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The Role of U.S. Tax Policy in Offshoring
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Abstract: The United States tax system taxes the foreign income of U.S. resident firms upon repatriation, providing a credit for tax paid to foreign governments. Deferral of U.S. taxation until repatriation provides an incentive for U.S. based multinational firms to undertake offshoring activities in low-tax countries and to shift profits toward low-tax destinations. Any system of taxing multinational firms will reflect a compromise between the goals of ensuring efficient worldwide capital allocation, protecting the competitiveness of U.S. multinational firms, and seeking government revenue. While systematic changes should be considered cautiously, there is ample room for improvement in the U.S. tax system.

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I. Introduction

U.S. corporate tax policy affects firms' choices regarding offshoring in important ways. The decision regarding how to provide an intermediate good or service is influenced by the tax treatment afforded different modes of provision. In addition, when firms choose to provide an intermediate good via in-house offshoring (foreign direct investment), their choice of country as well as their subsequent financial decisions regarding these transactions are influenced by international tax incentives.

This paper examines the role of U.S. corporate tax policy in influencing offshoring behavior. It address four related questions. First, how does the U.S. tax system operate? Section II will consider how the current U.S. tax system is designed, and it will investigate how recent legislative changes have affected that design. Second, what are the incentives provided by this system? Section III will examine how the U.S. system of taxation affects the decision to offshore activities, the choice of foreign country for offshoring operations, and the nature of offshoring transactions. It will also briefly describe the extent to which the U.S. system differs from those in other countries. Third, what should an international tax system do? Section IV will discuss four potential goals for an international tax system: enhancing efficiency, improving macroeconomic indicators, augmenting external effects associated with multinational activity, and generating government revenue. Finally, given the current U.S. system as well as these goals, what are the merits of suggested policy alternatives? Section V will evaluate several major policy design changes with respect to these policy goals; it will also consider pragmatic smaller changes that could improve the functioning of the current U.S. tax system.

II. Background

There is a substantial disagreement, in the literature as well as the popular press, regarding the definition of offshoring. To some, it is treated synonymously with outsourcing, and those that distinguish the two phenomena differ regarding the breadth of activities that are considered under each heading.¹ One option is to consider offshoring as the international subset of outsourcing activity, although this makes the definition of offshoring contingent on the breadth of the outsourcing definition. Schultze (2004, p. 1) defines offshoring as “actions of American firms in relocating some part of their domestic operations to a foreign country”; this definition encompasses both within-firm foreign direct investment and arms-length activities.

For the purpose of this paper, my preferred definition of offshoring follows Cronin et al. (2004); they generate a handy 2x2 matrix similar to Table 1. In this formulation, as with Schultze, both foreign direct investment (FDI) as well as arms-length offshoring are classified as offshoring.

Table 1: Means of Intermediate Good or Service Provision

	At Home	Abroad
Within the Firm	In-house provision	In-house Offshoring/ Foreign Direct Investment (FDI)
Arm’s-Length	Outsourcing	Outsourced Offshoring

As the following sections of the paper will clarify, U.S. international tax policy has two main effects on the decisions of firms in this context. First, decisions regarding which quadrant is the optimal route to the provision of a particular good or service are

¹ Bhagwati, Panagariya, and Srinivasan (2004) go to great length to define outsourcing as solely arms-length trade in services across borders. This makes outsourcing analytically equivalent to conventional trade, and it limits their analysis accordingly. They do not discuss offshoring as a separate phenomenon.

likely influenced by tax policy. Second, if a firm chooses the NE quadrant of this diagram for provision, i.e., in-house offshoring/FDI, U.S. international tax policy will continue to influence the firm's decisions regarding location choices, investment levels, and the prices and quantities of intrafirm transactions. On the other hand, once a firm has decided to outsource a given part of its production process at arm's length, either at home or abroad, tax rules will have relatively little impact on decisions regarding the prices or quantities of transactions.

The U.S. International Tax System²

The United States government taxes U.S. multinational firms on a residence basis. Thus, U.S. multinational firms incur taxation on income earned abroad as well as income earned in the United States. However, U.S. firms receive a tax credit for taxes paid to foreign governments. This tax credit is limited to the U.S. tax liability although firms may (in some cases) use excess credits from income earned in high tax countries to offset U.S. tax due on income earned in low tax countries. Taxation only occurs when income is repatriated; thus, there is an incentive to incur income in low-tax countries as income can grow tax-free prior to repatriation. There is also typically an incentive to avoid incurring income in high-tax countries as the tax credit received by the U.S. firm is limited to the U.S. tax liability.

As an example, consider a U.S. based multinational firm that operates a subsidiary in Ireland. Assume that the U.S. corporate income tax rate is 35% while the Irish corporate income tax rate is 12.5%. The Irish subsidiary earns €800 and decides to repatriate €70 of the profits to the United States. (Assume, for ease of computation only,

² Some of the following text that provides background information is also found in Clausing (2005).

a 1:1 exchange rate.) First, the Irish affiliate pays €100 to the Irish government on profits of €800. It then repatriates \$70 to the United States, using the remaining profit (€630) to reinvest in its Irish operations. The firm is eligible for a tax credit of \$100 (taxes paid) times $70/700$ (the ratio of dividends to after-tax profits), or \$10. This calculation assumes that the U.S. multinational firm does not have excess foreign tax credits from its operations in high tax countries; if it does, it can use these credits to offset taxes due on the repatriated Irish profits.

The remaining profits (€630) can grow abroad tax-free prior to repatriation; this process is referred to as deferral. However, U.S. tax law does contain some provisions aimed at discouraging firms from taking full advantage of deferral. Under the subpart F provisions of U.S. tax law, certain foreign income of controlled foreign corporations is subject to immediate taxation.³ Most importantly, this includes both income from passive investments and foreign base company income.⁴

Some countries (such as the U.K and Japan) use a tax credit system similar to that used by the United States. Still, others (such as France and the Netherlands) exempt foreign income from taxation; this is referred to as a territorial system of international taxation. In theory, multinational firms based in these countries have an even greater incentive to incur income in low-tax countries as such income will not typically be taxed upon repatriation. However, some authors argue that excess foreign tax credits and deferral blur the distinction between these two systems.⁵ In addition, several countries have hybrid systems that lie in between these two systems; for instance, foreign income

³ Controlled foreign corporations are foreign corporations with over 50% American ownership, where each owner (an individual or corporation) owns at least a 10% stake.

⁴ Foreign base company income is derived from sales of goods between related parties where the goods are both manufactured outside the base country and sold for use outside the base country.

⁵ See, e.g., Altshuler (2000). de Mooij and Ederveen (2003) find evidence in support of this view.

may be exempt from taxation in the home country provided that the foreign country's tax system is sufficiently "similar" to that in the home country.

Recent Changes in the U.S. Tax System

Shortly before the 2004 election, the U.S. Congress passed the American Jobs Creation Act; it was signed into law on October 22nd, 2004. The heart of the bill is a repeal of an illegal trade subsidy—the Extraterritorial Income (ETI) exclusion—plus a number of new tax breaks for business interests, including a deduction for U.S. "production" income. For the purpose of this analysis, the most noteworthy provisions were those enacting changes in U.S. international tax system.⁶

These provisions represent a somewhat subtle shift toward a territorial system of taxing international income in the United States. Many of these changes are quite complex, given the arcane world of international taxation, but the overall effect is undisputable. The legislation clearly lessens the overall burden of the U.S. tax system on the foreign income of multinational firms.

For example, the legislation contains a provision to allow a temporary tax holiday for dividend repatriations of 5.25 percent. U.S. firms may elect a one-year window during which they may deduct 85% of extraordinary cash dividends received from controlled foreign corporations. (This effectively taxes those dividends at 5.25%, or 35% of 15%.) Typically, under U.S. law, when a corporation repatriates income from a low-tax country, it must pay the difference between the U.S. tax rate (35 percent) and the foreign tax rate, although in many cases it can use excess foreign tax credits from

⁶ The repeal of the ETI provision is unlikely to substantially affect firm's offshoring decisions, as the provision does not alter firms' marginal incentives regarding sourcing. Under prior law, a tax exemption was provided for a portion of a firm's extraterritorial income; extraterritorial income was defined to include both income derived from exporting and income from foreign operations (to the extent that it did not exceed export income).

affiliates based in high-tax countries to offset taxes due.⁷ This temporary provision of the new law would provide a substantial tax advantage to repatriate funds from low-tax countries in the year of the tax break.

