

Reconsidering the Taxation of Foreign Income

James R. Hines Jr.
University of Michigan and NBER

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ABSTRACT

This paper evaluates the efficiency and distributional consequences of taxing foreign income, noting that home country taxation, as practiced by countries such as the United States, distorts the ownership of business assets, thereby reducing productivity and aggregate income, without advancing the distributional goals underlying most of the tax system. The alternative of exempting foreign income from domestic taxation would significantly influence patterns of capital ownership. In order to exempt foreign income from taxation in a way that does not distort capital ownership it is necessary to avoid making domestic expense deductions contingent on the allocation of investment and other income-producing activity between domestic and foreign locations. Thus it is not only the taxation of active foreign income, but also the expense allocation rules, that create the inefficient ownership incentives in the current U.S. tax system.

The efficiency and fairness arguments typically advanced to justify taxing foreign income also imply that countries should subject foreign sales to domestic sales taxation, foreign value added to domestic value added taxation, foreign property to domestic property taxation, and similarly subject any and all foreign activities to the corresponding domestic taxes. In practice, however, no country attempts to apply its sales, value added, property, and all other non-income taxes to the foreign activities of its resident companies, reflecting the obvious associated economic distortions and lack of any clear justification for such extraterritorial taxation. Since the efficiency and fairness considerations are the same whether taxes are imposed on income or they are imposed on sales or value added, it is difficult to understand the rationale for taxing foreign income but not taxing foreign sales or value added.

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James R. Hines Jr.
Department of Economics
University of Michigan
343 Lorch Hall
611 Tappan Street
Ann Arbor, MI 48109-1220

jrhines@umich.edu

1. Introduction

A policy of taxing worldwide income on a residence basis holds enormous intuitive appeal, since if income is to be taxed, it would seem to follow that the income tax should be broadly and uniformly applied regardless of the source of income. Whether or not worldwide income taxation is in fact a desirable policy requires analysis extending well beyond the first pass of intuition, however, since the consequences of worldwide taxation reflect international economic considerations that incorporate the actions of foreign governments and foreign taxpayers. Once these actions are properly accounted for, worldwide taxation starts to look considerably less attractive. Viewed through a modern lens, worldwide income taxation by a country such as the United States has the effect of reducing the incomes of Americans and the economic welfare of the world as a whole, prompting the question of why the United States, or any other country, would ever want to maintain such a tax regime.

The purpose of this paper is to analyze the consequences of taxing foreign business income,¹ and in particular, to compare a regime in which a home country taxes foreign income to a regime in which it does not. In practice, countries typically do not adopt such extreme policy positions. For example, a country such as France, which largely exempts foreign business income from taxation, nevertheless taxes small pieces of foreign income; and a country such as the United States, which attempts to tax the foreign incomes of American corporations, permits

¹ Worldwide income taxation typically includes the taxation of individual incomes, but, in the interest of tackling one issue at a time, this paper puts the specific considerations that apply to individual income tax implications of worldwide taxation and territoriality aside for a more propitious moment. As a practical matter, worldwide taxation of business income by the United States is much more consequential in the sense of revenue collected and burdens imposed than is U.S. worldwide taxation of individual incomes. As one indication of the relative magnitudes involved, the aggregate foreign earned income reported by American individuals filing form 2555 in 2001, plus trust income earned in 2002, was \$27.9 billion. By contrast, the largest controlled foreign corporations of American corporations reported \$160.1 billion of after-tax foreign earnings and profits in 2002. See Curry and Kahr (2004), Holik (2005), and Masters and Oh (2006). Any unreported income is of course not captured in these figures.

taxpayers to defer home country taxation in some circumstances, claim foreign tax credits in most situations, and in other ways avoid the consequences of full home country taxation. It is nevertheless useful to consider stylized and somewhat extreme versions of territoriality and residence taxation, in part because the older theory that forms the basis of much U.S. policy advocates in favor of an extreme position of taxing worldwide income, and in part because insights drawn from considering extreme examples prove useful in understanding the murky middle to which tax policies naturally tend in practice.

The older wisdom in the international tax policy area holds that worldwide taxation of business income with provision of foreign tax credits promotes world welfare, whereas worldwide taxation of business income without foreign tax credits (instead permitting taxpayers to deduct foreign tax payments in calculating taxable income) promotes domestic welfare. These claims about the underlying welfare economics, introduced by Peggy Musgrave (1963, 1969) and subsequently quite influential, have come under considerable academic fire in recent years. Modern economic thinking parts company with Musgrave's analysis in two important respects. The first is that modern scholarship incorporates the impact of economic distortions introduced by taxes other than those imposed on foreign income, which Musgrave's analysis does not. The second is that modern scholarship incorporates reactions by foreigners to home country tax changes. Capital ownership by foreign and domestic investors is directly affected by home country tax policies, and these ownership effects, properly understood, have the potential to reverse entirely the welfare prescriptions that flow from Musgrave's analysis.

The second and third sections of the paper review the older theory of home country taxation of foreign income, the more modern ownership neutrality concepts, and their implications. These ownership neutrality concepts, which are developed in Desai and Hines

(2003, 2004), offer normative criteria by which to evaluate the desirability of tax systems in practice. The ownership neutrality concepts stress the importance of productivity effects of capital ownership in evaluating the incentives created by tax systems.

Section four of the paper considers the implications of capital ownership for the design of tax systems that exempt foreign income from taxation. In particular, this section notes that in order to create efficient ownership incentives it is necessary to avoid allocating general domestic expense deductions between domestic and foreign income.

In an effort to make the ownership issues perhaps more vivid, section five of the paper evaluates rather whimsical systems of residence-based excise and value-added taxation. The same arguments that are typically advanced in favor of worldwide taxation of corporate income apply with equal force to residence-based excise and value-added taxation, and the evident drawbacks of the latter apply equally to residence-based corporate income taxation.

Section six of the paper considers the implications of residence taxation for taxpayer equity and the distribution of tax burdens, noting that equitable taxpayer treatment requires a special regime for the taxation of foreign income, and that the burdens (including the efficiency costs) of taxing foreign income are typically borne by domestic labor in the form of lower real wages. Section seven of the paper considers the implications of practical complications, including the reactions of foreign governments and the ability of taxpayers to avoid taxes on domestic income. Section eight is the conclusion.

2. *Older Analytical Frameworks*²

² This section and the section that follows draw heavily on Desai and Hines (2003, 2004).

The Musgrave notion of capital export neutrality (CEN) is the doctrine that the return to capital should be taxed at the same total rate regardless of the location in which it is earned. If a home country tax system satisfies CEN, then a firm seeking to maximize after-tax returns has an incentive to locate investments in a way that maximizes pre-tax returns. This allocation of investment corresponds to global economic efficiency under certain circumstances. The CEN concept is frequently invoked as a normative justification for the design of tax systems similar to that used by the United States, since the taxation of worldwide income on accrual and with provision of unlimited foreign tax credits satisfies CEN. This is not exactly the system that the United States uses, since taxpayers are permitted to defer home country taxation of certain unrepatriated foreign income, and foreign tax credits are subject to various limits. Nonetheless, CEN is often used as a normative benchmark against which to evaluate contemplated changes to the U.S. system of taxing foreign income,³ since tax systems that satisfy CEN are thought to enhance world welfare.

