

# **Economic Foundations of International Tax Rules**

Mihir A. Desai  
Harvard University and NBER

James R. Hines Jr.  
University of Michigan and NBER

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*Economic foundations of international tax rules*

ABSTRACT

This paper introduces “capital ownership neutrality” (CON) and “national ownership neutrality” (NON) as benchmarks for evaluating the desirability of international tax reforms, and applies them to analyze recent U.S. tax reform proposals. Tax systems satisfy CON if they do not distort the ownership of capital assets, which promotes global efficiency whenever the productivity of an investment differs based on its ownership. A regime in which all countries exempt foreign income from taxation satisfies CON, as does a regime in which all countries tax foreign income while providing foreign tax credits. Tax systems satisfy NON if they promote the profitability of domestic firms, and therefore home country welfare, by exempting foreign income from taxation. Standard normative benchmarks of capital export neutrality, national neutrality, and capital import neutrality carry very different implications, since they fail to account for the productivity effects of tax-induced changes in capital ownership.

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Mihir A. Desai  
Harvard Business School  
Morgan 363  
Soldiers Field  
Boston, MA 02163  
Mdesai@hbs.edu

James R. Hines Jr.  
University of Michigan  
Business School  
701 Tappan Street  
Ann Arbor, MI 48109-1234  
jrhines@umich.edu

## ***1. Introduction***

Much of the current structure of U.S. taxation of foreign income dates to the early 1960s, and, remarkably, so too does much of current thinking on the desirability of taxing foreign income. The U.S. regime of taxing foreign subsidiaries of American multinational corporations was put in place in 1962, and despite numerous modifications in subsequent years, the system used by the United States to tax foreign income has been broadly unchanged since the early 1960s. American individuals and American corporations owe tax to the U.S. government on their worldwide incomes, but are entitled to claim credits for income taxes paid to foreign governments. Taxpayers are permitted to defer U.S. taxation of unrepatriated foreign income earned by separately-incorporated foreign subsidiaries, though this deferral is limited.

Every political season in the United States brings new issues and controversies, typically including tax legislation that has foreign provisions. Proposed U.S. legislation in 2003 illustrates this trend, with three major legislative initiatives directed at those inclined to change the taxation of foreign income. This flurry of interest reflects not only the importance of international taxation to modern economies and the unsettled nature of the U.S. tax treatment of foreign income, but also fundamental uncertainty over what constitute desirable attributes of systems of taxing foreign income.<sup>1</sup> Economic theory offers three benchmarks for assessing the desirability of tax systems and reforms. The concepts of “capital export neutrality” (CEN) and “capital import neutrality” (CIN), introduced by Richman (1963), and which she refined in Musgrave (1969), are mainstays of the welfare analysis of international tax reform. These principles

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<sup>1</sup> Graetz (2001) provides a useful summary of the sources of dissatisfaction with existing frameworks used to evaluate international tax rules.

characterize tax systems directed at maximizing global welfare, while “national neutrality” (NN) is characteristic of home-country tax systems directed at maximizing home-country welfare.

The purpose of this paper is to consider the evidence of taxpayer reaction to the tax systems we have, and to reconsider the appropriate principles to use in evaluating the desirability of taxing foreign income. The analysis introduces capital ownership neutrality (CON), the principle that world welfare is maximized if the identities of capital owners are unaffected by tax rate differences, and national ownership neutrality (NON), the principle that national welfare is maximized by exempting foreign income from taxation. In order to frame the analysis of these welfare benchmarks, section 2 of the paper reviews the workings of the tax system facing U.S. firms and then considers the extant evidence on the influence of those rules on firm behavior. Section 3 of the paper motivates the emphasis on ownership that is central to CON and NON and that is missing from standard welfare frameworks. Section 4 describes CON and NON, drawing attention to the very small change in assumptions that distinguishes them from standard welfare benchmarks. Section 5 evaluates current international tax reform proposals according to these alternative welfare frameworks. Section 6 considers the impact of adding realistic complications to the simple models analyzed in section 4. Section 7 is the conclusion.

## **2. *Tax Systems and Their Impact*<sup>2</sup>**

An analysis of alternative welfare benchmarks for taxing foreign income is usefully framed within an analysis of how existing rules influence firm behavior. This section reviews the rules facing American firms and then considers the evidence on the effect of these rules on investment and tax avoidance activities.

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<sup>2</sup> This section draws on Hines (1997, 1999a) and Desai, Foley and Hines (2003).

## 2.1. *International tax practice*

The taxation of international transactions differs from the taxation of domestic economic activity primarily due to the complications that stem from the taxation of the same income by multiple governments. In the absence of double tax relief, the implications of multiple taxation are potentially quite severe, since national tax rates are high enough to eliminate, or at least greatly discourage, most international business activity if applied two or more times to the same income.

### 2.1.1 *The foreign tax credit*

Almost all countries tax income generated by economic activity that takes place within their borders. In addition, many countries – including the United States – tax the foreign incomes of their residents. In order to prevent double taxation of the foreign income of Americans, U.S. law permits taxpayers to claim foreign tax credits for income taxes (and related taxes) paid to foreign governments.<sup>3</sup> These foreign tax credits are used to offset U.S. tax liabilities that would otherwise be due on foreign-source income. The U.S. corporate tax rate is currently 35 percent, so an American corporation that earns \$100 in a foreign country with a 10 percent tax rate pays taxes of \$10 to the foreign government and \$25 to the U.S. government, since its U.S. corporate tax liability of \$35 (35 percent of \$100) is reduced to \$25 by the foreign tax credit of \$10.