While the dividend tax holiday will increase U.S. government revenue temporarily, it will reduce revenue over a longer timeframe, as firms will have less accumulated income to repatriate at the normal rate. Further, such a provision sends a strange message to U.S. multinational firms, who will in coming years have an incentive to *not* repatriate income back to the United States in the hope of similar holidays in the future.

The law's provisions require firms to reinvest repatriated funds in the United States. Firms must make a domestic reinvestment plan (or "drip") indicating how the funds will be used. The provision was open-ended, and Internal Revenue Service guidance has indicated a very flexible application of the provision. Given the fact that funds are fungible, it is quite likely that firms will be able to meet the requirements of the law without changing their underlying investment decisions. In addition, even if a substantial inflow of capital results, in our world of mobile capital markets, these inflows would likely just displace other inflows of funds from abroad, leaving total investment and interest rates in the United States unchanged.

On net, this holiday makes investments in low tax countries *more* attractive relative to the prior status quo, as there is now the promise of methods for repatriating profits without incurring large tax costs. Further, if such holidays are anticipated for the

⁷ Careful tax planning likely explains why U.S. taxes paid on foreign income earned in low-tax countries are often quite small. In addition, firms have been clever at finding alternative methods of effectively repatriating funds without triggering U.S. taxation, such as the use of hybrid corporate structures.

future, there is less of an incentive to undercapitalize initial investments in low tax countries in order to take full advantage of deferral.

In addition, many of the other provisions in the legislation allow for a more generous tax treatment of foreign income. There are reductions in the number of foreign tax credit baskets, a change that enables a more efficient use of foreign tax credits to offset tax due on income earned in low tax countries. Further, there is a more generous carry-forward of excess foreign tax credits, several provisions weaken Subpart F, and there are changes in interest expense allocation rules that should allow firms to use foreign tax credits more efficiently. On net, the international tax provisions of the legislation are estimated by the Joint Committee on Taxation to lose over \$40 billion in tax revenue over 10 years; revenue losses would be larger in the absence of phase-ins.

Tax writers admit that they view the bill as taking “baby steps to a territorial system”.⁸ Recently, George Yin, the chief of staff of the Joint Committee on Taxation, concluded that the American Jobs Creation Act indeed takes the U.S. system of taxation closer to a territorial system, and speculated that future tax policy would move further in that direction.⁹

III. What are the Tax Incentives Behind Offshoring?

As shown in Figure 1, the effects of the U.S. international tax system that are related to offshoring can be divided into three categories. First, the U.S. international tax system affects the tier 1 decision regarding how to provide a good or service. Consider, for example, the choice between options A and C. As explained above, U.S.

⁸ See quote in Glenn (2004a).

⁹ See Glenn (2004b).

multinational firms face a lower tax burden on their foreign income earned in low tax countries than on their domestic income. Further, operating abroad can also lower the taxes paid on domestic income if, e.g., U.S. income is shifted abroad to low tax destinations.¹⁰ Note, however, that the tax preference associated with operating abroad is contingent on picking a low-tax location. Investing in a high tax location can increase a firm's global tax burden, as U.S. tax credits for foreign income tax paid are limited to the U.S. tax liability.¹¹

Tax incentives also affect the choice between options C and D. The decision about whether to provide the good in-house via a foreign affiliate or to purchase the good from an arms-length provider has tax consequences. If the good is provided within the firm, the affiliate and the parent firm can together take pricing and provision decisions in a way that maximizes the firm's global after-tax profits. If the good is provided at arms-length by an unaffiliated firm, such decisions are a result of two firms' independent profit maximizing decisions. The theory of multinational firms has long recognized (see, e.g., Dunning (1975)) that multinational activity is contingent on firms having both firm-specific assets as well as an incentive to internalize transactions within the firm; tax incentives can provide a strong motive for internalization. Gordon and Hines (2002) note that theories of multinational activity based on firm-specific assets (intangible capital) and the facilitation of tax avoidance offer plausible explanations for the empirical patterns of multinational activity observed.¹²

¹⁰ Income shifting will be discussed in far more detail below.

¹¹ Still, excess tax credits can be handy in offsetting tax due on income earned in low-tax countries; in addition, excess tax credits can be used to offset interest and royalty income from abroad.

¹² For example, models of multinational firms as financial intermediaries suggest that foreign investment should equalize after-tax rates of return across countries. This generates the prediction that before-tax profit rates should be higher in high-tax countries, to compensate for the tax disadvantage. In reality,

Second, if the firm has decided to pursue in-house offshoring (FDI) as a mode of intermediate good or service provision, the U.S. international tax system affects the tier 2 decision regarding the location and scale of foreign direct investment. Low tax countries are more attractive places to locate, *ceteris paribus*, and it is expected that low-tax locations will therefore attract disproportionate amounts of multinational activity.

In reality, the distinction between tier 1 and tier 2 decisions is somewhat artificial, as the decision about the location of foreign direct investment is likely taken contemporaneously with the decision to pursue in-house offshoring (FDI). Still, tier 2 decisions are simpler to investigate empirically, as one can focus on a simple testable hypothesis. As noted below, there is consequently a more extensive literature examining these effects.

Finally, tier 3 financial decisions are also certainly affected by tax influences. For example, decisions about the amount and sources of investment funds are likely influenced by tax factors. It may be advantageous for a multinational firm to undercapitalize an initial investment in a low-tax country in order to take maximum advantage of tax savings due to deferral. Undercapitalization provides firms with good uses for reinvested profits, thus allowing profits to grow abroad free of U.S. tax. In addition, it may also be advantageous for multinational firms to alter the debt/equity ratios of affiliated firms in high and low tax countries in order to maximize interest deductions in high-tax countries and taxable profits in low tax countries.

Further, decisions regarding the prices and quantities of intrafirm transactions will also be affected by tax minimizing incentives. For example, multinational firms have an

however, before-tax profit rates in high-tax countries are found to be systematically lower in the literature, evidence of pervasive income shifting.

incentive to distort the prices on intrafirm transactions in a way that shifts income to low-tax locations. For example, firms can follow a strategy of under- (over-) pricing intrafirm exports (imports) to (from) low tax countries, following the opposite strategy with respect to high tax countries.¹³ Further, multinational firms have an incentive to undertake more intrafirm transactions if such transactions generate tax savings.

Beyond these three types of tax influences on offshoring behavior, there has been some recent concern regarding multinational firms' incentive to change their ownership structure in order to minimize their global tax burden. For example, American based multinational firms may undertake inversions, by moving their real or putative headquarters (and their corporate residence for tax purposes), to low tax countries. Such a change inverts the corporate structure, as the parent firm becomes a subsidiary and the subsidiary becomes the parent.¹⁴ In addition, there is concern regarding an increasing use of "hybrid" entities that allow firms to repatriate earnings from low-tax countries without triggering U.S. tax. Such strategies are complex; some examples are given in Sheppard (2004).

What Does the Evidence Suggest?

¹³ Legal considerations may interfere with this motivation. In particular, firms may be subject to penalties if their manipulation of transfer prices is too flagrant. As Kant (1990) shows, if the probability of receiving a penalty increases as the transfer price is further from the arms-length price, firms will likely choose a transfer price that balances the gain from profit shifting with the possibility of a penalty. This consideration alters the degree of transfer price manipulation, but would not alter the desired direction of underpricing or overpricing.

¹⁴ Desai, Foley, and Hines (2002) note that inversions are capable of both reducing any U.S. tax due on foreign income (as income earned abroad by non-U.S. firms is not subject to U.S. taxation) and further facilitating tax avoidance on U.S.-source corporate income. Case study evidence regarding actual inversions indicates that market reactions to these events are too large to simply reflect reduced tax payments on foreign income. The authors also find that inversions are more likely for large firms, firms with a larger share of foreign assets, highly indebted firms, and firms with affiliates in low tax countries, findings consistent with theoretical predictions.