The standard analysis further implies that governments acting on their own, without regard to world welfare, should tax the foreign incomes of their resident companies while permitting only a deduction for foreign taxes paid. Such taxation satisfies what is known as national neutrality (NN), discouraging foreign investment by imposing a form of double taxation, but doing so in the interest of the home country that disregards the value of tax revenue collected by foreign governments. From the standpoint of the home country, foreign taxes are simply costs of doing business abroad, and therefore warrant the same treatment as other costs. The home country's desired allocation of capital is one in which its firms equate marginal after-tax foreign returns with marginal pretax domestic returns, a condition that is satisfied by full taxation

³ See, for example, the analysis in U.S. Congress, Joint Committee on Taxation (1991, pp. 232-264), and U.S.

of foreign income after deduction of foreign taxes. This line of thinking suggests that the American policy of taxing foreign income while granting foreign tax credits fails to advance American interests because it treats foreign income too generously. In this view there is a tension between tax policies that advance national welfare (NN) by taxing after-tax foreign income, and those that advance global welfare (CEN) by taxing foreign income while permitting taxpayers to claim foreign tax credits. The practice of much of the world, including Germany, France, Canada, and the Netherlands, that effectively exempts most foreign income from taxation, is, by this reasoning, difficult to understand, since it is inconsistent with either national or global interests.

The third of the standard efficiency principles is capital import neutrality (CIN), the doctrine that the return to capital should be taxed at the same total rate regardless of the residence of the investor. Pure source-based taxation at rates that differ between locations can be consistent with CIN, since different investors are taxed (at the corporate level) at identical rates on the same income. In order for such a system to satisfy CIN, however, it is also necessary that individual income tax rates be harmonized, since CIN requires that the combined tax burden on saving and investment in each location not differ between investors. While CEN is commonly thought to characterize tax systems that promote efficient production,⁴ CIN is thought to characterize tax systems that promote efficient saving. Another difference is that CIN is a feature of all tax systems analyzed jointly, whereas individual country policies can embody CEN or NN. As a practical matter, since many national policies influence the return to savers, CIN is often dismissed as a policy objective compared to CEN and NN.

Treasury (2000).

⁴ Horst (1980) identifies circumstances in which the optimal taxation of foreign income corresponds to CEN; see also Dutton (1982) and Horst (1982). Rousslang (2000) offers a recent statement of the significance of CEN.

It is important to clarify the assumptions built into the standard normative framework that delivers CEN and NN as global and national welfare criteria. The first assumption is that the goal of home-country governments (in the case of NN) is to promote efficiency, where efficiency is understood to entail maximizing the sum of tax revenue and the after-tax worldwide profits of firms subject to home-country taxation. The second assumption is that tax policies of other countries are unaffected by changes in home-country tax policies. The third assumption is that tax rate differences are unrelated to the differences in the benefits that host countries receive from incoming foreign investment. And the fourth assumption is that the activities of foreign firms are unaffected by the repercussions of changes in the home-country taxation of foreign income.

The first assumption makes sense if domestic residents have stakes in the success of home-country firms, which they can as shareholders, employees, those who sell these firms inputs, or who interact with them in other capacities. The first assumption takes the (tax) residence of home-country firms to be unaffected by the taxation of foreign income, and ignores the second-best nature of taxation, in which governments must distort economies in order to raise revenue, so additional government revenue may be worth more than income accruing to residents. The second assumption corresponds to countries not acting strategically in setting taxes, while the third assumption requires that tax rates are unrelated to the social value of additional investment. The first three assumptions have been criticized in the literature, and their implications explored,⁵ though defenders of CEN and NN maintain that they are robust to changes in these assumptions.⁶

⁵ See, for example, Hamada (1966), Hufbauer (1992), Keen and Pekkiola (1997), Hines (1999b), and others surveyed by Gordon and Hines (2002).

⁶ See, for example, Rousslang (2000).

The fourth assumption underlying the CEN and NN framework, that foreign firms do not respond to changes induced by home-country taxation, has received attention only recently, but may be the most critical of all.⁷ Investment by domestic firms at home and abroad may very well influence investment by foreign firms, a scenario that is inconsistent with the logic underlying CEN and NN. If greater investment abroad by home-country firms triggers greater investment by foreign firms in the home country, then it no longer follows that the home country maximizes its welfare by taxing foreign income while permitting only a deduction for foreign taxes paid. The reason is that, from the standpoint of the home country, the cost of foreign investment is not necessarily From the standpoint of global welfare, if home and foreign firms compete for the ownership of capital around the world, and the productivity of an investment depends on its ownership, then it is no longer the case that the taxation of foreign income together with the provision of foreign tax credits necessarily contributes to productive efficiency.

3. *Modern Approaches*

This section describes the application of ownership criteria to the taxation of foreign income, and offers an assessment of the importance of capital ownership to economic welfare.

3.1 *Capital Ownership Neutrality*

Tax systems satisfy capital ownership neutrality (CON) if they do not distort ownership patterns. It is easiest to understand the welfare properties of CON by considering the extreme case in which the total stock of physical capital in each country is unaffected by international tax rules. In this setting, the function of foreign direct investment is simply to reassign asset

⁷ Exceptions include work by Levinsohn and Slemrod (1993) and Devereux and Hubbard (2003), who consider the possibility that home-country taxation influences the strategic interaction of domestic and foreign oligopolists in

ownership among domestic and foreign investors. If the productivity of capital depends on the identities of its owners (and there is considerable reason to think that it does), then the efficient allocation of capital is one that maximizes output given the stocks of capital in each country. It follows that tax systems promote efficiency if they encourage the most productive ownership of assets within the set of feasible investors.

Consider the case in which all countries exempt foreign income from taxation. Then the tax treatment of foreign investment income is the same for all investors, and competition between potential buyers allocates assets to their most productive owners. Note that what matters for asset ownership is comparative advantage rather than absolute advantage: if French firms are always the most productive owners of capital, but they do not have the resources necessary to own everything, then efficiency requires that French firms own the capital for which their rate of return difference with the rest of the world is the greatest. The United States would reduce world welfare by taxing foreign income while permitting taxpayers to claim foreign tax credits, since such a system encourages American firms to purchase assets in high-tax countries and foreign firms to purchase assets in low-tax countries. These tax incentives distort the allocation of ownership away from one that is strictly associated with underlying productivity differences.

CON is satisfied if all countries exempt foreign income from taxation, but the exemption of foreign income from taxation is not necessary for CON to be satisfied. If all countries tax foreign income (possibly at different rates), while permitting taxpayers to claim foreign tax credits, then ownership would be determined by productivity differences and not tax differences, thereby meeting the requirements for CON. In this case the total tax burden on foreign and

world markets.

domestic investment varies between taxpayers with different home countries, but every investor has an incentive to allocate investments in a way that maximizes pretax returns. More generally, CON requires that income be taxed at rates that, if they differ among investors, do so in fixed proportions. Thus, CON would be satisfied if investors from certain European countries face home and foreign tax rates that are uniformly 1.2 times the tax rates faced by all other investors.

In order for the allocation of capital ownership to be efficient it must be the case that it is impossible to increase output by trading capital ownership among investors. This efficiency condition requires not necessarily that capital be equally productive in the hands of each investor, but that the potential gain of reallocating ownership to a higher-productivity owner be exactly equal to the cost of such a reallocation by offsetting ownership changes elsewhere. Since taxpayers allocate their investments to maximize after-tax returns, the marginal dollar spent on new investments by any given investor must yield the same (expected, risk-adjusted) after-tax return everywhere. It follows that, if net (host country plus home country) tax rates differ between investments located in different countries, marginal investments in high-tax locations must generate higher pre-tax returns than do marginal investments in low-tax locations. Selling an asset in a low-tax location and purchasing an investment in a high-tax location increases output by the firm engaging in the transaction, but (generally) reduces output by the firm on the other side of this transaction. If both parties face the same tax rates, or face taxes that differ in fixed proportions from each other, then CON is satisfied, ownership reallocation would have no effect on total productivity, and the outcome is therefore efficient. If some countries tax foreign income while others do not, then it is impossible to restore CON without bringing them all into alignment. Individual countries have the potential to improve global welfare by moving their taxation of foreign income into conformity with an average global norm, though the general

theory of the second best applies (see, e.g., Dixit 1985), and a movement toward conformity is not always guaranteed to improve global welfare.