### 2.1.2 *Tax deferral*

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<sup>3</sup> The United States is not alone in taxing the worldwide income of its residents while permitting them to claim foreign tax credits. Other countries with such systems include Greece, Italy, Japan, Norway, and the United Kingdom. Under U.S. law, taxpayers may claim foreign tax credits for taxes paid by foreign firms of which they own at least 10 percent, and only those taxes that qualify as income taxes are creditable.

Americans are permitted to defer any U.S. tax liabilities on certain unrepatriated foreign profits until they receive such profits in the form of dividends.<sup>4</sup> This deferral is available only on the active business profits of American-owned foreign affiliates that are separately incorporated as subsidiaries in foreign countries. The profits of unincorporated foreign businesses, such as those of American-owned branch banks in other countries, are taxed immediately by the United States.

To illustrate deferral, consider the case of a subsidiary of an American company that earns \$500 in a foreign country with a 20 percent tax rate. This subsidiary pays taxes of \$100 to the foreign country (20 percent of \$500), and might remit \$100 in dividends to its parent U.S. company, using the remaining \$300 (\$500 - \$100 of taxes - \$100 of dividends) to reinvest in its own, foreign, operations. The American parent firm must then pay U.S. taxes on the \$100 of dividends it receives (and is eligible to claim a foreign tax credit for the foreign income taxes its subsidiary paid on the \$100).<sup>5</sup> But the American firm is not required to pay U.S. taxes on any part of the \$300 that the subsidiary earns abroad and does not remit to its parent company. If, however, the subsidiary were to pay a dividend of \$300 the following year, the firm would then be required to pay U.S. tax (after proper allowance for foreign tax credits) on that amount.

U.S. tax law contains provisions designed to prevent American firms from delaying the repatriation of lightly-taxed foreign earnings. These tax provisions apply to controlled foreign corporations, which are foreign corporations owned at least 50 percent by American individuals or corporations who hold stakes of at least 10 percent each. Under the Subpart F provisions of U.S. law, some foreign income of controlled foreign corporations is “deemed distributed,” and therefore

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<sup>4</sup> Deferral of home-country taxation of the unrepatriated profits of foreign subsidiaries is a common feature of systems that tax foreign incomes. Other countries that permit this kind of deferral include Canada, Denmark, France, Germany, Japan, Norway, Pakistan, and the United Kingdom.

<sup>5</sup> In this example, the parent firm is eligible to claim a foreign tax credit of \$25, representing the product of foreign taxes paid by its subsidiary and the subsidiary's ratio of dividends to after-tax profits [ $\$100 \times (\$100/\$400) = \$25$ ].

immediately taxable by the United States, even if not repatriated as dividend payments to American parent firms.<sup>6</sup>

### *2.1.3. Excess foreign tax credits*

Since the foreign tax credit is intended to alleviate international double taxation, and not to reduce U.S. tax liabilities on profits earned *within* the United States, the foreign tax credit is limited to U.S. tax liability on foreign-source income. For example, an American firm with \$200 of foreign income that faces a U.S. tax rate of 35 percent has a foreign tax credit limit of \$70 (35 percent of \$200). If the firm pays foreign income taxes of less than \$70, then the firm would be entitled to claim foreign tax credits for all of its foreign taxes paid. If, however, the firm pays \$90 of foreign taxes, then it would be permitted to claim no more than \$70 of foreign tax credits.

Taxpayers whose foreign tax payments exceed the foreign tax credit limit are said to have “excess foreign tax credits;” the excess foreign tax credits represent the portion of their foreign tax payments that exceed the U.S. tax liabilities generated by their foreign incomes. Taxpayers whose foreign tax payments are smaller than their foreign tax credit limits are said to have “deficit foreign tax credits.” American law permits taxpayers to use excess foreign tax credits in one year to reduce their U.S. tax obligations on foreign source income in either of the two previous years or in any of the following five years.

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<sup>6</sup> Subpart F income consists of income from passive investments (such as interest and dividends received from investments in securities), foreign base company income (that arises from using a foreign affiliate as a conduit for certain types of international transactions), income that is invested in United States property, money used offshore to insure risks in the United States, and money used to pay bribes to foreign government officials. American firms with foreign subsidiaries that earn profits through most types of active business operations, and that subsequently reinvest those profits in active lines of business, are not subject to the Subpart F rules, and are therefore able to defer U.S. tax liability on their foreign profits until they choose to remit dividends at a later date.

In practice, the calculation of the foreign tax credit limit entails certain additional complications, notable among which is that total worldwide foreign income is used to calculate the foreign tax credit limit. This method of calculating the foreign tax credit limit is known as “worldwide averaging.” A taxpayer has excess foreign tax credits if the sum of worldwide foreign income tax payments exceeds this limit.

## 2.2. *Taxation and FDI*

Tax policies are obviously capable of affecting the volume and location of FDI,<sup>7</sup> since, all other considerations equal, higher tax rates reduce after-tax returns, thereby reducing incentives to commit investment funds. Of course, all other considerations are seldom equal. Countries differ not only in their tax policies, but also in their commercial and regulatory policies, the characteristics of their labor markets, the nature of competition in product markets, the cost and local availability of intermediate supplies, proximity to final markets, and a host of other attributes that influence the desirability of an investment location. Furthermore, the various tax and regulatory policies that are relevant to foreign investors may be correlated with non-tax features of economies that independently affect FDI levels. Consequently, it is necessary to interpret evidence of the effect of taxation with considerable caution.