Most of the literature has focused on the second and third tier of tax influences described above, rather than considering the tier 1 choices among provision modes. Still, decisions between provision options A and C can be considered conceptually equivalent to the decision regarding where to invest abroad; the only difference is that the home country is one possible location choice. Decisions between options C and D are more difficult to tackle, given data constraints.

Several studies have considered the tax responsiveness of foreign direct investment. Altshuler et al (2001) find that the elasticity of real capital with respect to the host country corporate tax rate is 1.5 in 1984, rising to 3.0 in 1992; they attribute the increase to increased globalization. Mutti (2003) also finds that the tax responsiveness of foreign investment increased over time; he too focuses on the period 1984 to 1992. de Mooij and Ederveen (2003) perform a meta-analysis of 25 studies that consider this question; they find that the median value of the tax rate semi-elasticity is 3.3, indicating that a 1 percentage point reduction in the host country tax rate raises foreign direct investment by 3.3%. They also explicitly note that the elasticities of the reviewed studies increase over time. Reported elasticities are centered at 2.4 in 1987, rising to 3.7 by 2002.

Low tax locations are attractive places in which to locate new real investments, and more multinational economic activity occurs in these locations as a result. In addition, the ability to reduce worldwide tax burdens by shifting income to lightly taxed locations enhances the attractiveness of such locations. There is substantial indirect evidence of tax-motivated income shifting in the literature. Hines (1997 and 1999a) provides thorough reviews. Due to data limitations, most previous evidence is necessarily indirect, relying on statistical relationships between country tax rates and

affiliate profitabilities or tax liabilities. For example, Hines and Rice (1994) find that 1% tax rate differences are associated with 2.3% differences in before-tax profitability.

There have also been a few studies that directly consider the impact of transfer pricing incentives on trade prices. Swenson (2001) uses trade price data, together with variations in country-level tax rates as well as product-level tariff rates, to identify the incentives to manipulate transfer prices; results indicate that trade prices are responsive to these tax incentives.¹⁵ Clausing (2003) finds evidence of tax-motivated transfer pricing utilizing intrafirm price data from the Bureau of Labor Statistics.

Given the breadth and size of the aforementioned tax influences, it is worth putting this information in perspective with a quick overview of where U.S. multinational firms are operating. If one considers *real* measures of multinational activity, such as employment, assets, or sales, it appears that a primary driving force behind multinational firm location decisions is likely market access, as most multinational activity occurs in countries with big markets. For example, Figure 2 shows the top 10 host countries in terms of affiliate employment for U.S. multinational firms. These countries are the usual suspects in terms of large markets with close ties to the United States. As Table 2 indicates, the average effective tax rate paid by U.S. affiliates in these countries (31%) is quite similar to the U.S. statutory tax rate (35%).

The situation changes if one considers instead the distribution of total *profits* of U.S. multinational firms across locations, as shown in Figure 3. Many of the top profit locations (such as Ireland, Bermuda, the Netherlands, Luxembourg, Switzerland, and Singapore) are not particularly large economies, but are nonetheless attractive places to

¹⁵ Effects are statistically significant but quantitatively small. One difficulty with the analysis is the lack of trade price data that separate intrafirm from arm's length transactions.

earn profits due to their low tax rates. Table 2 indicates that the average effective tax rate paid by U.S. affiliate firms in the top-10 profit countries is only 17%. If one considered profit *rates* instead of gross profits (shown here), one would find an even larger negative relationship between the countries' tax rates and affiliate profitability.

The U.S. System in an International Context

Before turning to policy options, it may be useful to consider the U.S. corporate income tax system in the context of the policies of other OECD countries. Among OECD countries, approximately one-third employ a credit system like that used in the United States, approximately one-third employ a territorial system (exempting foreign income from taxation), and approximately one-third employ a hybrid system with elements of both territorial and credit systems. As Figure 4 indicates, the average tax rate of OECD member countries has declined over the previous quarter century, from 43% in 1979 to 29% in 2002. By 2002, the U.S. corporate tax rate was nearly one standard deviation above the OECD average; since 1987, the U.S. rate has been gradually increasing relative to rates in other OECD countries. At the same time, the United States collects relatively little revenue from the corporate income tax, as Figure 5 demonstrates. The U.S. corporate tax generates about half as much revenue (1.43% of GDP in 2002) as that of an average OECD country (2.9% of GDP in 2002).

IV. Policy Goals for the U.S. International Tax System

The current system of U.S. international taxation favors foreign income earned in low-tax countries. Multinational firms can lower their worldwide tax burdens by undertaking real operations in low-tax countries as well as by employing financial

strategies that allow them to shift income toward low-tax countries. These incentives likely influence both the extent and nature of offshoring activity. Before considering policy alternatives in detail, one should ponder the ideal objectives of the U.S. international tax system. Four possible policy goals are discussed below: (a) enhancing efficiency, (b) improving U.S. macroeconomic indicators, (c) garnering more beneficial external effects associated with multinational activity, and (d) enhancing government revenue.¹⁶

Enhancing Efficiency

Traditional tax theory (starting with Musgrave (1963)) suggests that the optimal allocation of worldwide investment will result when multinational firms allocate investment irrespective of tax treatment, a goal referred to as *capital export neutrality*. Under typical assumptions, this would require that governments tax currently foreign income, providing unlimited tax credits for tax payments to foreign governments.¹⁷ Such a tax system would assure that foreign investors would not take tax considerations into account when making their location decisions, as the resulting income would be taxed at the same rate irrespective of their decision. Thus, decisions would be made based on a comparison of before-tax rates of return, and investments would flow toward those locations with the highest return, thus providing the greatest economic gain from a worldwide efficiency perspective. Further, there would be no incentive to shift income to

¹⁶ Other important policy goals include equity (both horizontal and vertical), administrative simplicity and ease of compliance, enforceability, and conformity with international norms.

¹⁷ It should be noted that several researchers have offered extensions to the classic capital export neutrality result, such as recognizing that countries' tax setting policies may be interdependent, allowing savings to be endogenous, and allowing positive economic spillovers from foreign investment. The first and third of these extensions will be discussed further below; Hines (1999b) reviews all of these extensions in greater detail.

more lightly-taxed locations, as all locations would be taxed equally from an investor's perspective.

Of course, neither the U.S. credit system nor a traditional exemption system meets this description. Under the U.S. system, tax credits are not unlimited, and foreign income is not taxed currently, but upon repatriation. These two features make investors responsive to tax rates differences across countries in both their real and financial decisions. Under an exemption system, foreign income is not taxed at all, further heightening the incentive to respond to tax differences across countries.

Desai and Hines (2004) advocate focusing instead on the concept of capital *ownership* neutrality, which would require that tax rules do not distort ownership patterns. They argue that such a goal is consistent with theories of multinational activity that focus on ownership advantages as a key impetus for foreign direct investment. Conformity among tax systems would promote capital ownership neutrality, although conformity could take several forms.

Improving U.S. Macroeconomic Indicators

Some observers maintain that the U.S. international tax system could better promote the health of U.S. macroeconomic indicators, including the level of output and jobs in the economy as well as U.S. international financial balances. Basic macroeconomic theory suggests that the level of output and jobs fundamentally depends on such variables as the capital stock, the labor force, and the technological possibilities of the economy. Thus, if the international tax system is to affect the amount of output in the economy, it likely does so by enhancing the capital stock.

A focus on enhancing the domestic capital stock might suggest that tax policy should favor U.S. investments relative to those in other locations. The *national neutrality* doctrine implies that, in order to maximize the *national* gain from the worldwide investment of U.S. capital, the tax system should favor U.S. investments by treating foreign tax payments as a (deductible) expense associated with doing business abroad. Such a goal would require current taxation of foreign income, with only a deduction allowed for taxes paid to foreign governments.¹⁸

Such a policy also has two rather obvious drawbacks. First, under this system, double taxation of income in two countries is likely, as (e.g.) U.S. multinationals would pay income tax twice on income earned abroad. From a world-wide perspective, this system would lead to an inefficiently low level of foreign investment, as investments abroad would be tax disadvantaged relative to investments at home. Second, such beggar-thy-neighbor tax policy could encourage similar policies by other governments, reducing foreign investment in the United States, and worsening both world and national welfare further.