The welfare implications of CON are less decisive in settings in which the location of plant, equipment, and other productive factors is mobile between countries in response to tax rate differences. Tax systems then determine the location of production as well as patterns of ownership and control, so the net effect of taxation on global welfare depends on the sum of these effects. There is considerable econometric evidence that international tax rate differences influence the location of property, plant and equipment investment, which conforms to anecdotal accounts of tax-motivated FDI in low-tax locations such as Singapore and Ireland. Hence pure source-based taxation at rates that differ between countries may encourage excessive investment in low-tax countries,⁸ even though it would satisfy CON. If one country were then to tax foreign income while providing foreign tax credits, it would have the effect of reducing the welfare cost of real capital misallocation, but do so at the cost of distorting the ownership and operation of industry. Whether the cost of having too many factories in the Bahamas is larger or smaller than the cost of discouraging value-enhancing corporate acquisitions is ultimately an empirical question, though the importance of ownership to FDI suggests that the attendant welfare impact of distorting ownership allocation may also be substantial.

The welfare properties of CON emphasize the allocation of ownership of a given volume of business activity between locations whose tax attributes differ. The taxation of foreign

⁸ As Hines (1999b) and others note, the welfare cost of excessive investment in low-tax countries takes country tax rates to be unrelated to the social value of FDI. Tax rate differences between countries may instead be correlated with the net benefits governments perceive foreign direct investment to bring. Countries for whom the economic activity associated with foreign direct investment is most valuable, due to local economic conditions, tax policies, or other government policies, are the most likely to offer foreign investors attractive tax climates. Conversely, countries that perceive important costs to be associated with foreign direct investment are generally unwilling to try

income also has the potential to influence rates of national saving and the sizes of domestic firms, though this effect is not explicitly incorporated in the analysis. National saving is affected by a large range of public policies including monetary policy, intergenerational redistribution programs such as social security, the taxation of personal income, estate taxation, and other policies that influence the discount rates used by savers. Business activity is likewise influenced by a host of fiscal, monetary, and regulatory policies. Given these various factors that influence national saving and corporate investment, it seems appropriate to analyze the optimal taxation of foreign v. domestic income separately from the question of how much governments should encourage capital accumulation and total investment of home-based firms.

3.2 *National Ownership Neutrality*

The same circumstances that make CON desirable from the standpoint of world welfare also imply that countries acting on their own, without regard to world welfare, have incentives to exempt foreign income from taxation no matter what other countries do. The reason is that additional outbound foreign investment does not reduce domestic tax revenue, since any reduction in home-country investment by domestic firms is offset by greater investment by foreign firms. With unchanging domestic tax revenue, home-country welfare increases in the after-tax profitability of domestic companies, which is maximized if foreign profits are exempt from taxation. Tax systems that exempt foreign income from taxation can therefore be said to satisfy “national ownership neutrality” (NON). Hence it is possible to understand why so many countries exempt foreign income from taxation, and it follows that, if every country did so, capital ownership would be allocated efficiently and global output thereby maximized.

to attract foreign investment with low tax rates. To the extent that local tax rates reflect the local costs and benefits of FDI, it no longer follows that investment in low-tax countries is excessive from the standpoint of global welfare.

National welfare is maximized by exempting foreign income from taxation in cases in which additional foreign investment does not reduce domestic tax revenue raised from domestic economic activity.⁹ This condition is satisfied if, to the extent that marginal foreign investment reduces domestic investment by domestic firms, it triggers an equally productive amount of new inbound investment from foreign firms. In more general cases, the welfare-maximizing tax treatment of foreign investment depends on the extent to which foreign investment substitutes for domestic investment lost due to new outbound FDI, and the relative productivities of foreign-owned and domestic-owned capital in the home country.

The analysis of NON takes as its basis the setting used in the standard NN analysis of home country tax policies, one in which home-country welfare is a function of the after-tax profitability of home-country firms. With worldwide ownership of firms, it is possible that home countries no longer attach any special value to the profits of their resident companies. If so, then home-country welfare becomes a function of tax revenue and after-tax incomes of domestic residents. As is well-known from the results of Diamond and Mirrlees (1971), competition between jurisdictions then produces an outcome in which countries find it in their interest to exempt all capital income from taxation. If followed by all countries, such an outcome satisfies all of CON, NON, CEN, NN, and CIN.

3.3 *How important is ownership?*

⁹ This result is similar to those obtained by Slemrod, Hansen, and Procter (1997) in a related context. The desirability of exempting foreign income from taxation presumes strict adherence to international transfer pricing rules. One possible justification for the taxation of foreign income with provision of foreign tax credits is that such a system removes the incentive to reallocate taxable income to low-tax foreign jurisdictions, thereby protecting the domestic tax base (see, for example, McIntyre, 1993). The evidence, surveyed by Hines (1999a), indicates that the location of taxable income is sensitive to tax rate differences, though whether home-country taxation of foreign income is effective in protecting the domestic tax base (and whether it requires protection) is an open question.

It is common practice in analyzing the desirability of international tax rules to posit that foreign investments by multinational firms from different countries are equally productive. In contrast, CON and NON place productivity differences between owners at the center of the welfare analysis of international tax rules. In order to consider the appropriate role of ownership in evaluating international tax rules, it is helpful to consider the role of ownership in determining patterns of foreign direct investment (FDI) and the effects of tax rules on patterns of ownership.

Ownership and FDI

Since Hymer (1976), the literature on foreign direct investment starts from the observation that FDI is driven by the needs of firms in markets, and therefore represents something much more than the transfer of net savings between countries. Caves (1996), who surveys this literature, notes that the intuition that multinational firms are merely conduits for capital to arbitrage differences in rates of return between countries has been found to be “neither satisfying theoretically nor confirmed empirically” (p. 26). In its place, economic models of multinational behavior have emphasized a transaction-cost approach whereby multinational firms emerge because of the advantages conferred by joint ownership of assets across locations. These advantages are understood to stem from proprietary assets that are best exploited under common ownership.

The most common manifestation of this framework for explaining foreign direct investment in the international business literature – Dunning’s eclectic paradigm – emphasizes how ownership, localization and internalization (OLI) are the fundamental determinants of

foreign direct investment.¹⁰ Specifically, multinational firms are thought to engage in foreign direct investment when ownership confers specific advantages relative to arms-length relationships, so activities are most profitably undertaken within the firm. An obvious implication of this approach is that multinational firms differ in the proprietary assets (e.g., brands, production processes, patents) they can exploit and that these differences are critical to understanding the patterns of FDI and the productivity of these firms.¹¹ In addition to differences in business practices contributing to the possible importance of ownership, scholars are paying increasing attention to differences in institutions (eg. legal regimes) and the ways in which these variables can influence firm outcomes. These country-level differences would provide another reason to expect ownership to be associated with different patterns of FDI and the productivity of that investment.¹²

The modern property rights approach to the theory of the firm, as developed in Grossman and Hart (1986) and Hart and Moore (1990), suggests that the prevalence of incomplete contracts provides a rationale for particular configurations of ownership arrangements. The ability to exercise power through residual rights when contracts are unable to prespecify outcomes provides an economic rationale for when ownership is important. Such settings are particularly likely to characterize multinational firms investing abroad. Desai, Foley and Hines (2004a) analyze the changing ownership decisions of multinational firms, finding that globalization has made firms more reluctant to share ownership of foreign affiliates, given the higher returns to

¹⁰ See Dunning (1981). While the OLI framework is usually considered relevant for horizontal FDI, vertical FDI similarly emphasizes the transaction-cost approach.