The empirical literature on the effect of taxes on FDI considers almost exclusively U.S. data, either the distribution of U.S. direct investment abroad, or the FDI patterns of foreigners who

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<sup>7</sup> FDI consists of changes in the ownership claims of controlling foreign investors. For example, an American parent firm that establishes a wholly-owned foreign affiliate with \$100 million of equity and \$50 million of loans from the parent company thereby creates \$150 million of FDI. In order for foreign investment to count as FDI, the American investor must own at least 10 percent of the foreign affiliate. FDI is the sum of parent fund transfers and American owners' shares of their foreign affiliates' reinvested earnings, minus any repatriations to American owners. Prior to 1974, the United States reported FDI only for investments in which American owners held at least 25 percent ownership shares. Reported FDI typically represents book values.



invest in the United States.<sup>8</sup> The simple explanation for this focus is not only that the United States is the world's largest economy, but also that the United States collects and distributes much more, and higher-quality, data on FDI activities than does any other country.

The available evidence of the effect of taxation on FDI comes in two forms. The first is time-series estimation of the responsiveness of FDI to annual variation in after-tax rates of return. Implicit in this estimation is a q-style investment model in which contemporaneous average after-tax rates of return serve as proxies for returns to marginal FDI. Studies of this type consistently report a positive correlation between levels of FDI and after-tax rates of return at industry and country levels.<sup>9</sup> The implied elasticity of FDI with respect to after-tax returns is generally close to unity, which translates into a tax elasticity of investment of roughly -0.6. The estimated elasticity is similar whether the investment in question is American direct investment abroad or FDI by foreigners in the United States.

The primary limitation of aggregate time-series studies is that they are identified by yearly variation in taxes or profitability that may be correlated with important omitted variables. As a result, it becomes very difficult to distinguish the effects of taxation from the effects of other variables that are correlated with tax rates. Two of the time-series studies exploit cross-sectional differences that offer the potential for greater explanatory power. Slemrod (1990) distinguishes FDI in the United States by the tax regime in the country of origin, comparing the behavior of investors from with tax systems similar to that used by the United States to the behavior of investors whose home countries exempt foreign profits from taxation. He finds no clear empirical pattern indicating that investors from countries that exempt U.S. profits from home-country

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<sup>8</sup> Devereux and Freeman (1995) and Hines (2001) are recent exceptions.

taxation are more sensitive to U.S. tax changes than are investors from countries granting foreign tax credits. Swenson (1994) reports that industries in which the (U.S.) after-tax cost of capital rose the most after passage of the U.S. Tax Reform Act of 1986 were those in which foreign investors concentrated their FDI in the post-1986 period, which is consistent with the tax incentives of foreign investors from countries granting foreign tax credits.

Other studies of investment location are exclusively cross-sectional in nature, exploiting the very large differences in corporate tax rates around the world to identify the effects of taxes on FDI. Grubert and Mutti (1991) and Hines and Rice (1994) estimate the effect of national tax rates on the cross-sectional distribution of aggregate American-owned property, plant and equipment (PPE) in 1982. Grubert and Mutti analyze the distribution of PPE in manufacturing affiliates in 33 countries, reporting a  $-0.1$  elasticity with respect to local tax rates. That is, controlling for other observable determinants of FDI, ten percent differences in local tax rates are associated with one percent differences in amounts of local PPE ownership in 1982. Hines and Rice consider the distribution of PPE in all affiliates in 73 countries, reporting a much larger  $-1$  elasticity of PPE ownership with respect to tax rates. Altshuler, Grubert and Newlon (2001) compare the tax sensitivity of aggregate PPE ownership in 58 countries in 1984 to that in 1992, reporting estimated tax elasticities that rise (in absolute value) from  $-1.5$  in 1984 to  $-2.8$  in 1992. Desai, Foley and Hines (2002b) use affiliate-level data to identify the impact of differences in income tax rates and other taxes on the allocation of FDI within companies. The results indicate that one percent lower income tax rates are associated with 0.4 percent larger affiliate assets, which translates into an estimated elasticity of asset allocation with respect to income taxes of 0.125.

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<sup>9</sup> See, for example, Hartman (1984), Boskin and Gale (1987), Newlon (1987), Young (1988), Slemrod (1990), and Swenson (1994).

### 2.3. *Taxation and tax avoidance*

One of the important issues in considering the impact of taxation on international investment patterns is the ability of multinational firms to adjust the reported location of their taxable profits. To the extent that FDI can facilitate the advantageous relocation of profits, then firms will have incentives to tailor their international investment strategies with such relocation in mind. Hence any complete analysis of the impact of taxation on the operations of multinational firms must necessarily consider the ability and evident willingness of multinational firms to undertake activities to avoid international tax obligations.

The financing of foreign affiliates presents straightforward opportunities for international tax avoidance. If an American parent company finances its investment in a foreign subsidiary with equity funds, then its foreign profits are taxable in the host country and no taxes are owed the U.S. government until the profits are repatriated to the United States. The alternative of financing the foreign subsidiary with debt from the parent company generates interest deductions for the subsidiary that reduce its taxable income, and generates taxable interest receipts for the parent company.

Simple tax considerations therefore often make it attractive to use debt to finance foreign affiliates in high-tax countries and to use equity to finance affiliates in low-tax countries.<sup>10</sup> The evidence is broadly consistent with these incentives. Hines and Hubbard (1990) find that the average foreign tax rate paid by subsidiaries remitting nonzero interest to their American parent firms in 1984 exceeds the average foreign tax rate paid by subsidiaries with no interest payments, while the reverse pattern holds for dividend payments. Grubert (1998) estimates separate

equations for dividend, interest, and royalty payments by 3467 foreign subsidiaries to their parent American companies (and other members of controlled groups) in 1990, finding that high corporate tax rates in countries in which American subsidiaries are located are correlated with higher interest payments and lower dividend payout rates. The evidence provided in Desai, Foley and Hines (2003a) indicates that 10 percent higher local tax rates are associated with 2.8 percent higher debt/asset ratios of American-owned affiliates, and that borrowing from related parties is particularly sensitive to tax rates.