Even if one rejects the doctrine of national neutrality, as most economists and policy-makers do, that still leaves many analysts with the desire to enhance the U.S. “competitive” position via international tax policy. For example, some have argued (see e.g., Hufbauer (2002)), that the U.S. tax system puts U.S. goods at a disadvantage relative to goods from countries that rely more heavily on value-added taxes. Value-added taxes are typically charged on a country’s imports, while exports receive VAT rebates. Still,

¹⁸ The analog to capital ownership neutrality is here national ownership neutrality, which implies, according to Desai and Hines (2004, p.26), “that countries should want to exempt foreign income from taxation...[as] countries have incentives to select tax rules that maximize the productivity of foreign and domestic investment.”

while it would appear that a VAT system would encourage exports relative to imports, there are both theoretical and empirical reasons to doubt this conclusion. First, economists have long recognized that exchange rate changes should offset these VAT effects; in particular, currency appreciation will undo any export advantage provided by a VAT.¹⁹ Further, recent empirical research by Desai and Hines (2003) indicates that countries that have VATs or that rely on VATs for more revenue actually have *lower* export performance than other countries. This finding persists despite controlling for country specific attributes such as GDP, income per-capita, geography, and tariffs.

The United States is faced with persistent trade and current account deficits, so perceived tax solutions to this problem will continue to be attractive. However, it is quite unlikely that border tax adjustments, a move toward a VAT, or export tax incentives such as the ETI provisions will have an effect on U.S. financial balances. If U.S. policy-makers want to take serious steps to address trade imbalances, the logical first step would be to address government fiscal imbalances, as basic national income accounting analysis demonstrates.²⁰

Garnering Beneficial External Effects associated with Multinational Activity

Those who are concerned with watching over the competitiveness of U.S. multinational firms are often operating under the assumption that U.S. based multinational firms generate external benefits for the U.S. economy. If such external effects are important, it may make sense to favor foreign income in order to assure that U.S. based multinational firms are not at a disadvantage relative to competitor firms from other countries that tax foreign income more lightly or not at all.

¹⁹ See, e.g., the lengthy list of citations to such studies in Viard (2004).

²⁰ See Clausing (2005) for a more detailed demonstration of this result.

An exemption system may be suitable for meeting such goals. Such a system meets the standards of *capital import neutrality*, a doctrine that focuses on ensuring that all firms in a given location are treated equally for tax purposes. If home countries do not tax the foreign income of their multinational affiliate firms, then affiliate firms will not be disadvantaged when competing with other firms in low tax countries. Thus, capital import neutrality generally puts the international competitiveness of a country's multinational firms ahead of considerations regarding optimal investment location or government revenue. For example, capital may be allocated inefficiently toward low tax locations due to higher after-tax rates of return in such locations.

This doctrine raises the question of why governments should care about the international competitiveness of domestically owned multinational firms. Rationale usually include beneficial spillover effects due to the domestic location of headquarters or research and development activities. Also, some evidence suggests that foreign multinational activity may encourage domestic activity. Still, leaving such activity untaxed due to the possibility of beneficial external effects begs a comparison with other activities in the economy that provide beneficial external effects. Further, usually there are more direct methods of encouraging the external effects in question, such as subsidization of research and development.

In addition, it is important to keep in mind that the effective tax burden on the foreign income of U.S. multinational firms is likely to be low. For example, Grubert and Mutti (1995) undertake a series of calculations that indicates that the effective U.S. tax rate on active foreign income in 1990 is quite low, approximately 2.7%, or less under

some assumptions.²¹ Such low tax rates imply that the competitiveness cost of the U.S. tax system may be far less than one might infer from a simple interpretation of the parameters of U.S. law.

Enhancing Government Revenue

As noted above, the current U.S. corporate tax system, including the American Jobs Creation Act, generates a paradox. The U.S. statutory corporate income tax rate (35%) is now well above the OECD average (29%). Still, despite this relatively high statutory tax rate, the U.S. corporate tax generates about half as much revenue (1.43% of GDP in 2002) as the average OECD corporate tax (2.9%).²² Figure 5 indicates that the United States has experienced a reduction in corporate income tax revenue relative to GDP over a period (1979-2002) where the average OECD country has experienced an increase in corporate income tax revenues.

While the U.S. system of taxing foreign income appears to be more comprehensive than many international tax systems, the General Accounting Office (2004) reports that 61% of U.S. controlled corporations report no U.S. tax liability at all over the period 1996-2000, and an astonishing 94% of U.S. controlled corporations report tax liabilities that are less than 5% of total income over the same period.²³ These facts are important to keep in mind, particularly if one is inclined to fret about the double taxation

²¹ For example, lower tax rates result if one accounts for unrepatriated foreign income in the denominator of the tax payments/ income fraction. Other adjustments allow royalty and sales source income to be domestically sourced income rather than foreign source income, adjust for artificial income allocation rules, and allow for worldwide fungibility. Grubert (2001) and Altshuler and Grubert (2001) support similar conclusions using 1996 data. Desai and Hines (2004) guess that the tax burden on foreign income is rather higher; their calculations are based on far less detailed data.

²² In 2003, U.S. corporate income tax revenues fell further, to 1.2% of GDP. Numbers for 2002 are used in the text to facilitate comparison with other OECD countries.

²³ They utilize data from the IRS Statistics on Income files on corporate tax returns.

of corporate profits. These figures also likely imply both a very narrow tax base and a high degree of tax avoidance in the United States.

Turning to the more general question of how the tax *system* itself affects government revenue, there is very little evidence regarding this question. However, Clausing (2004) suggests that countries with a tax credit system raise more revenue than those with a territorial system, controlling for other factors that are likely to influence corporate tax revenues (such as corporate profitability, the corporate share of the economy, and the statutory tax rate). Tax credit countries receive approximately one percentage point more corporate income tax revenue relative to GDP than territorial countries, a substantial difference. Still, with any tax system design, the devil is in the details, and a move to a territorial system in the United States could presumably be designed in a way that ultimately raised revenue, as Grubert and Mutti (2001) postulate.

Whither Corporate Taxation?

Some economists view the corporate income tax itself as an anachronism. It has long been recognized that corporate taxation ultimately results in the taxation of individuals, and thus corporate taxation may ultimately lead to the double taxation of corporate profits, as individuals are also taxed at the personal level on dividends and capital gains. Still, the corporate income tax also acts as a backstop for the personal income tax, particularly for high-income individuals. Dividends and capital gains are often taxed preferentially (in the United States, both are currently taxed at a rate of 15% or below while the top income tax bracket is 35%), and capital gains income is only taxed upon realization, thus allowing income to grow tax free in the interim. Income shifting between the personal income tax base and the corporate income tax base is likely important, as Gordon and Slemrod (2000) demonstrate.

Gordon and Makie-Mason (1995) note that, despite the theoretical prediction that small open economies should not tax corporate income, income shifting between the personal and corporate income tax bases generates an important role for corporate income taxation. In fact, in order to avoid such domestic income shifting, theory suggests that the top personal and corporate tax rates should be the same. Income shifting between domestic and foreign corporate tax bases also presents a problem that increases with tax rate differences between countries; such considerations may provide for a lower corporate tax rate.

Other arguments for the corporate income tax include the presence of administrative difficulties associated with taxing capital income on an individual level, the existence of pure profits or rents associated with corporate activity, and the benefit principle. The benefit principle argues that corporations should be taxed to help finance the benefits that they receive from government activity. Further, there may be a role for corporate income tax coordination among countries. The theoretical literature regarding tax competition among countries indicates that competition to attract mobile corporate income tax bases can lead to sub-optimal outcomes.

Evaluating Policy Criteria In the Context of Offshoring

The decision of a U.S. multinational firm to offshore a portion of its activities can be considered in the context of these policy objectives. One is more likely to object to offshoring activities, or the nature of such activities, to the extent that such activities are viewed as (a) occurring for reasons other than economic efficiency, (b) harming U.S. macroeconomic indicators, (c) reducing external gains associated with U.S. multinational production, and (d) undermining the U.S. government's tax base. However, the mere

existence of offshoring can work in either direction with respect to these policy objectives. Changes in the U.S. tax system that work toward enhancing the potential for offshoring to be compatible with the four policy objectives of efficiency, macroeconomic activity, beneficial external effects, and government revenue are particularly desirable. The following section will review possible policy changes in this context.