¹¹ Morck and Yeung (1991, 1992) test the internalization hypothesis and find that multinationality is only valued in the presence of intangible assets and overseas acquisitions are met with positive stock market reactions that are a function of the level of intangible assets of the acquiring firm.

¹² See Djankov et al. (2003) for a discussion of this “new comparative economics.” Rossi and Volpin (2002) apply this logic to the cross-border market for corporate control and demonstrate that cross-border transactions typically

coordinated transactions inside firms. The costs and benefits of ownership appear to be central, and increasingly so, to the choice between investing in a country and serving the same market with arm's-length transactions.

It is useful to consider the importance of ownership with reference to a specific example. Consider the establishment of an automotive manufacturing plant in a large emerging market. Why might the productivity of this plant differ depending on whether a local or multinational firm owns it? One can easily imagine that the multinational firm may be more productive given the ability to extend a global brand or to transplant proven production processes to the emerging market. Similarly, the ability to integrate this plant within a worldwide production process or to use expatriates with related experience in similar markets could also have important productivity consequences. Finally, the ability to use incentive contracts tied to equity where minority shareholders have protections could similarly lead to productivity differences. While this example emphasizes a productivity advantage for the multinational firm, the more general point is that ownership is likely to be associated with significant productivity differences.

Taxation and Ownership of FDI

There is ample evidence that foreign direct investment responds to tax incentives through altered investment patterns and tax avoidance activities. Home country taxation also has the potential to affect the patterns of ownership of foreign assets by changing after-tax returns and thereby inducing the substitution of one investment for another. As a general matter, investors from countries that exempt foreign income from taxation have the most to gain from locating their foreign investments in low-tax countries, since such investors benefit in full from any

involve targets from countries with poorer investor protections than those of the countries from which their acquirers

foreign tax savings. Investors from countries (such as the United States) that tax foreign profits while providing foreign tax credits may benefit very little (in some cases not at all) from lower foreign tax rates, since foreign tax savings are offset by higher home-country taxation. These relative tax incentives therefore create incentives for investors from countries that exempt foreign income from taxation to concentrate their investments in low-tax countries, while investors from countries that tax foreign income while providing foreign tax credits have incentives to concentrate investments in high-tax countries.

There is considerable evidence that the patterns of ownership associated with foreign investment respond to incentives created by home-country tax regimes. Hines (1996) compares the location of investment in the United States by foreign investors whose home governments grant foreign tax credits for federal and state income taxes with the location of investment by those whose home governments do not tax income earned in the United States. Investors who can claim credits against their home-country tax liabilities for state income taxes paid in the United States should be much less likely than others to avoid high-tax states, and the behavior of foreign investors is consistent with this incentive.¹³ Hines (2001) compares the distribution of Japanese and American FDI around the world, finding Japanese investment to be concentrated in countries with whom Japan has “tax sparing” agreements that reduce home country taxation of foreign income. As such, the composition of foreign investment by source country appears to be influenced by home-country tax rules.

come from.

¹³ In particular, one percent state tax rate differences in 1987 are associated with ten percent differences in amounts of manufacturing PPE owned by investors from countries with differing home-country taxation of foreign-source income, and three percent differences in numbers of affiliates owned, implying a tax elasticity of investment equal to -0.6.

In addition to this evidence of how worldwide ownership patterns are determined by home country tax regimes, recent empirical work also indicates the extent to which ownership decisions of U.S. multinationals themselves are affected by tax incentives. Desai and Hines (1999) measure the extent to which American firms shifted away from international joint ventures in response to the higher tax costs created by separate “basket” provisions of the Tax Reform Act of 1986.¹⁴ Altshuler and Grubert (2003) and Desai, Foley and Hines (2003) demonstrate that American multinational firms increasingly use “chains of ownership” for their foreign affiliates, including intermediate ownership by affiliates located in countries that exempt foreign income from taxation, to facilitate deferral of home country taxation. The National Foreign Trade Council (1999) argues – through case study examples of the foreign flag shipping, life insurance, and oil and gas pipeline industries – that tax rules have altered the positioning of U.S. firms relative to multinationals from different countries leading to changes in ownership patterns within these industries. And Desai and Hines (2002) analyze dramatic ownership reversals in which U.S. multinational firms expatriate by inverting their corporate structure, reconfiguring their ownership as foreign corporations in order to reduce the burden imposed by U.S. tax rules. These and other cases indicate that ownership patterns of foreign affiliates and their parent companies are significantly affected by tax incentives in their home countries.

Foreign Investment and Domestic Investment

One of the significant ways in which the modern analysis of taxing foreign income parts company with earlier approaches lies in its consideration of the impact of outbound investment on domestic investment. As noted above, once one acknowledges that greater foreign

¹⁴ Similarly, Altshuler and Hubbard (2003) use the tightening of anti-deferral rules on financial services income to demonstrate how the location of assets across host countries is influenced by home country rules.

investment need not entail reduced domestic investment, then the opportunity cost of greater foreign investment changes significantly, and with it, the desirability of taxing foreign income.

International capital market equilibrium implies that the capital account must be balanced over time: net outbound foreign investment equals net inbound foreign investment in present value. It does not, however, follow from this implication of market equilibrium that greater outbound foreign direct investment triggers greater inbound foreign direct investment, since the capital account can be balanced either through foreign direct investment flows or through portfolio capital flows.¹⁵ Hence the degree to which greater outbound foreign direct investment is associated with greater or lesser domestic investment is ultimately an empirical question.

There is a flurry of recent evidence suggesting that outbound foreign direct investment may not reduce the size of the domestic capital stock, but instead possibly increase it. This evidence includes aggregate time-series evidence of the behavior of U.S. multinational firms (Desai, Foley and Hines, 2005a), aggregate evidence for Australia (Faeth, 2006) and Germany (Lipponer, 2006), industry-level studies of Germany (Arndt, Buch, and Schnitzer, 2007) and Canada (Hejazi and Pauly, 2003), and firm-level evidence for the United States (Desai, Foley and Hines, 2005b) and Germany (Kleinert and Toubal, 2006). The difficulty confronting all of these studies is that foreign investment is itself a purposive choice, reflecting economic conditions that very likely also directly influence the desirability of domestic investment, making it difficult to disentangle the pure effect of greater foreign investment on domestic economic activity. These studies approach this problem in different ways, drawing conclusions that are accordingly persuasive to differing degrees, though the accumulation of this evidence strongly

¹⁵ Official transfers also enter the capital account, though these are typically of very small net magnitude.

points to the possibility that outbound investment need not be associated with reduced domestic investment.

4. *Implications for Expense Allocation*

Businesses engaging in worldwide production typically incur significant costs that are difficult to attribute directly to income produced in certain locations. Important examples of such expenses include those for interest payments and general administrative overhead. There is a very important question of how these expenses should be treated for tax purposes. Practices differ in countries around the world, and indeed, U.S. practice has varied over time, but the current U.S. tax treatment is squarely on the side of allocating domestic expenses between foreign and domestic income based on simple indicators of economic activity. Thus, for example, an American multinational firm with 100 of domestic interest expense is not permitted to claim as many foreign tax credits as is an otherwise-equivalent American firm without the interest expense, reflecting the theory that a portion of the borrowing on which interest is due went to finance foreign investment.