Contractual arrangements between related parties located in countries with different tax rates offer numerous possibilities for sophisticated tax avoidance. It is widely suspected that firms adjust transfer prices used in within-firm transactions with the goal of reducing their total tax obligations. Multinational firms typically can benefit by reducing prices charged by affiliates in high-tax countries for items and services provided to affiliates in low-tax countries. OECD governments require firms to use transfer prices that would be paid by unrelated parties, but enforcement is difficult, particularly when pricing issues concern unique items such as patent rights. Given the looseness of the resulting legal restrictions, it is entirely possible for firms to adjust transfer prices in a tax-sensitive fashion without even violating any laws.

The evidence of tax-motivated transfer pricing comes in several forms. Grubert and Mutti (1991) and Hines and Rice (1994) analyze the aggregate reported profitabilities of U.S affiliates in different foreign locations in 1982. Grubert and Mutti examine profit/equity and profit/sales ratios of U.S.-owned manufacturing affiliates in 29 countries, while Hines and Rice regress the profitability of all U.S.-owned affiliates in 59 countries against capital and labor inputs and local

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<sup>10</sup> Hines (1994) identifies exceptions to this rule that stem from the benefits of limiting equity finance in affiliates located in countries with very low tax rates in anticipation of reinvesting all of their after-tax profits over long periods.

productivities. Grubert and Mutti report that high taxes reduce the reported after-tax profitability of local operations; Hines and Rice find considerably larger effects (one percent tax rate differences are associated with 2.3 percent differences in *before*-tax profitability) in their data. While it is possible that high tax rates are correlated with other locational attributes that depress the profitability of foreign investment, competitive conditions typically imply that after-tax rates of return should be equal in the absence of tax-motivated income-shifting. The fact that before-tax profitability is negatively correlated with local tax rates is strongly suggestive of active tax avoidance. Using affiliate-level data, Desai, Foley and Hines (2002b) show that 10 percent higher tax rates are associated with 0.6 percent lower profit rates, which corresponds to an elasticity of reported profits with respect to the tax rate of 0.33.

Harris, Morck, Slemrod and Yeung (1993) report that the U.S. tax liabilities of American firms with tax haven affiliates are significantly lower than those of otherwise-similar American firms over the 1984-1988 period, which may be indirect evidence of aggressive transfer-pricing by firms with tax haven affiliates. Collins, Kemsley and Lang (1998) analyze a pooled sample of U.S. multinationals over 1984-1992, finding a similar pattern of greater reported foreign profitability (normalized by foreign sales) among firms facing foreign tax rates below the U.S. rate. And Klassen, Lang and Wolfson (1993) find that American multinationals report returns on equity in the United States that rose by 10 percent relative to reported equity returns in their foreign operations following the U.S. tax rate reduction in 1986.

Patterns of reported profitability are consistent with other indicators of aggressive tax-avoidance behavior, such as the use of royalties to remit profits from abroad and to generate tax deductions in host countries. Hines (1995) finds that royalty payments from foreign affiliates of American companies in 1989 exhibit a  $-0.4$  elasticity with respect to the tax cost of paying

royalties, and Grubert (1998) also reports significant effects of tax rates on royalty payments by American affiliates in 1990. Clausing (2001) finds that reported trade patterns between American parent companies and their foreign affiliates, and those between foreign affiliates located in different countries, are consistent with transfer-pricing incentives. Controlling for various affiliate characteristics, including their trade balances with unaffiliated foreigners, Clausing finds that ten percent higher local tax rates are associated with 4.4 percent higher parent company trade surpluses with their local affiliates, which is suggestive of pricing practices that move taxable profits out of high-tax jurisdictions. In subsequent work, Clausing (2003) reports that prices used for transactions between U.S. parent companies and their foreign affiliates differ from prices for comparable goods used by companies transacting with unrelated parties in ways that tend to relocate taxable profits out of high-tax jurisdictions and into low-tax jurisdictions. Swenson (2001) finds a similar pattern in the reported prices of goods imported into the United States, in which high unit tariff rates appear to be associated with unusually low prices.

Dividend repatriations from foreign subsidiaries to domestic parent companies trigger tax obligations, so firms have incentives to adjust the timing and magnitude of dividend payments in order to avoid home country taxes.<sup>11</sup> Hines and Hubbard (1990) analyze a cross-section of U.S. multinationals using tax return data from 1984 in an effort to determine the sensitivity of multinational dividends to tax costs. In their sample, Hines and Hubbard note that large aggregate payouts are the result of selective and infrequent dividend payments by affiliates. Using this cross-section of data, they conclude that a one percent decrease in the repatriation tax is associated with a

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<sup>11</sup> Firms can avoid dividend repatriations in various ways, including reinvesting money abroad in other foreign investments; see Altshuler and Grubert (2003), and Desai, Foley and Hines (2003b) for an analysis.

four percent increase in dividend payout rates.<sup>12</sup> The evidence provided in Hines and Hubbard suggests that tax considerations are very important determinants of the timing of dividend repatriations.

The cross-section used by Hines and Hubbard makes it impossible to distinguish the effects of transitory and permanent changes in repatriation taxes. Altshuler, Newlon and Randolph (1995) attempt to identify permanent and transitory tax costs by creating an unbalanced panel of subsidiaries using tax returns from 1980, 1982, 1984 and 1986. Permanent repatriation tax costs for subsidiaries are constructed from a first-stage regression that uses as explanatory variables statutory withholding tax rates and average tax rates of other subsidiaries in the same country. Altshuler, Newlon and Randolph find, as predicted by Hartman (1985), that transitory tax costs influence dividend payments while permanent tax costs do not. The effort to disentangle the permanent and temporary tax costs of dividends is limited, however, by the very small number of annual observations for each firm.

