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Taxation of Multinational Corporations

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Taxation of Multinational Corporations

Abstract

Multinational taxation is an area of research that encompasses academics in accounting, finance and economics. In particular, researchers are interested in determining whether taxation alters where multinational corporations (MNCs) operate their businesses. A review of the literature on foreign direct investment provides clear support for taxes influencing MNCs' location decisions. In addition, MNCs appear to organize themselves in a manner to increase the amount of their profits invested in relatively lightly taxed jurisdictions. By altering the location and the character of income across jurisdictions, MNCs are able to reduce their tax burdens. The natural extension of these lines of research, then, is determining the welfare consequences of MNCs' sensitivity to taxation.

This review aggregates the large body of international tax literature succinctly in one location. Very little of what is incorporated in this piece is novel. Rather, it borrows heavily from those researchers who have focused their careers on understanding taxation in the multinational context. Unfortunately, because the research in this area is dominated by work involving U.S. data, the review is also quite U.S.-centric. However, many countries' multinational tax rules are quite similar. This is primarily attributable to the conformity generated in tax treaties based on the model treaty outlined by the Organization for Economic Cooperation and Development (OECD). So, although there is variation in specific tax rules across jurisdictions, the basic tax rules are very homogeneous.

Keywords

multinational taxation, foreign direct investment, financial accounting, transfer pricing, finance, international economics, international finance

Disciplines

Accounting | Corporate Finance

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By Jennifer Blouin

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Multinational taxation is an area of research that encompasses academics in accounting, finance and economics. In particular, researchers are interested in determining whether taxation alters where multinational corporations (MNCs) operate their businesses. A review of the literature on foreign direct investment provides clear support for taxes influencing MNCs' location decisions. In addition, MNCs appear to organize themselves in a manner to increase the amount of their profits invested in relatively lightly taxed jurisdictions. By altering the location and the character of income across jurisdictions, MNCs are able to reduce their tax burdens. The natural extension of these lines of research, then, is determining the welfare consequences of MNCs' sensitivity to taxation.

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1

Introduction

Multinational taxation is an area of research that encompasses academics in accounting, finance and economics. Over the years, these researchers have endeavored to understand the role of taxation on multinational corporation (“MNC”) behavior. In particular, researchers are interested in determining whether taxation alters where MNCs’ operate their businesses. A review of the literature on foreign direct investment provides clear support for taxes influencing MNCs’ location decisions. In addition, MNCs appear to organize themselves in a manner to increase the amount of their profits invested in relatively lightly taxed jurisdictions. By altering the location and the character of income across jurisdictions, MNCs are able to reduce their tax burdens. The natural extension of these lines of research, then, is determining the welfare consequences of MNCs’ sensitivity to taxation. *Ceteris paribus*, investors are better off if an MNC can lower its worldwide tax burden. Yet, the revenue consequences to the jurisdictions involved are far less clear.

The central problem of multinational taxation is that there are at least two jurisdictions that can claim the right to tax the firm’s income. Firms that only operate within the confines of one jurisdiction face one

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set of statutory tax rates. Firms that operate in several jurisdictions are not only subject to several sets of tax rates but also several sets of tax regulations. The interplay between rules and rates leads to a multitude of potential tax obligations facing these firms. As the income of multinational corporations faces overlapping tax claims, MNCs have developed various avenues for tax avoidance which complicates tax collection by the tax authorities. Such tax-avoiding behavior may reduce tax revenue and could distort international financial flows and the international allocation of investment by MNCs. An important policy question is to what extent these incentives for tax avoidance actually affect the behavior of MNCs and reduces tax revenue.

Governments also have been known to use the tax system to both attract foreign investment and acquire leverage over MNCs' that they believe are unfairly escaping taxation in their jurisdiction. Hence, there are often competing incentives that lead to conflicting objectives between an MNC's home country and the countries where they do business. Further, many countries are broadly defined to be tax havens. A tax haven can be any country that reduces its statutory tax rates to attract foreign investment. Not only does a relatively low tax rate potentially attract investment, it also likely increases the incentives for a firm operating in a nearby high-tax jurisdiction to shift its profits out of the high-tax jurisdiction into its low-tax neighbor. Many legislators argue that havens are bad for the U.S. But if a U.S. MNC reduces its foreign tax burden, then, as described below, it is effectively increasing its domestic tax burden. Furthermore, the U.S. and the U.K. are known to be particularly astute in pursuing taxpayers who appear to be aggressively undertaking income shifting to low-tax jurisdictions.