Expense allocation of the variety embodied in current U.S. tax law has a decided intuitive appeal. It carries the general implication that domestic expenses that are incurred in the production of foreign income that is exempt from U.S. taxation (as is the case, for example, of income earned in countries with very high tax rates, for which foreign tax credits are available) are effectively not permitted domestic tax deductions (via an equivalent reduction in foreign tax credit limits). While one can, and undoubtedly should, quibble with the fine details of the current U.S. rules governing expense allocation, it must be conceded that the general structure of

expense allocation is largely consistent with the rest of the U.S. system of attempting to tax foreign income in a manner that vaguely embodies CEN.

Taking as a premise that CEN is an unsatisfactory basis for taxing foreign income, and that a country prefers to exempt foreign income from taxation based on capital ownership considerations, then what kind of expense allocation regime properly accompanies the exemption of foreign-source dividends from domestic taxation? The answer is that domestic expenses must not be allocated at all, or to put the same matter differently, general expenses must be fully deductible in the country in which they are incurred.

In order to understand the logic behind the full deductibility of domestic expenses, it is helpful to start by noting that any other system of expense allocation will have the effect of distorting ownership by changing the cost of foreign investment. Consider the case of a firm with both foreign and domestic income, and 150 of expenses incurred domestically in the course of activities that help the firm generally, and thereby arguably contribute both to domestic and foreign income production. One sensible-looking rule would be to allocate the 150 of expenses according to income production, so that if the firm earns half of its income abroad and half at home, with the foreign half exempt from domestic taxation, then the firm would be entitled to deduct only 75 of its expenses against its domestic taxable income.¹⁶ For a firm with a given level of borrowing, greater foreign investment would then be associated with reduced domestic interest deductions, and therefore greater domestic taxes. Hence the home country would in fact impose a tax on foreign income, in the sense of discouraging foreign investment and triggering

¹⁶ We could envision a world in which foreign governments might permit the firm to deduct the other 75 of its expenses against income earned in their country, though this is of course not the world we inhabit. The discussion that follows assumes that governments do not permit deductions for general expenses incurred in other countries, as is indeed the universal practice.

additional domestic tax collections for every additional dollar of foreign investment. The only sense in which this tax differs from a more conventional tax on foreign income is that it does not vary with the rate of foreign profitability.

The fact that a simpleminded expense allocation rule acts just like a tax on foreign investment might at first suggest that those who design policy should seek alternative expense allocation systems that do not have these perverse incentives. Unfortunately, there is no clever solution available to this problem: any system that allocates expenses based on a taxpayer's behavior will have the effect of influencing that behavior, in the same way that a more conventional tax would. Hence policies designed to avoid taxing foreign income necessarily must forego allocating expenses incurred domestically.

This implication of foreign income exemption seems to run afoul of obvious objections from the standpoint of tax arbitrage. Why should the United States permit taxpayers to borrow in the United States, using the proceeds to invest abroad, and thereby earn income that is exempt from U.S. tax while claiming deductions against other U.S. taxable income for the cost of their borrowing? Even the observation that this is exactly what many other countries do has the feel of not fully addressing this issue. The answer lies in the fact that greater foreign investment triggers added domestic investment, so from the standpoint of the U.S. tax system, the borrowing does not simply generate uncompensated interest deductions, but instead a domestic tax base that is equivalent to (quite possibly greater than) the tax base that would be forthcoming if the borrowing proceeds were invested domestically by the same entity that does the borrowing.

The same point can be considered from the standpoint of the taxpayer. An American multinational firm with domestic and foreign operations should be indifferent, at the margin,

between investing an additional dollar at home or abroad; if not, the firm is not maximizing profits. Hence when the firm borrows an additional dollar to invest abroad, it might as well invest at home, since the two produce equivalent after-tax returns – and it is clear that if a purely domestic firm borrows to undertake a domestic investment, it is entitled to deductions for its interest expenses.

Part of the confusion that surrounds the treatment of interest expenses (and other general expenses that firms incur and that are difficult to assign to particular lines of business) is that, from a tax standpoint, the marginal source of investment finance matters greatly. That said, the marginal source of investment finance is extremely difficult to pinpoint. Debt finance is generally preferred to equity finance on the basis of tax considerations, since in a classical corporate income tax system such as that practiced by the United States, interest expenses are tax deductible whereas dividend payments to shareholders are not. Hence debt finance might be thought of as a worst case scenario from the standpoint of raising corporate tax revenue; with appropriate income measurement, marginal debt-financed domestic investments generate no tax revenue, and with inappropriate income measurement, these investments might generate positive or negative tax revenue.

If the goal of a tax system is properly to raise revenue while offering appropriate economic incentives, and these are understood to include efficient incentives for capital ownership, then the simple exemption of foreign income from taxation is insufficient without accompanying expense allocation rules. Exempting foreign income from taxation gives taxpayers incentives to allocate their resources to maximize after-local-tax profits only if there is no unwinding of these incentives through expense allocation that depends on where income is earned or where other expenses are incurred. Permitting full deductibility of domestic expenses

need not be viewed as a daring step. The same logic that underlies the efficiency rationale behind exempting foreign income in the first place also implies that expenses should be deductible where incurred.

5. *Residence-Based Excise and Value-Added Taxation*

The current U.S. system of taxing foreign income includes the proviso that taxpayers are entitled to claim foreign tax credits only for foreign income taxes, and related taxes, paid (or deemed paid) to foreign governments. Consequently, the payment of other taxes, such as foreign excise taxes, value-added taxes, property taxes, and many others, does not create an entitlement to claim foreign tax credits. In practice, this restriction creates numerous difficulties both for taxpayers, who may be denied U.S. foreign tax credits for payments to foreign governments that bear many similarities to income taxes, and for foreign governments, who are often eager to adopt innovative tax systems but are deterred by the potential noncredibility of the resulting taxes. The rule limiting foreign tax credits to income taxes is quantitatively quite important, as the annual foreign income tax payments of American companies greatly exceed their payment of foreign taxes that do not qualify as income taxes (Desai et al., 2004c).

Why are foreign tax credits permitted only for foreign income tax payments? Various justifications have been offered for this restriction, including, prominently, the argument that the burdens of corporate income taxes fall on owners of capital in the form of lower returns, whereas the burdens of other taxes tend to fall on foreign consumers. It is difficult to understand the relevance of tax incidence in this context. In part, this is due to the fact that little was known until relatively recently about the incidence of corporate income taxes, so any legislative restriction based on knowledge of the underlying economics of corporate tax incidence prior to

the modern era would have represented a pure stab in the intellectual dark. But more importantly, it is difficult to discern what possible difference even secure knowledge of the incidence of corporate taxation would make to the desirability of permitting taxpayers to claim credits for alternative taxes paid to foreign governments. The justification for taxing foreign income after foreign tax credits presumably lies in some combination of the efficiency and distributional effects of such taxation from the standpoint of home country taxpayers, to which the ultimate incidence of foreign corporate taxation makes little if any contribution.