Grubert (1998) and Grubert and Mutti (2001) report that dividends are sensitive to tax costs in their analyses of cross-sections of tax returns for 1990 and 1992, respectively. Desai, Foley and Hines (2001, 2002a) consider the responsiveness of dividend repatriations to tax rate differences, finding that a variety of non-tax factors affect repatriation decisions, but that one percent lower repatriation tax rates are associated with one percent higher dividends – implying that repatriation taxes reduce aggregate dividend payouts by 12.8 percent.

### **3. *The Importance of Ownership to the Welfare Analysis of FDI***<sup>13</sup>

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<sup>12</sup> Dividend payout rates are calculated as dividends over assets. In the Hines and Hubbard sample, only 16 percent of subsidiaries with parents filing returns report paying dividends. Altshuler and Newlon (1993) find similar patterns in a related sample with a slightly reduced elasticity of dividends to tax costs.

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, this section considers evidence on the role of ownership in determining patterns of foreign direct investment (FDI) and on the effects of tax rules on patterns of ownership.

### *3.1. 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 offers an excellent survey of 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

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<sup>13</sup> This section and the section that follows draw on Desai and Hines (2003).



direct investment.<sup>14</sup> 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.<sup>15</sup> 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.<sup>16</sup>

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 (2002c) 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 coordinated transactions inside firms. The costs and benefits of ownership appear to be central, and

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<sup>14</sup> See Dunning (1981). While the OLI framework is usually considered relevant for horizontal FDI, vertical FDI similarly emphasizes the transaction-cost approach.

<sup>15</sup> 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.

<sup>16</sup> 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 involve

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.

Recent evidence illustrates the degree to which foreign direct investment represents transfers of ownership rights rather than reallocations of property, plant, and equipment between countries. Table 1 categorizes foreign direct investment into the United States, as reported by Anderson (2002), as either the establishment of new entities or the acquisition of preexisting entities. These figures suggest that the vast majority of FDI in the United States over the last decade represents transfers of ownership rights rather than greenfield investment. The fact that most FDI in the United States represents the acquisition of assets from existing owners, typically at

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

a premium, implies that much of what drives FDI is that certain assets have greater value to foreign firms than they do to domestic firms.<sup>17</sup>

The distribution of U.S. multinational activity abroad likewise suggests that FDI is driven by something other than transfers of net saving between countries. Table 2 profiles the distribution of gross product (sales minus purchases from other firms) for U.S. multinationals in 1999. American multinationals produced almost two-thirds of their total gross product in eight high-income economies that year. Moreover, capital outflows from the United States between 1997 and 2000 are similarly concentrated in rich economies. If it were the case that the function of foreign direct investment by multinational firms is to move capital from where it is abundant to where it is scarce, then FDI would not be so highly concentrated in high-income destinations. Instead, it appears that American firms invest abroad in response to productivity differences associated with ownership. In sum, the literature on FDI and the available data indicate that ownership, and its attendant costs and benefits, are likely to be central to explaining the determinants of multinational investment.

### *3.2. Taxation and Ownership of FDI*

As detailed above, there is ample evidence that foreign direct investment responds to tax incentives through altered investment patterns and tax avoidance activities. In addition to the evidence provided above regarding the effect of host country tax rates on these activities, home-country taxation 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

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<sup>17</sup> Harris and Ravenscraft (1991) and Marr, Mohta and Spivey (1993) find larger wealth effects for U.S. targets of

from locating their foreign investments in low-tax countries, since such investors benefit in full from any 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.<sup>18</sup> 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.

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foreign acquirers relative to domestic acquirers and find that these greater gains are associated with the likelihood that the target and acquirer are in related businesses.

<sup>18</sup> 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.<sup>19</sup> Altshuler and Grubert (2003) and Desai, Foley and Hines (2003b) 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.

#### **4. *Alternate Welfare Frameworks in Evaluating the Taxation of Foreign Income***

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<sup>19</sup> 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.

This section reviews the standard welfare benchmarks used to evaluate the taxation of foreign income, the distinguishing features of CON and NON, and the circumstances in which each is appropriate.

#### *4.1. Standard Welfare Benchmarks*

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 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,<sup>20</sup> 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 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 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

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<sup>20</sup> See, for example, the analysis in U.S. Congress, Joint Committee on Taxation (1991, pp. 232-264), and U.S. Treasury (2000).

thought to characterize tax systems that promote efficient production,<sup>21</sup> 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.

It is important to clarify the five main 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 maximize the sum of tax revenue and the after-tax worldwide profits of home-country firms, which is equivalent to maximizing national income. 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. The fourth assumption is that home countries receive no special benefits from the headquarters activities of resident multinational firms. And the fifth 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 are residual claimants (as shareholders, employees, or in other capacities) on the returns earned by home-country firms, and the residence of home-country firms is unaffected by the taxation of foreign income. The first assumption also ignores the second-best nature of taxation, in which governments must distort economies in order to raise revenue, so additional government revenue is typically worth

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<sup>21</sup> Horst (1980) identifies circumstances in which the optimal taxation of foreign income corresponds to CEN; see also Dutton (1982) and Horst (1982). Roussslang (2000) offers a recent statement of the significance of CEN.