V. Policy Options for Taxing U.S. Multinational Firms

Several factors suggest a need for changes to the U.S. system of taxing multinational firms. This section will first review the rationale for change and then discuss several policy options including (a) continued small steps toward a territorial system of taxing foreign income, (b) a wholesale adoption of a territorial system, (c) proposals to eliminate deferral of U.S. taxation on foreign income earned in low-tax countries, (d) moves toward a system of formula apportionment for international income, and (e) increased international coordination of corporate tax policy. Finally, pragmatic policy changes will be considered that could improve the functioning of the current system without changing it in a fundamental manner.

Any of these changes is likely to affect firms' decisions regarding offshoring. Not only will changes affect the relative attractiveness of choosing offshoring relative to alternative modes of intermediate good or service provision, but tax policy changes will also affect the character of offshoring decisions once they are taken, including the location choice among countries as well as the structuring of intrafirm trade transactions.

Why Change?

There are several problematic aspects of the current system of taxing U.S. multinational firms. First, the U.S. statutory tax rate is nearly one standard deviation higher than the average rate of OECD countries, as documented in Figure 4. This tax differential provides a large incentive for U.S. multinational firms to locate real economic activity in other countries, as well as a large incentive for U.S. multinational firms to shift income toward more lightly-taxed locations. The strength of these incentives likely increases the extent of in-house offshoring activities. To the extent that these activities occur for tax purposes, the efficiency of such activities is in doubt. There may also be concerns associated with a potential loss of U.S. economic activity, although the nature of such effects is ambiguous.

Second, the U.S. corporate tax system collects relatively little revenue compared to comparable OECD countries. Also, as noted above, very few corporations pay significant amounts of corporate income tax to the U.S. government. Low revenues from this source imply some combination of higher deficits, lower public good provision, and higher required revenues from other sources. Low corporate tax revenues are likely due to a combination of factors including an uncompetitive tax rate, an increasingly narrow tax base, and increasing opportunities for tax avoidance. Tax avoidance opportunities are increasing due to the increasing globalization of U.S. business and constant innovations in the provision of tax shelters. Figure 6 provides one indication of increasing globalization; foreign direct investment stocks have increased dramatically as a share of GDP since 1980. This trend accompanies the increased offshoring activity documented elsewhere in this volume.

Third, the U.S. international tax system would benefit from dramatic reductions in complexity. The Tax Reform Act of 1986 greatly simplified the U.S. tax system while reducing tax rates and broadening the tax base. However, the U.S. corporate tax system has grown increasingly complex and loophole ridden. One stated objective of the American Jobs Creation Act was to simplify the taxation of international income, yet many practitioners argue that the resulting system is even more complex.²⁴

Finally, a host of other concerns have been raised. Some observers worry that the U. S. tax system undermines the competitiveness of U.S. multinational firms. For reasons explained in the previous section, these concerns may be overstated, but they nonetheless drive many of the policy prescriptions below. Some observers additionally feel that the very existence of a corporate income tax is anachronistic, and advocate a greater reliance on other sources of government finance, such as consumption taxes. As discussed above, if such a move were contemplated, it would be important to consider how such a change would affect the integrity of the broader tax system.

More Steps Toward a Territorial System?

The American Jobs Creation Act of 2004 (AJCA) took the United States tax system closer to a territorial tax system by providing a temporary tax holiday for repatriating dividends from low-tax countries and by taking several steps to lighten the taxation of foreign income of U.S. multinational firms. Some have suggested (see, e.g., Glenn (2004b)) that U.S. policy will continue to move in this direction. By lightening the taxation of foreign income, the AJCA and similar steps in that direction likely increase

²⁴ See, e.g., Taylor (2005).

the incentives of multinational firms to offshore activities to low tax countries as well as to shift their worldwide income to low tax destinations.

Further, it is not clear that the current taxation of foreign income of multinational firms is unduly burdensome. As the calculations of Grubert and Mutti (1995) and Altshuler and Grubert (2001) demonstrate, the effective tax burden on the foreign income of U.S. multinational firms is already quite low, implying that further steps to lighten the tax burden on foreign income may be unwarranted.

In addition, one might be concerned regarding the incentives created by temporary tax measures such as the one in the AJCA. Temporary tax breaks for dividend repatriation are likely to boost repatriations in the year in question, but will likely lessen repatriations in other years. In fact, relative to the status quo absent temporary tax breaks, firms have a lower incentive to return funds to the United States in future years, as they may find it optimal to postpone such repatriation until a more favorable tax environment arises.

Complete Adoption of a Territorial System

Relative to the more incremental nature of the AJCA, a complete adoption of a territorial system would have both advantages and disadvantages. In its favor, such a change could simplify the U.S. system of taxing international income, as exempting foreign income from taxation would reduce the necessity of a great deal of tax planning effort. However, many aspects of the current complexity of the international tax system would be retained, including the need to distinguish foreign and domestic income, to distinguish passive income, to allocate expenses appropriately, and to determine transfer prices.

Such a system would also likely enhance the competitiveness of U.S. firms in low-tax countries, potentially increasing external benefits associated with multinational activity in the United States. In addition, depending on how such a system was designed, it need not lose revenue relative to the status quo. For example, as Grubert and Mutti (2001) point out, such a change could be accompanied by the increased taxation of interest and royalty income from abroad as well as changes in interest allocation rules that could reduce tax deductions on income earned in the United States.

However, it is important to point out that a move to a territorial system could also undoubtedly be designed in a manner that loses government revenue, and there is no reason a priori to make the assumption that revenue would be gained. Further, evidence in Clausing (2004) suggests that, for the OECD countries as a group, exemption countries raise less revenue from their corporate income tax than countries with a tax credit system, controlling for other factors that are likely to impact revenues.

An additional argument against adoption of a territorial system is that exempting foreign income from taxation strengthens the tax preference favoring offshoring and other economic activity in low-tax countries. In addition, such a change would strengthen the incentive to shift income toward low-tax countries. Such tax motivated changes in behavior are unlikely to be consistent with economic efficiency, and there is the potential for such behavior to further erode the U.S. corporate income tax base.²⁵

²⁵ Previous literature is equivocal on the question of whether investors from territorial (or exemption) systems are more sensitive to taxation than those from tax credit systems such as the United States. In their meta-analysis of the previous studies on taxation and foreign direct investment, de Mooij and Ederveen (2003) find little difference in the tax sensitivity of FDI under the two systems. However, Hines (1996) finds that investment across U.S. states is sensitive to whether the home country taxes foreign income on a territorial or tax-credit basis. Gropp and Kostial (2000) also find that tax sensitivity is larger for investments sourced in territorial countries.

Eliminating Deferral

Various observers have suggested the possibility of eliminating deferral of U.S. taxation on unrepatriated income earned in low-tax countries. One such proposal was proposed by Presidential candidate John Kerry in 2004.²⁶ A complete elimination of deferral would bring the United States tax system closer to the ideal of capital export neutrality, as there would no longer be an incentive to earn income in low-tax countries or to shift profits to such locations.²⁷ These actions would therefore be attractive to those who are concerned that the favorable tax treatment of foreign income encourages offshoring and an inefficiently large presence in low tax countries. Such a change would also likely increase government revenues.

However, such a change would exacerbate concerns regarding the international competitiveness of U.S. based multinational firms, as U.S. firms would face tax disadvantages relative to firms based in other countries when operating in low-tax markets. Further, such a change could certainly encourage corporate inversions, although legislative attempts to discourage such responses could be taken. Eliminating deferral thus raises the possibility of reduced external benefits associated with U.S. multinational activity abroad. However, if such a change were accompanied by a large reduction in the U.S. corporate income tax rate, such concerns would be ameliorated.

Formula Apportionment

²⁶ The Kerry proposal would have limited deferral unless the income earned abroad was generated from production and sale in the country where the affiliate was based. This proposed change would therefore apply to a minority of foreign income. Further, such a partial limit on deferral creates some problematic incentives to relabel income earned from out-of-country sales, or alter prices on within-firm transactions in order to make out-of-country operations appear unprofitable.