A simpler and more direct explanation for the practice of limiting foreign tax credits to foreign income tax payments is the similarity of the taxes involved, since foreign tax credits are used to offset home country taxes that would otherwise be due on foreign income. This logic implies that governments might permit taxpayers to claim credits for foreign excise tax payments that can be used to offset domestic excise tax liabilities due on foreign sales, an entitlement that makes sense only if countries impose worldwide excise taxes on a residence basis. Such a worldwide excise tax regime offers few attractions from the standpoint of national economic policy, but analyzing the properties of such a system offers the prospect of casting useful light on the taxation of worldwide income on a residence basis.

5.1 Residence-based excise taxation

To take a concrete example of excise taxation imposed on a residence basis, suppose that the U.S. federal government were to levy a \$2 tax on each gallon of gasoline sold in the United States and sold abroad by persons resident in the United States. American taxpayers would be entitled to claim foreign tax credits for excise taxes paid to foreign governments, so that a firm selling gasoline in a country whose excise tax rate exceeds \$2 per gallon would owe no

additional tax to the United States, whereas a firm selling gasoline in a country with a \$0.75 per gallon tax would owe \$1.25 per gallon to the United States. One could imagine permitting worldwide averaging, thereby permitting taxpayers to use excess excise tax credits from sales in jurisdictions with excise taxes exceeding \$2 per gallon to claim credits to offset taxes due on sales in jurisdictions with excise taxes less than \$2 per gallon.

What would be the impact of such a home country tax regime? Firms selling in countries with excise taxes exceeding the U.S. rate would have excess foreign tax credits and therefore no U.S. tax obligations, so the tax regime would not affect them. Firms without excess foreign tax credits would face U.S. excise taxes on foreign sales that vary with local excise tax rates. Odd though such a system would be, it does not necessarily follow that it would spell the end of foreign gasoline sales by American companies in all low-tax jurisdictions, though that is certainly one possibility. American companies would persist in selling gasoline in those foreign markets in which two conditions hold: first, that American firms are profitable, and second, that the same American firms could not be even more profitable (in a present value sense) by selling their operations to foreign petroleum companies who are not subject to the U.S. tax regime.¹⁷ Since American firms may have significant cost or marketing advantages over their competition in certain foreign locations, it is possible that they would be able to remain in business despite the significant tax penalty associated with U.S. residence. In cases without such advantages, and where low foreign excise tax rates imply significant U.S. tax costs, American firms are likely to disappear.

¹⁷ One method of selling foreign operations to foreign companies not subject to the U.S. tax regime is for an American company to expatriate by inverting the corporate structure to establish non-U.S. ownership of its foreign operations. The adoption of residence-based excise taxation would certainly increase incentives to expatriate, and there is ample evidence (see, for example, Desai and Hines, 2002) that expatriation behavior is sensitive to incentives. The discussion that follows limits its analysis to situations in which domestic firms face sufficient economic or political costs of expatriating that they do not avail themselves of this option.

The economic costs of a residence-based excise tax regime are simple to identify. American firms lose the opportunity to earn profits in foreign markets from which they are driven by U.S. excise taxes, and this, in turn, reduces the rate of return to domestic activities that make foreign operations otherwise profitable. Since there is every reason to believe that a worldwide excise tax regime would have very significant effects on the participation of American firms in foreign markets, the associated economic costs are potentially enormous. The tax crediting mechanism creates an odd pattern of U.S. excise taxes on foreign operations, with zero and even (in some cases) negative excise taxes on foreign sales in some countries, whereas in other countries the U.S. system imposes positive tax rates that vary with local excises. Even in circumstances in which American firms sell in foreign markets despite the imposition of significant U.S. excise taxes on such sales, the volume of foreign activity will be reduced, and distorted among countries, as a result of such taxes.¹⁸

What possible justification could be offered for a home-country excise tax regime such as that just described? Many, if not all, of the same arguments commonly advanced in favor of worldwide income taxation would apply with equal force to worldwide excise taxation. From the standpoint of the world as a whole, the benefits of selling an additional gallon of gasoline in country A equals the benefit to consumers in country A, which in turn is measured by the (tax-inclusive) price that consumers pay for the gasoline.¹⁹ Since sellers receive only the tax-exclusive price of gasoline, their incentives do not correspond to global efficiency except in the unlikely event that excise taxes are the same everywhere. In the absence of residence-based

¹⁸ Desai, Foley and Hines (2004c) offer evidence of the impact of taxes other than income taxes on the volume of foreign activity by American businesses.

¹⁹ This discussion of the example of gasoline excise taxes puts aside one of the primary considerations in taxing gasoline, namely the externalities associated with the environmental, health, congestion, and other consequences of consuming gasoline. To the degree that countries differ in their gasoline excise taxes based on differences in levels

worldwide excise taxation, too few gallons of gasoline will be consumed in countries with high excise tax rates, and (relatively) too many in countries with low excise tax rates. Domestic excise taxation might be said to encourage American firms to move their sales offshore. A system of residence-based taxation in effect harmonizes excise taxes around the world from the standpoint of domestic producers.

An analogous argument would apply to domestic welfare, which, by the standard logic, is maximized by a worldwide excise tax regime even less generous than that under consideration. Domestic welfare, the thinking would go, is maximized by subjecting foreign sales to domestic excise taxation without provision of foreign tax credits. The reason is that, from the standpoint of the United States, the value of selling a marginal gallon of gasoline in a foreign market equals the profit that it generates, whereas the value of selling a marginal gallon of gasoline in the United States equals the profit it generates plus the associated excise tax revenue. Equating these two requires that the United States impose equal excise taxes on foreign and domestic sales.

One simple and entirely reasonable objection to subjecting foreign sales to home country excise taxation is that excise taxes tend to be incorporated in sales prices, so that, for example, increasing a (commonly used today; destination-based) excise tax on gasoline by \$0.10 per gallon tends to be associated with roughly \$0.10 per gallon higher gasoline prices. Of course, this incidence is unlikely to be exact, and indeed, both theoretical and empirical studies of sales tax incidence find that prices can move by less than, or in some cases more than, changes in excise tax rates.²⁰ But the efficiency argument – which is identical to the argument used by Musgrave and many subsequent authors to support worldwide taxation – is valid on its own

of local externalities, then global efficiency requires preserving these differences, and not offsetting them with a residence-based system. But of course the same point applies to income taxes, as noted above and in Hines (1999b).

terms regardless of the incidence of the tax. That is, the argument is unchanged whether or not gasoline taxes are incorporated fully in consumer prices. Furthermore, and this is the underlying point, the same argument that consumer prices incorporate excise taxes applies to corporate income taxes, and for the same reason: both excise taxes and corporate income taxes increase the cost of doing business, and market forces translate higher costs into higher consumer prices.

5.2 *Residence-based value-added taxation*

The analysis of the efficiency properties of worldwide taxation, and the resulting apparent desirability of residence-based excise taxes, applies with equal force to other taxes, such as value-added taxes. Suppose, for example, that the United Kingdom were to tax value-added on a residence basis, so the 17.5% British value-added tax (VAT) rate would apply not only to goods and services sold in the United Kingdom (as it does currently), but also goods and services produced by U.K.-resident firms sold for consumption abroad. Again, one can entertain the possibility of a crediting scheme, in which taxpayers would be entitled to credit VATs paid to foreign governments against their domestic tax liabilities. As of 2004 VATs were used by more than 130 countries in the world (Hines, 2006), though not one of them attempts to levy a VAT in this way. It is instructive to consider the implications of such a VAT, which offers a clue to why such a design is so unpopular.