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 fourth assumption rules out productivity spillovers from multinationals to other local firms. The first four assumptions have been criticized in the literature, and their implications explored,<sup>22</sup> though defenders of CEN and NN maintain that they are robust to changes in these assumptions.<sup>23</sup>

The fifth assumption underlying the CEN and NN framework, that foreign firms do not respond to changes induced by home-country taxation, has received almost no attention but may be the most critical of all.<sup>24</sup> 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. 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.

#### 4.2. *Capital Ownership Neutrality*<sup>25</sup>

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<sup>22</sup> See, for example, Hamada (1966), Hufbauer (1992), Keen and Pekkiola (1997), Hines (1999b), and others surveyed by Gordon and Hines (2002).

<sup>23</sup> See, for example, Rousslang (2000).

<sup>24</sup> Exceptions include work by Levinsohn and Slemrod (1993) and Devereux and Hubbard (2000), who consider the possibility that home-country taxation influences the strategic interaction of domestic and foreign oligopolists in world markets.

<sup>25</sup> The phrase “capital ownership neutrality” appears in Devereux (1990), which discusses the possibility that productivity levels vary with owners and investigates the implications of such differences for world welfare. The paper concludes that, in settings in which productivity varies more with owners than with location, source-based taxation is

Tax systems satisfy capital ownership neutrality 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 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.

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recommended for global efficiency. While the conclusion is that productivity differences associated with location are more important than those associated with owners, it is noteworthy that the paper considers the implications of productivity that differs between owners. Devereux (1993, 1998), Devereux and Pearson (1995), and Slemrod (1995) analyze related issues, including interactions of corporate and individual tax regimes, while Roushlang (2000, p. 595) contributes the observation that exempting foreign income may be globally efficient in some circumstances.

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 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 is 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,<sup>26</sup> 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

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<sup>26</sup> 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 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.

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 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.

#### *4.3. 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.

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.<sup>27</sup> 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. If foreign investment and domestic investment are equally productive in the home country, but inbound foreign investment replaces only 75 percent of domestic investment lost due to outbound FDI, then the analysis implies that the optimal home-country policy is to tax 34 percent of the after-tax foreign income earned by home-country firms.<sup>28</sup>

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<sup>27</sup> 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.

<sup>28</sup> Specifically, if home-country firms have fixed capital stocks, so additional FDI comes at the expense of domestic investment, then the optimal repatriation tax rate, given by  $\tau_r$ , can be shown to equal:  $\tau_r = \frac{(1 - \tau^*)\tau(1 - \gamma)}{(1 - \tau\gamma)}$ , in which  $\tau$  is the domestic tax rate and  $\tau^*$  is the foreign tax rate.  $\gamma$  is the product of the additional foreign investment triggered by a dollar of outbound FDI by home country firms and the ratio of the marginal products of foreign and domestic investors in the home country. This 34 percent calculation uses the U.S. statutory rate of 35% [(1-0.75)/(1-0.35\*0.75)].

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.

## **5. *Evaluating Recent Reform Proposals***

This section illustrates the application of the normative frameworks discussed in section four to evaluate international tax reforms, taking recent U.S. tax reform proposals as examples. Despite their stylized natures, these frameworks offer useful guidance in assessing the desirability of alternative tax packages. Indeed, given the complexity of most tax reform proposals, and the complexity of the pre-reform tax environment, it can be difficult to amass the necessary information to judge the value of a reform unless doing so on the basis of clear guidelines, such as those provided by normative frameworks.

In order to evaluate the desirability of U.S. tax reforms it is necessary to consider the extent to which the U.S. tax system differs from the tax systems of other major capital-exporting countries. These countries can be divided into two groups, one containing countries that exempt foreign income from home-country taxation, and another containing countries that tax foreign income while granting foreign tax credits. The United States is in the second group, and by the

standards of the world community has a strict tax regime that is effectively enforced, so American taxpayers are subject to heavier taxation on their foreign incomes than are most taxpayers in capital-exporting countries. This broad characterization is appropriate despite the fact that the U.S. system effectively exempts a portion of foreign income from U.S. taxation, and that some foreign countries that nominally exempt foreign income actually subject some of it to home-country taxation. It is not only the statutory provisions that make the U.S. tax system particularly burdensome for taxpayers with foreign income, but also the extent to which they are enforced.

### *5.1. The Homeland Investment Act of 2003*

The Homeland Investment Act, as proposed by House members, provides for temporary relief from repatriation taxes imposed by the United States. A so-called toll tax of 5.25% would be imposed on all repatriations from all foreign subsidiaries, above a base amount determined by examining repatriation behavior over the last several years. This legislation, which would provide this relief for only one year, is designed to facilitate the repatriation of earnings that multinational firms maintain overseas in order to avoid an even larger tax obligation upon repatriation. As a consequence of electing for this treatment, the parent firm would also lose the value associated with 85% of the foreign tax credits associated with these earnings. Alternative versions of this bill, including the Invest in the USA Act as proposed in the Senate, include stipulations that tie this relief to specific plans for investing the repatriated earnings domestically.

The reactions of individual firms to such a measure, and the impact on tax revenues, depends on their current foreign tax credit situation, their anticipated future tax liability on those unrepatriated earnings and their anticipation of future such opportunities for relief from repatriation taxes. Estimates of the actual amounts of repatriated earnings range upward from an estimate



provided by the Joint Committee of Taxation of a one-year flow of \$135 billion. The revenue consequences are a function, in turn, of the gross amount of those flows, subsequent repatriation activity, and the ways in which such a one-time repatriation impacts future allocations of interest expense and future earnings abroad.

