problem. Accordingly, it is to be hoped that any actions undertaken by the international community will reflect thoughtful consideration of the magnitude of BEPS and the costs and benefits of possible reforms.