The application of such a VAT scheme by the United Kingdom would obviously stimulate an enormous restructuring of British foreign investment. By far the largest destination country for British foreign direct investment is the United States, and the absence of a U.S. VAT implies that the value-added produced by the U.S. investment of British firms would be subject

²⁰ See, for example, Poterba (1998) and Besley and Rosen (2000).

to a 17.5% VAT rate for any firms that do not have excess VAT credits from other foreign operations. The British VAT scheme would have less purchase in Europe, given the generally high VAT rates in the European Union, and indeed, the availability of excess VAT credits from European operations might offset a significant portion of U.K. VAT liabilities on U.S.-source income for some British taxpayers. But in the circumstances in which worldwide taxation matters – when taxpayers would not have excess foreign tax credits in the absence of active management – the residence-based VAT system would impose significant burdens, and burdens that vary with local VAT rates.

How are taxpayers likely to respond to the introduction of residence-based value-added taxation? The obvious reaction is to shed, or avoid in the first place, ownership of value-added producing activities in jurisdictions where British ownership triggers significant tax liabilities. Again, it does not follow that British firms would maintain no U.S. operations; it is almost certain that they would continue at least some operations, despite the tax cost. But the distortion to ownership, investment, and productivity would be enormous.

The older efficiency norms that underlie CEN and related concepts would evaluate residence-based value-added taxation favorably. Policies that allocate value-added around the world based on pretax returns maximize world welfare, so the CEN logic implies that total (host country plus home country) value-added tax rates should be the same everywhere. In the absence of worldwide tax harmonization, this can only be achieved by home country tax regimes that offset any differences between domestic and foreign taxation, as in the hypothetical British example. Home-country welfare would be maximized by a different regime, in which after-foreign-tax returns are subject to home country value-added taxation at the normal rate. In the British example, a firm producing 100 of value-added in a country with a 20% VAT would pay a

VAT of 20 to the foreign government and then 14 (17.5x80) to the U.K. government. This tax system, says the theory, maximizes home country welfare.

5.3 Application to income taxes

No country attempts to tax sales or value-added on a residence basis, doubtless deterred by some of the considerations that are apparent from the preceding analysis. A very similar analysis can be offered for application of the residence principle to worldwide property and other taxation. The reason to analyze these taxes is not because they might realistically be adopted by the United States or some other government in the near future, or because they contain desirable features, but instead for the light that they shed on residence-based systems of taxing corporate income earned in other countries. To put the matter directly: why is it that residence-based excise, value-added, and property taxation are clearly undesirable policies, while residence-based income taxation has not enjoyed the same unpopularity?

Residence-based taxation of foreign income has the same ownership effects as would residence-based excise or value-added taxation, with the same (negative) impact on economic welfare. The economic consequences of income taxation seem subtler than those of, say, excise taxation, but this is merely an illusion, since a \$10 million tax liability associated with American ownership will discourage U.S. ownership of foreign business assets to the same extent whether the \$10 million is called an income tax or an excise tax.

6. *Fairness and Distribution*

This section considers some of the fairness and income distribution considerations raised by the question of whether or not to tax foreign income.

6.1 *Fairness.*

Simple fairness principles can have considerable purchase in issues of tax design, and one of the powerful arguments occasionally advanced in favor of taxing worldwide income is that the failure to do so would produce a system that unfairly burdens taxpayers with domestic income relative to taxpayers with foreign income.²¹ Even in the absence of widely agreed-upon norms of fairness, this argument has considerable intuitive appeal, and therefore warrants careful consideration.

It is helpful to work through a simple, and somewhat extreme, example in order to identify the salient fairness issues at stake in taxing (or exempting) foreign income. Compare two taxpayers, both earning 100 of pretax income; one earns 100 domestically, where the income is subject to a 35 percent tax, whereas the other earns 100 in a jurisdiction that does not tax corporate income at all. For simplicity, there are no other taxes in these countries.

In the absence of worldwide residence-based taxation, it appears that the taxpayer with foreign income somehow obtains an unfair advantage over the taxpayer earning domestic income. Both have (by assumption) equivalent if not identical business operations; both benefit from the services that the home government provides; but only the taxpayer whose income has domestic source contributes resources to the provision of home country government services. In such a setting, and with such reasoning, even the acknowledged equal opportunity of any taxpayer to earn foreign income if desired hardly seems to allay fairness concerns.

On closer examination, however, the pretax situations of those earning foreign and domestic income betray marked dissimilarities. In the example, the taxpayer with foreign

business income operates in an environment in which it is necessary to compete with other business interests that are not subject to the same home-country tax regime. Consider the case in which competing business interests are not subject to taxes beyond the local source-basis tax, either because their business homes are countries that exempt foreign income from taxation, or because they are domestic firms in the foreign country. The profits of these competing firms are therefore not taxed at all, and competition among these firms therefore drives returns down to a level at which the pretax rate of return just equals the after-tax returns available elsewhere. Put simply, the zero tax rate in the foreign jurisdiction unleashes foreign competition that reduces the returns that investors can earn locally.

To the extent that investors are affected by local foreign competition, they incur costs that are associated with the competition triggered by low foreign tax rates. For example, foreign investment attracted by low foreign tax rates will tend to bid up real local wages, increasing the cost of business for all investors. As a consequence, it is more difficult than it would be otherwise for a firm to turn a profit in such a country; to put the same matter differently, an investor in a zero-tax country pays an implicit tax in the form of lower returns produced by market competition.

The tax treatment of interest earned on state and local debt offers an instructive comparison. For most taxpayers, the exemption of state and local bond interest from taxable income offers a marked benefit, since, minor complications aside, the after-tax rate of interest equals the pre-tax rate of interest. Does it follow that anyone who invests in state and local bonds receives a significant windfall as a result? Certainly not, since the availability of the tax exemption greatly increases demand for these bonds, increasing bond prices and thereby

²¹ See, for example, Fleming, Peroni and Shay (2001).

depressing market yields. With a sufficient number of top-bracket investors, market equilibrium requires that the risk-adjusted after-tax return available from investing in state and local bonds equals the risk-adjusted after-tax return available from other securities held by top-bracket investors.²² Thus the tax exemption for state and local bond interest fails to ignite a groundswell of objection on the basis of fairness.

Fleming, Peroni and Shay (2001), among others, would distinguish on fairness grounds those implicit taxes paid on tax-exempt debt from explicit taxes that are required to be remitted explicitly to governments. Certainly given the intrinsic vagueness of almost any notion of fairness it is possible to identify a specific characteristic that a tax system must satisfy in order to be fair, and to declare any alternatives to be unfair. From the standpoint of the ultimate distribution of income, the question remains whether an investor who has already paid an implicit tax needs to be subject to an explicit home country tax in the name of fairness. There is the additional consideration that many intuitive notions of fairness grapple rather little, if at all, with the extraterritorial nature of worldwide income production. On what fairness basis does foreign income production require domestic taxation? And is it fair for the United States to subject income earned in other countries to U.S. taxation, thereby quite possibly affecting the distribution of income in foreign countries?

The same fairness argument that favors subjecting foreign income to domestic income taxation would also favor subjecting foreign value added to domestic value added taxation, foreign sales to domestic sales taxation, and similarly extending other domestic taxes to foreign activities. Why is there not a groundswell of fairness-motivated objection to the territoriality of

²² As it happens, there appears to be insufficient demand for state and local debt among top-bracket investors, as the implied tax rate from tax exempt bond yields is below the 35 percent top federal rate. As a consequence, a taxable

value added taxes, particularly in countries such as Denmark and Hungary that boast very high domestic VAT rates? In the case of the VAT, it is obvious that taxes are largely capitalized into the prices of goods sold, so multinational firms do not obtain extraordinary tax benefits from selling in countries with low VAT rates, since competition pushes down final output prices in such places. Expressed differently, one pays an implicit tax on sales in jurisdictions with low tax rates. Exactly the same process applies to income taxes, the only difference being that the implicit taxes are slightly less transparent.