## 5.2. *The American Competitiveness and Corporate Accountability Act of 2002*

The American Competitiveness and Corporate Accountability Act of 2002 (ACCA) attempted to combine several reforms of the taxation of international transactions for U.S. multinational firms. Specifically, the legislation included changes to the taxation of income associated with exports, the taxation of foreign source income, the tax treatment of corporate inversions and the rules meant to regulate corporate sheltering activities. The largest source of additional government revenue in this legislation came from the proposed repeal of the Extraterritorial Income Act, an act that replaced the export subsidy provided through Foreign Sales Corporations. In response to a World Trade Organization finding that the United States must remove its export subsidies, the ACCA repealed these export incentives. Additionally, the ACCA raised revenue by clarifying the economic substance doctrine regarding tax avoidance activities, and by strengthening the earnings stripping rules that prevent expatriated firms from aggressively using debt to reduce taxable income in the United States.

These revenue-generating aspects of ACCA were coupled with a substantial simplification of tax rules related to foreign income. First, the “basket” rules that limit cross-crediting of foreign taxes paid on separate types of foreign income were simplified and their impact thereby reduced. Second, the rules that govern the allocation of interest expense and the interactions of foreign tax credits with the Alternative Minimum Tax were simplified. Finally, the rules preventing deferral

of income associated with foreign sales subsidiaries were eased. These provisions, and several other more minor ones, were attempts to simplify and reduce the taxation of foreign income; when combined with the anti-sheltering and export provisions, ACCA was revenue-neutral.

### 5.3. *The Job Protection Act of 2003*

A third proposed change to the taxation of international income is the Job Protection Act of 2003 (JPA), proposed by Representatives Crane and Rangel. This legislation would also repeal the U.S. export subsidies, while providing transition relief for affected taxpayers until 2009. The idea behind the transition relief is to permit taxpayers to claim export tax benefits based on the benefits they obtained in 2001, thereby cushioning the effect of the tax change while not providing marginal incentives for additional exports in the years after 2003. The revenue raised by repealing the export incentive is then used to grant taxpayers a 10 percent tax deduction for income arising from domestic production activities, though this deduction is reduced by the fraction of income that taxpayers earn from production activities located abroad. Once this deduction is fully phased in by 2009, therefore, domestic production would be subject to a 31.5% tax rate (90% of the standard tax rate of 35%), whereas the United States would tax foreign income at its standard 35% tax rate.

### 5.4. *Evaluating Proposed Reforms*

Do these proposals promote world or national welfare? It is difficult to assess the impact of an unanticipated temporary reform such as the Homeland Investment Act, though this reform could have permanent features if taxpayers anticipate that something like it could be enacted again in the future. By the metric of CEN and NN, the Homeland Investment Act's significant reduction in repatriation taxes reduces global and U.S. welfare by encouraging excessive foreign investment,

particularly in low-tax countries. In contrast, the ownership framework used by CON and NON implies that the reduction in repatriation taxes would advance national welfare, and very likely also advance world welfare by reducing the repatriation taxes that distinguish the American tax system from the systems used by so many other countries.

The ACCA offers a more thorough reform of international tax rules. Its proposed simplification of basket rules, base company sales rules, and interest allocation rules all would permit taxpayers to receive foreign tax credits for more of their foreign tax payments than they do under current rules. Such a reform advances global welfare in a CEN framework that calls for complete foreign tax crediting, though it reduces national welfare as interpreted by NN. From an ownership standpoint, the ACCA simplifications would promote world welfare to the degree that the U.S. system – with its elaborate allocation and basket rules – differs from exemption and foreign tax credit systems around the world. To the degree that the ACCA strips away a variety of some of the idiosyncrasies that have come to characterize the American system, the CON standard implies that it would promote world welfare; and the NON standard certainly implies that the ACCA would promote national welfare.

The JPA would reduce the taxation of domestic activity while leaving intact the taxation of foreign activity. In imposing a relatively heavier tax on foreign (compared to domestic) income than does the current U.S. system, the JPA would promote national welfare from a NN standpoint, though it could reduce global welfare by moving the United States away from a classic foreign tax credit system. From an ownership standpoint, the JPA would reduce national and global welfare, as measured by NON and CON, by moving the United States tax system further from conformity with the rest of the world, thereby encouraging excessive domestic ownership of U.S. assets.

## 6. *Additional Considerations*

The analysis to this point is based on a very simple model of behavior and taxation that, while highly relevant to the design and welfare consequences of tax policies, is nonetheless somewhat stylized and austere. This section considers the implications of extending and generalizing the analysis in several directions.

### 6.1. *The Taxation of Inbound Investment*

The first extension concerns the taxation of inbound investment, and here it is useful to elaborate the argument of Diamond and Mirrlees (1971) that it is in the interest of countries that are small relative to the world market to exempt returns earned by foreign investors from any domestic taxes. The reason is that, in a small open economy, a tax on the return to domestic capital has no effect on the rate of return available to domestic savers,<sup>29</sup> since the domestic interest rate is determined by the world capital market. Domestic investment falls in response to higher tax rates. For firms to continue to break even, in spite of the added tax, either output prices must rise or other costs must fall by enough to offset the tax. When output prices are fixed by competition with imports, the tax simply causes the market-clearing wage rate to fall. As a result, the burden of the tax is borne entirely by labor or other fixed domestic factors. While a labor income tax would also reduce the net wage rate, it would not, in contrast, distort the marginal return to capital invested at home vs. abroad. This is the basis of the conclusion that a labor income tax dominates a corporate income tax, even from the perspective of labor.<sup>30</sup> As a result, one immediate and strong conclusion about tax policy in an open economy setting is that a “source-based tax” on capital income should not be used since it is dominated by a labor-income

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<sup>29</sup> This follows from the standard assumptions that capital is costlessly mobile internationally and there is no uncertainty.

tax. While countries might want to impose residence-based taxes on capital income,<sup>31</sup> foreign investors in the domestic economy should not be taxed, since in a small open economy domestic workers would bear the burden of the tax. Another immediate implication of the findings of Diamond and Mirrlees concerning productive efficiency under an optimal tax system is that a small open economy should not impose differential taxes on firms based on their location or the product they produce. This not only rules out tariffs but also differential corporate tax rates by industry.