²⁷ There would still be an incentive to avoid earning income in high tax countries, assuming that U.S. tax credits for foreign income taxes paid are still limited to the U.S. tax liability.

One option worthy of further study would be for the United States, and potentially other countries, to adopt a system of formula apportionment of international income. Such a system would be conceptually similar to the system used to allocate national income among U.S. states. Income is allocated using formulas based on the fraction of U.S. assets, sales, or payroll located in a particular state. The essential advantage of such a system is that it would remove the incentive to shift income across countries, as firms' tax liabilities would be based on their worldwide income as well as their actual activities in each country. In the case of the United States, now a relatively high tax country, it is likely that such a change would increase government revenues relative to the status quo.

However, firms would retain a tax incentive to offshore activities in low tax countries. A formula apportionment approach to allocating income acts somewhat like a tax on firms' sales, assets and payroll. Hence such a system may discourage firms from investing and hiring in high tax jurisdictions.²⁸ These sorts of behavioral responses are crucial to consider before evaluating formula apportionment relative to the status quo. In addition, if only a subset of countries adopt such a system, there is the possibility of double taxation.

International Coordination

Efforts to share information across countries or to reduce harmful tax competition from tax haven countries could prove successful in protecting the U.S. tax base and reducing inefficient tax-motivated activities. As one more extreme example, some policy-makers in the European Union have advocated corporate income tax harmonization among European Union countries. A harmonization of tax rates as well as

²⁸ A formula more heavily weighted toward sales would ameliorate these concerns. In the extreme, one could employ a sales only formula, so that $\text{Tax Payment}_i = t_i \Pi_w(S_i/S_w)$, where i indicates the country applying the formula, w indicates world, t is the tax rate, S is sales, and Π is profit.

tax base definitions would ensure both capital export neutrality and capital import neutrality among European location options (though not worldwide), eliminating within-Europe concerns regarding tax competition, efficiency distortions, and international competitiveness.

Still, such a policy change is politically extremely difficult even among European Union countries, and likely near impossible among OECD countries, much less the world. In addition, there may be good economic reasons for countries to choose different corporate tax rates, including variations in preferences, revenue needs, openness, and country size. Further, under some tax competition models (see Wilson (1999) for one review), there may be gains associated with tax competition.

Pragmatic Improvements to the Current System

There are several steps that would likely improve the functioning of the current U.S. system of taxing international income without entailing a fundamental shift in policy. For example, the statutory corporate income tax rate could be lowered. This change may not lose government revenue – even absent corresponding base broadening – due to the fact that the United States is likely to the right of the revenue-maximizing point on the corporate income tax Laffer curve.²⁹ In addition, any further reduction in the corporate income tax rate could likely be financed in a revenue-neutral fashion by broadening the tax base. This would have the additional benefit of reducing distortions to activity brought about by the narrow tax provisions in the current U.S. tax code.³⁰ Figure 5 indicates that the most noteworthy effort to broaden the U.S. corporate income tax base,

²⁹ Clausing (2004) charts such curves for OECD countries over the previous quarter century.

³⁰ For example, the domestic production deduction in the recent American Jobs Creation Act of 2004 favors domestic production activity. This measure likely encourages such activity as well as an ample amount of accounting effort directed at generating more tax favored activities on firms' books.

the Tax Reform Act of 1986, increased revenues, even accompanied by a reduction in the tax rate from 46% to 34%.

These two changes in tandem would achieve many useful objectives. First, economists generally agree that a tax with a broad base and a low tax rate is preferable (in terms of efficiency cost per dollar raised) to a tax with a narrow base and a high tax rate. Second, it would reduce the tax distortions associated with investment choices between the United States and other countries (as the U.S. tax rate would be closer to that of other countries), thus likely increasing the efficiency of worldwide investment allocation and offshoring decisions. Third, U.S. investments would be more attractive relative to previously, and there would be a reduced incentive to shift income to other countries. This should increase economic activity and tax revenue in the United States. Fourth, it would increase the competitiveness of U.S. based multinational firms as our tax burden on foreign income would be lower due to a lower U.S. tax rate. This has the potential to increase any external benefits associated with U.S. multinational firms' activities as well as to reduce the incentive to undertake corporate inversions. With respect to offshoring, these tax changes would help ensure that offshoring is occurring for reasons that are consistent with economic efficiency and the U.S. national interest, rather than being motivated by large tax rate differentials.

VI. Conclusion

U.S. corporate tax policy taxes the worldwide income of multinational firms, granting tax credits for taxes paid to foreign governments. As profits are only taxed upon repatriation to the United States, the tax system provides an incentive to locate real

economic activity as well as profits in low-tax countries. Further, recent changes in tax law under the American Jobs Creation Act of 2004 strengthen these incentives. In total, the U.S. tax system provides incentives to undertake in-house offshoring of activities in low tax countries, and it likely affects the nature of offshoring transactions in important ways. Previous empirical work provides abundant evidence that U.S. multinational firms are responsive to tax influences when choosing investment locations and when structuring their intrafirm transactions.

Any system of taxing multinational firms will reflect a compromise between the often competing goals of ensuring efficient worldwide capital allocation, protecting the competitiveness of U.S. multinational firms, and seeking government revenue. Current U.S. tax laws do not do particularly well at satisfying these criteria, and the extraordinary complexity of U.S. international tax laws also suggests a need for reform. While dramatic changes to the structure of U.S. tax laws should be taken with caution, proposals to lower the corporate tax rate, broaden the tax base, strengthen enforcement, and simplify the tax system deserve close attention, as these changes are likely to improve the performance of the U.S. tax system with respect to all of these criteria. Further, such changes can help ensure that offshoring activities occur in a manner that enhances efficiency and is consistent with the national interest.

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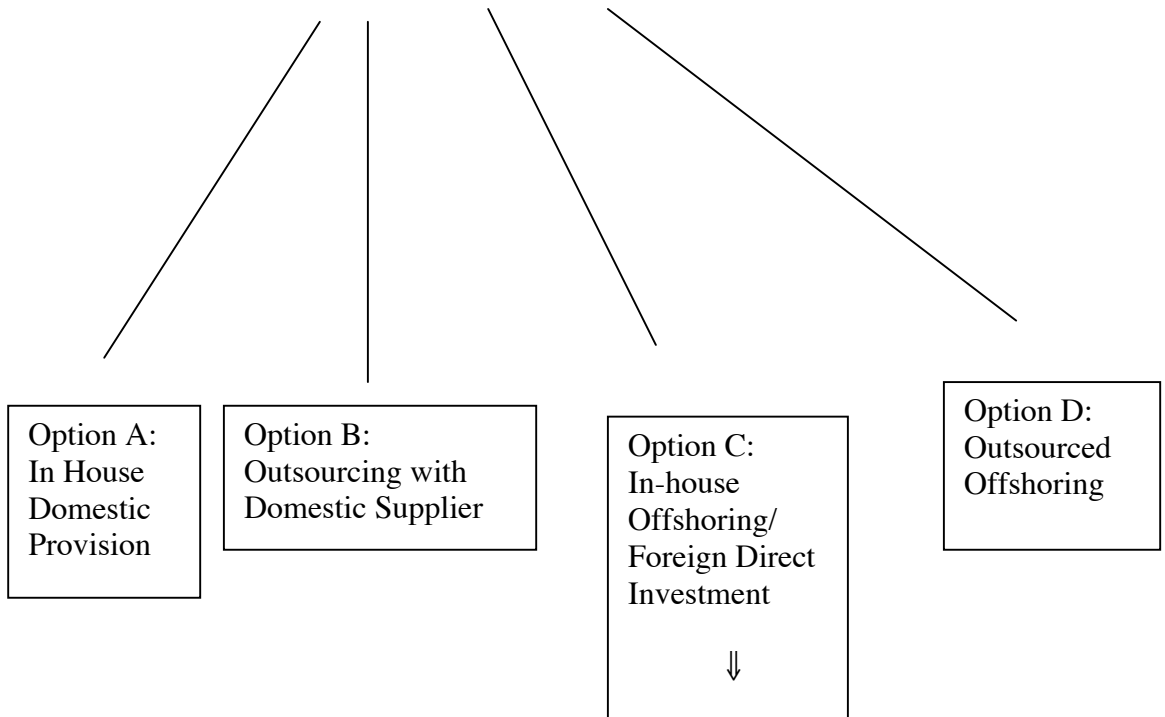
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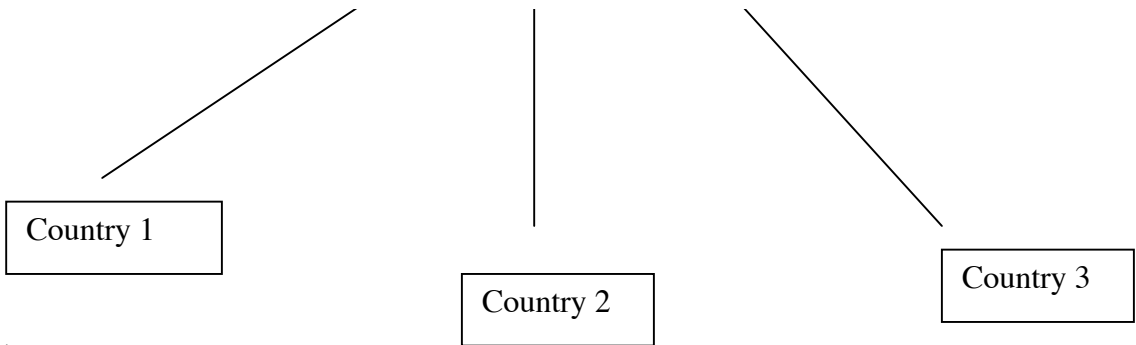
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Figure 1: Points of Tax Influences on Decisions Regarding Market Provision