6.2. *Who Pays and Who Benefits?*

The analysis of CON and other welfare benchmarks is premised in part on the notion that home countries benefit from policies that improve the profitability of home-country companies. While this is not a logical necessity,²³ there are at least two reasons why it is appropriate for the analysis to proceed on its basis. The first is that home-country residents typically have strong stakes in the profitability of home-country companies through their interactions as owners, workers, suppliers, and consumers. Ownership is the most obvious of these channels: the widely documented ‘home bias’ in asset ownership implies that domestic residents are considerably more likely than others to own local companies and thereby benefit from their profitability. Greater profitability is likewise associated with higher wages and other benefits for members of the community. The second reason comes from the analysis of Diamond and Mirrlees (1971), who note that the burden of taxation and its associated efficiency cost is borne by local factors, such as labor and land. If a small open economy attempts to tax foreign income at a nonzero

investor facing a 35 percent tax rate in most years receives a small windfall from buying state and local debt.

²³ See Reich (1990) for an argument that policies should focus on benefiting home-country workers rather than home-country companies. This does not rule out the possibility that the same policies benefit both, which can often happen with efficient tax policies.

rate, then it discourages foreign multinational firms from investing and the cost of this taxation is ultimately borne by local workers and landowners. Hence, it is not necessary for local residents to own multinational firms in order to be appropriately concerned about the efficiency with which they are taxed.

It is possible to add some precision to the analysis of who bears the burden of taxing foreign income by considering the incidence of the corporate income tax writ large. In an open economy such as the United States, capital taxes, of which corporate income taxes are only one species, are largely borne by factors that are fixed in the United States (Kotlikoff and Summers, 1986; Harberger, 1995). In practice, this means that taxes paid by American corporations, including taxes on their foreign incomes, reduce real wages in the United States, doing so both through direct tax burdens and also through indirect burdens in the form of reduced aggregate economic productivity. Randolph (2006) estimates that 70 percent of the U.S. corporate income tax burden is borne by labor, but this is a lower bound estimate. Randolph's model takes world capital supplies to be fixed, which is unrealistic. Using a more appropriate specification in which capital supply is an increasing function of real returns, the burden of capital income taxation is borne to an even greater degree by local labor.

7. *Complications*

Actual tax systems are considerably more distortionary than the stylized versions considered in this paper. Equity-financed corporate income is taxed twice by classical corporate tax systems while debt-financed corporate income is taxed only once, investments in certain industries and assets receive favorable tax treatment not available to other investments, capital gains are taxed only upon realization, and then at rates that may differ from the rates at which

other income is taxed, and there are many other income distinctions drawn by the tax system with little economic basis. In addition, activities that generate positive externalities, such as those that produce new technologies with economic spillovers, those that improve the natural environment, or others, may fail to receive appropriate encouragement from the tax system in the form of subsidies or reduced tax rates. The appropriate taxation of foreign income in an environment in which the tax system is already imperfectly tailored to tax domestic income may differ from the system that the government would want to adopt if its other tax policies were optimally designed.²⁴ The analysis nonetheless serves as a useful starting point for the design of optimal tax systems, but it is worth bearing in mind that it is only a starting point.

Tax systems that exempt foreign income have the potential to put more pressure on aspects of the tax system, such as the transfer pricing rules, that allocate income between domestic and foreign source. In some settings with worldwide taxation, the source of income will not matter for domestic tax purposes, hence (domestic, anyway) enforcement of these matters becomes an issue of little consequence. With tax systems that exempt foreign income the source of income and expense becomes a matter of great importance. In the past, some have argued in favor of worldwide taxation on this basis.

The difficulty of articulating and enforcing a coherent regime that distinguishes domestic from foreign source income is certainly a challenge for those who would base taxation on this distinction. This paper follows almost all of the preceding literature in taking enforcement matters to be outside the scope of the present inquiry, in large part because the traditional case for worldwide taxation is not presented in those terms. And indeed, even incorporating the enforcement difficulties that tax systems face, the notion of adopting worldwide taxation for no

²⁴ See Hines (1999b) for an extended analysis of this point.

reason other than the difficulty of enforcing a transfer pricing regime has a strong element of the transfer pricing tail wagging the tax system dog. Certainly transfer pricing is a difficulty, and should be addressed on its own terms, not by changing every other element of international taxation.

A final issue that is difficult to evaluate, but potentially important, is the reaction of other governments to changes in American tax policies. It is standard to assume that changes in U.S. policies do not affect the policies of other governments, but this will not be the case in some competitive situations and if governments react strategically with each other.²⁵ Naturally, this consideration has the potential to change the optimal tax policy from the standpoint of a government seeking to maximize the welfare of its own residents, since it enhances the attractiveness of home country tax policies that encourage foreign governments to reduce their own taxation of inward foreign direct investment. Incorporating such spillovers in the choice of optimal tax policies requires governments to determine the direction and magnitude of any effects of home country tax policies on foreign tax policies. While the United States is a capital exporter of sufficient size potentially to influence the tax policies of other countries,²⁶ most capital exporting countries are unlikely to have such effects and therefore may not be influenced by this consideration. And even for the United States it is very difficult to estimate the effect of the home country tax regime on foreign tax policies.

²⁵ Hamada (1966), Hartman (1977), Feldstein and Hartman (1979), Bond and Samuelson (1989), Gordon (1992), and Oakland and Xu (1996), among others, explore issues related to strategic setting of tax rates on foreign income by imperfectly competitive governments.

²⁶ See, for example, McLure and Zodrow (1996), who document the reluctance of the government of Bolivia to introduce a cash-flow style corporate income tax due to its potential noncredibility by American investors in Bolivia. Case-specific tax provisions, such as individually-negotiated tax holidays, are more likely to be influenced by

8. *Conclusion*

There is extensive evidence that tax systems influence the magnitude and composition of international economic activity, and there is good reason to believe that improved tax design has the potential to enhance the performance of national economies. Improved design can take the form of refining both the taxation of domestic income earned by foreign investors, and the taxation of foreign income earned by domestic residents.

The welfare principles that underlie the U.S. taxation of foreign income rely on the premise that direct investment abroad by American firms reduces the level of investment in the United States, since foreign competitors are assumed not to react to new investments by Americans. It follows from this premise that the opportunity cost of investment abroad includes foregone domestic economic activity and tax revenue, so national welfare is maximized by taxing the foreign incomes of American companies, whereas global welfare is maximized by providing foreign tax credits. If, instead, direct investment abroad by American companies triggers additional investment in the United States, which is likely in a globally competitive market, then entirely different prescriptions follow. National welfare is then maximized by exempting foreign income from taxation (NON), and global welfare is maximized by harmonizing the taxation of foreign income among capital-exporting countries (CON).

It is tempting to think of international tax differences as influencing the location of economic activity rather than determining the ownership of assets around the world. In fact tax systems do both, but given the central importance of ownership to the nature of multinational firms, there is good reason to be particularly concerned about the potential for economic

home country tax rules; see, for example, the evidence reported in Hines (2001) concerning the effect of “tax

inefficiency due to distortions to ownership patterns. Exactly the same issues would arise if governments were ever to impose excise or value-added taxes on a worldwide basis. Tax systems that satisfy CON ensure that the identities of capital owners are unaffected by tax rate differences, thereby permitting the market to allocate ownership rights to where they are most productive.

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