Whether the United States is small enough to qualify as a small open economy for the purpose of the analysis sketched above is ultimately an empirical question, one that turns on the extent to which returns to investments in the United States can differ from those in the rest of the world while still satisfying investors. Certainly the United States is the largest economy in the world, but it does not follow from that observation that the United States is necessarily capable of wielding extensive power in the world market for capital. Given the widely-observed “home bias” in international investment, there is reason to believe that even medium-sized countries have modest degrees of market power in the world capital market. The ability of countries to use tax policies to exploit market power in the world capital market typically implies that they can benefit from imposing modest levels of source-based capital taxes,<sup>32</sup> but the optimal level of such taxes is unlikely to be very high.

## 6.2. *Who is Us?*

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<sup>30</sup> Dixit (1985) provides a detailed and elegant development of this argument.

<sup>31</sup> In the long run the efficiency cost of taxing capital income becomes prohibitively high due to the associated distortion to saving and consumption, so the typical optimal tax program includes capital income taxes only over short periods; see Chamley (1986) and Auerbach and Hines (2002) for elaborations.

<sup>32</sup> See Gordon and Hines (2002) for an analysis.

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,<sup>33</sup> 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 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.

### 6.3. *Portfolio Investment*

Tax laws currently draw sharp distinctions between portfolio and direct investment, though it has been difficult to justify such distinctions based on economic principles typically applied in the literature. In particular, the ability of investors to claim foreign tax credits for taxes paid by foreign subsidiaries of which they own at least 10%, but not for portfolio

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<sup>33</sup> 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

investments with ownership stakes of below 10%, is arbitrary in the sense of not having an economic basis. If 10% ownership is a critical threshold for ownership to matter for operational and investment decisions, then perhaps an economic justification could be made for requiring 10% ownership to claim the foreign tax credit, but such a justification is not yet available and there is no reason to think that 10% is a special ownership fraction. Another possible difference between direct and portfolio investment is that portfolio investment may be more internationally mobile than direct investment, and therefore more elastic in response to tax rate differences. In the production efficiency framework introduced by Diamond and Mirrlees this distinction would not matter, since there is assumed to be an infinitely elastic supply of foreign direct investment; where any difference in the supply elasticities would matter is in comparing two distortionary sets of tax policies. As a theoretical matter, therefore, the implications of economic reasoning are that portfolio and direct investment would receive the same tax treatment by an optimizing government.

#### *6.4. Other Distortions*

Actual tax systems are considerably more distortionary than the ones considered in section four of 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

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with efficient tax policies.

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.<sup>34</sup> The analysis presented in section 4 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.

### 6.5. *Strategic Interactions*

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.<sup>35</sup> 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,<sup>36</sup> most

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<sup>34</sup> See Hines (1999b) for an extended analysis of this point.

<sup>35</sup> 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.

<sup>36</sup> 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 home



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.

## **7. 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 by foreign companies, 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).

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

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 inefficiency due to distortions to ownership patterns. 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. Proposed and pending international tax reforms in the United States have the potential to affect national and global welfare. In order to evaluate these tax reforms properly, it is necessary to consider their implications for patterns of capital ownership throughout the world.

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**Table 1: Foreign Direct Investment Into the U.S. by Mode of Investment, 1992- 2001**

	U.S. Businesses Acquired	U.S. Businesses Established	Total Investment Outlays	Share thru Acquisitions
1992	10,616	4,718	15,334	69.23%
1993	21,761	4,468	26,229	82.97%
1994	38,753	6,873	45,626	84.94%
1995	47,179	10,016	57,195	82.49%
1996	68,733	11,196	79,929	85.99%
1997	60,733	8,974	69,707	87.13%
1998	182,357	32,899	215,256	84.72%
1999	265,127	9,829	274,956	96.43%
2000	322,703	12,926	335,629	96.15%
2001	127,946	4,996	132,942	96.24%

Source: Anderson, Thomas W. "Foreign Direct Investment in the United States: New Investment in 2001," *Survey of Current Business*, June 2002, pp. 28-35.

**Table 2: The Distribution of Gross Product and Capital Outflows of U.S. Multinational Firms**

	1999 Gross Product	1999 Share of Worldwide Gross Product	1997-2000 Capital Outflows	1997-2000 Share of Worldwide Capital Outflows
United Kingdom	103,048	18.19%	135,657	23.95%
Canada	65,780	11.61%	52,546	9.28%
Germany	61,913	10.93%	12,882	2.27%
France	37,485	6.62%	9,817	1.73%
Japan	30,269	5.34%	21,817	3.85%
Italy	22,408	3.96%	12,591	2.22%
Australia	19,625	3.46%	13,158	2.32%
Netherlands	19,018	3.36%	45,869	8.10%
Mexico	17,556	3.10%	21,469	3.79%
Brazil	16,593	2.93%	18,095	3.20%
All others	172,701	30.49%	222,417	39.27%
Total	566,396	100.00%	566,318	100.00%

Source: Lowe, Jeffrey H. "U.S. Direct Investment Abroad: Detail for Historical Cost Position and Related Capital and Income Flows, 2001," *Survey of Current Business*, September 2002, pp. 68-97. Gross product data are drawn from the most recent benchmark survey in 1999.