Tier 1: Decision Regarding Means of Provision

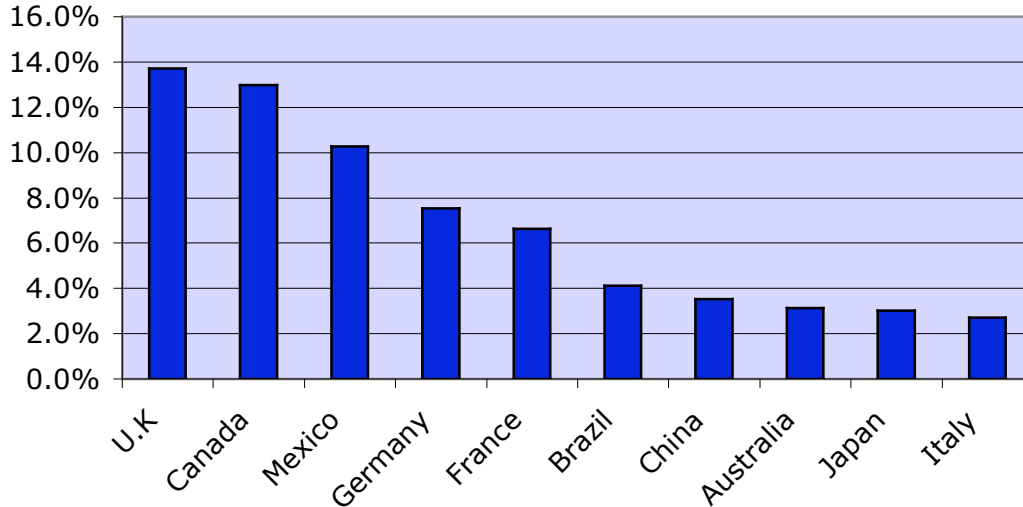


Tier 2: Decision Regarding Location and Investment

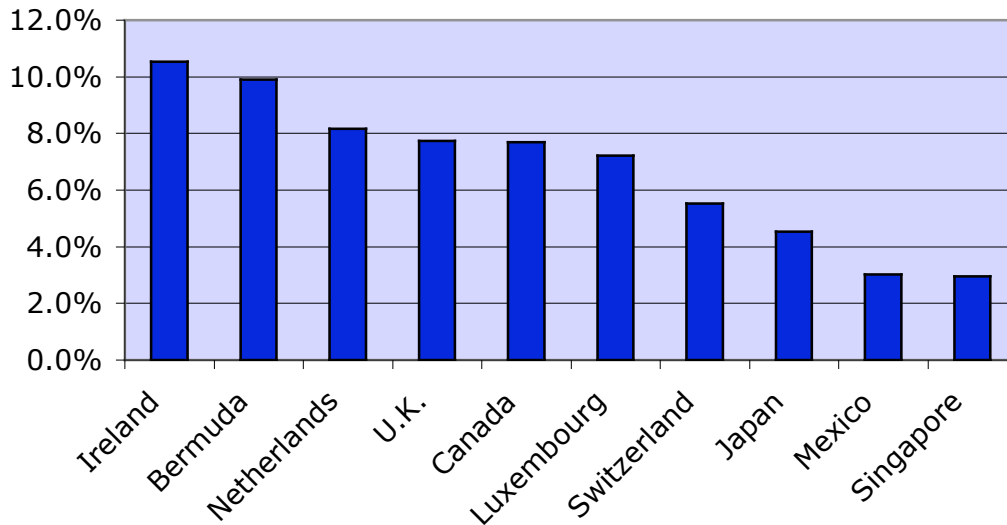


Tier 3:
Financial Decisions affecting Reported Profits in Affiliate and Parent Firms, including Decisions regarding Financing and Intrafirm Transactions

**Figure 2:
Where are the jobs in 2002?**

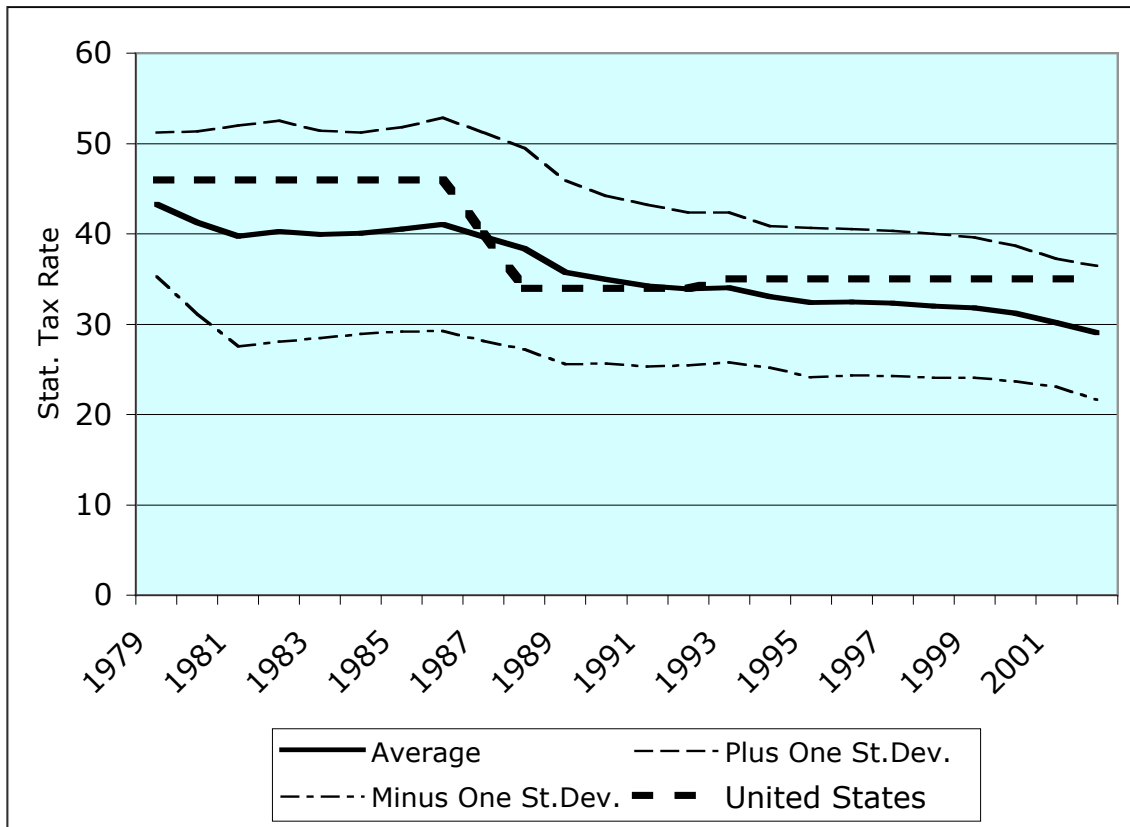


**Figure 3:
Where are the profits in 2002?**



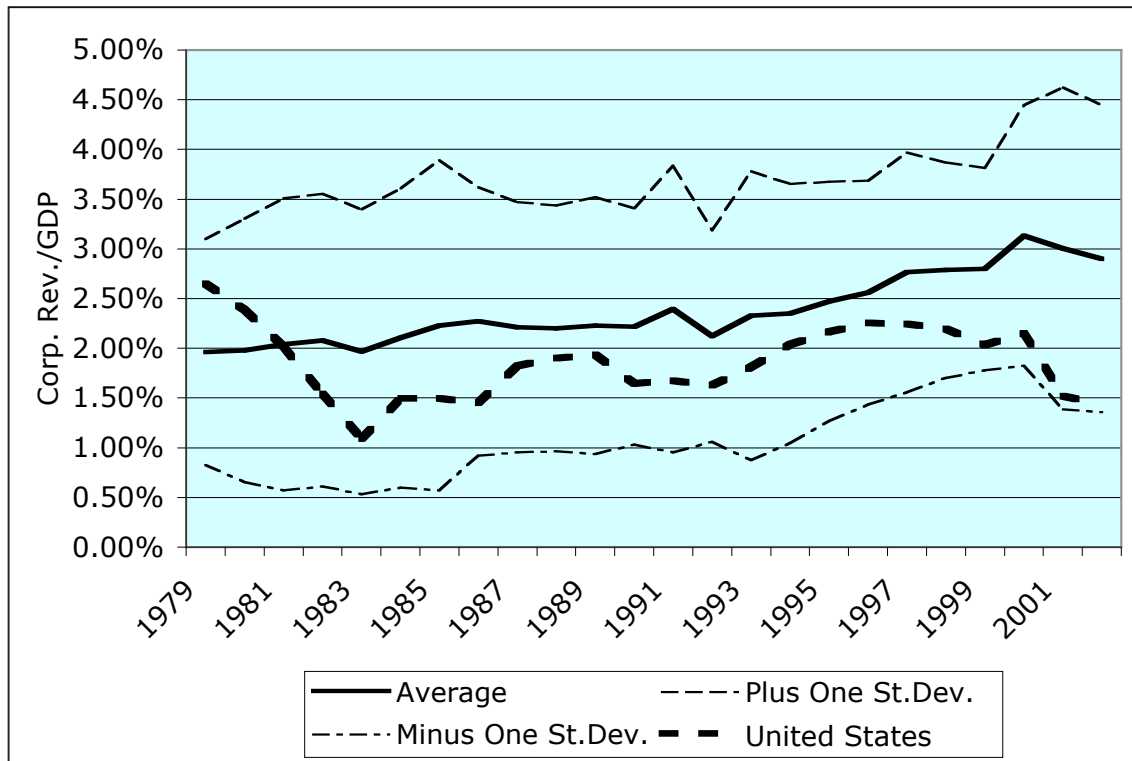
Note: Figures shown above are percentages of the worldwide (non-U.S.) totals occurring in each country. Data are from the Bureau of Economic Analysis (BEA) web page. The bureau of Economic analysis conducts annual surveys of *Operations of U.S. Parent Companies and Their Foreign Affiliates*. Data were accessed on-line at: <http://www.bea.doc.gov/bea/ai/iidguide.htm#link12b> on 10 March 2005.

Figure 4: OECD Statutory Corporate Income Tax Rates, 1979-2002
 (Averages, +/- one standard deviation, and U.S. rates)



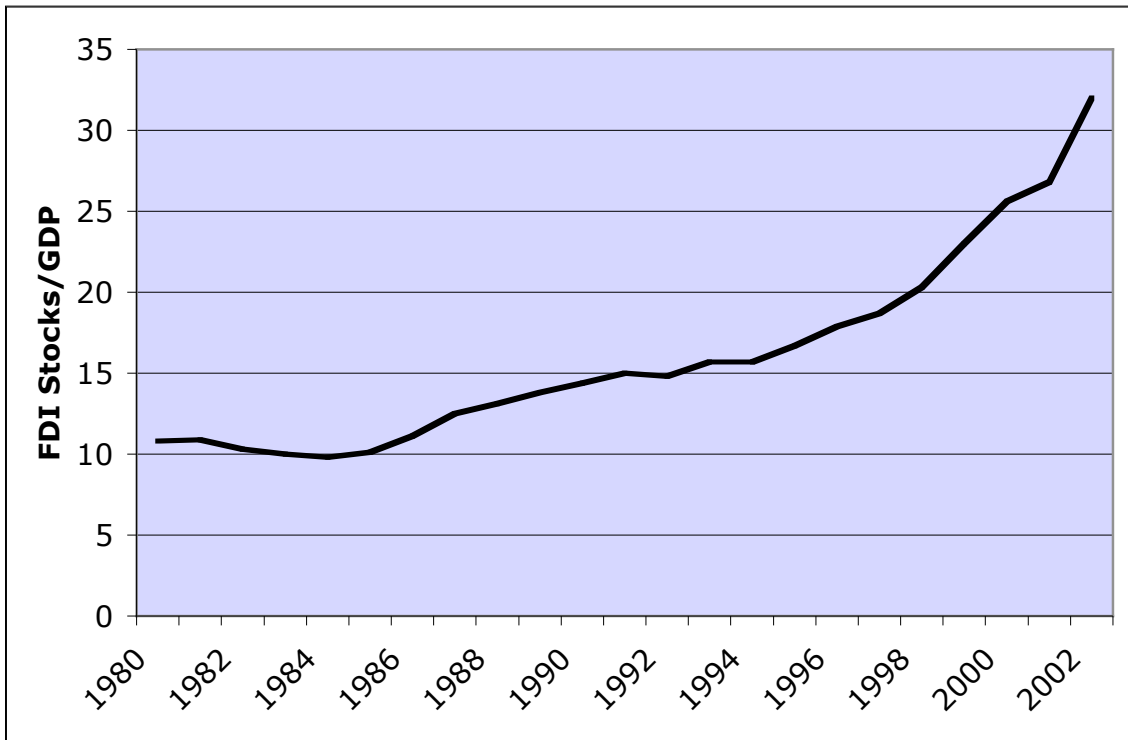
Note: Tax rate data come from annual publications of PricewaterhouseCoopers *Corporate Taxes: Worldwide Summaries*.

Figure 5: OECD Corporate Income Tax Revenue Relative to GDP, 1979-2002
 (Averages, +/- one standard deviation, and U.S. data)



Note: Corporate tax revenue data are from the OECD revenue statistics. GDP data are from the World Bank's *World Development Indicators* database.

Figure 6: FDI Stocks/GDP for the United States (1980-2002)



Data on FDI include both inward and outward stocks. Data are from UNCTAD.

Table 2: Top Employment and Income Countries in 2002

Top Employment Countries	Effective Tax Rate	Top Income Countries	Effective Tax Rate
U.K	31%	Ireland	8%
Canada	26%	Bermuda	2%
Mexico	37%	Netherlands	9%
Germany	27%	U.K.	31%
France	34%	Canada	26%
Brazil*	>100%	Luxembourg	1%
China	17%	Switzerland	4%
Australia	29%	Japan	39%
Japan	39%	Mexico	37%
Italy	41%	Singapore	11%
Average*	31%	Average	17%

Note: Data are from the Bureau of Economic Analysis (BEA) web page. The Bureau of Economic analysis conducts annual surveys of *Operations of U.S. Parent Companies and Their Foreign Affiliates*. Data were accessed on-line at:

<http://www.bea.doc.gov/bea/ai/iidguide.htm#link12b> on 10 March 2005. Effective tax rates are calculated as foreign taxes paid by U.S. affiliate firms in a given country relative to net (pre-tax) income.

* Brazil's effective tax rate exceeds 100% due to negative net income and positive foreign tax payments. The average is calculated without this figure.