Eventually, much of the discussion herein will (hopefully) become obsolete as countries continue to conform their tax regimes. As discussed in detail below, there are two basic tax regimes facing multinational firms: a territorial system, and a worldwide system. Under a territorial system, profits are subject to taxation based on where they are earned regardless of where the ultimate owner (or parent) of the firm resides. Worldwide taxation, on the other hand, subjects all profits to taxation in the parent's home country. At the writing of the review, the U.S. is the sole member of the G7 with a worldwide system of

taxation and corporate tax rate in excess of 30%. Both Japan and the U.K. adopted territorial tax systems in 2009. Now, over three quarters of the member nations of the Organization for Economic Coordination and Development (OECD) have adopted a territorial system of taxation. The fact that U.S. MNCs not only face a worldwide system of taxation but also a very high statutory tax rate leads many to believe that U.S. firms are at a relative disadvantage as compared to their non-U.S.-domiciled competitors.

The role of this review is to aggregate the large body of international tax literature succinctly in one location. Very little of what is incorporated in this piece is novel. Rather, it borrows heavily from those researchers who have focused their careers on understanding taxation in the multinational context. Unfortunately, because the research in this area is dominated by work involving U.S. data, the review is also quite U.S.-centric.

However, many countries' multinational tax rules are quite similar. This is primarily attributable to the conformity generated in tax treaties based on the model treaty outlined by the Organization for Economic Cooperation and Development (OECD). So, although there is variation in specific tax rules across jurisdictions, the basic tax rules are very homogeneous.

Much of the prior non-U.S. research used the cross-sectional variation in countries' tax rates to garner variation in other jurisdictions' dividend taxation systems to study the role of shareholder level taxes on payout policy and share prices (e.g., Lasfer, 2008). However, there has been a recent uptick in studies involving non-U.S. corporate data. Because of the availability of Bureau van Dijk's Orbis, Amadeus and the Bundesbanks' datasets, researchers have begun to investigate the role of cross-border taxation on merger and acquisition activity (e.g., Huizinga and Voget, 2009) as well as intra-firm capital structure (e.g., Huizinga et al., 2008). I look forward to reading more of this work in the future.

I begin by outlining all of the (relatively) picky details of taxing multinational firms in Section 2. My focus, due to the limits of my knowledge, is on the U.S. tax regime. As the very notion of multinational implies more than one regime, the consequences of other

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jurisdictions' tax regimes are also important but, for simplicity, are presumed to merely be different than that of the U.S. In Section 3 of this review, I will discuss the theory and the related research on the role of taxation on foreign direct investment and remittances of profits into the home country. The incentives to undertake income shifting and/or transfer pricing will be described in Section 4. Then, in Section 5, I will address some of the non-tax considerations (including financial accounting) of foreign investment decisions. I discuss some current developments in the multinational tax policy in Section 6. Section 7 concludes.

2

U.S. Taxation of Multinational Corporations

2.1 Overview

U.S. corporations earn a substantial portion of their income from foreign sources. In 1986, the net foreign-source income reported by U.S. corporations on their U.S tax returns was over \$140 billion, which amounted to over 52% of their total net income. As Figure 2.1 shows, over the past two decades, foreign source income of the S&P500 has grown from 32% to 50% of firms' total pre-tax income. At the same time, the proportion of these firms' U.S. tax expense as a percentage of total pre-tax income has declined from 18% to 8%. This finding has led many to believe that there has been an erosion of the U.S. tax base because multinational firms are either shifting income out of the U.S. or forgoing U.S. domestic investment for investment in low-tax foreign jurisdictions.

In order to understand any potential welfare implications of tax planning, it is first necessary to understand how the U.S. taxes multinational firms. The U.S. effectively taxes based on the residence principle. Basically, if a company is incorporated in the U.S. then that company and all of its downstream subsidiaries (or affiliates) are taxed on their

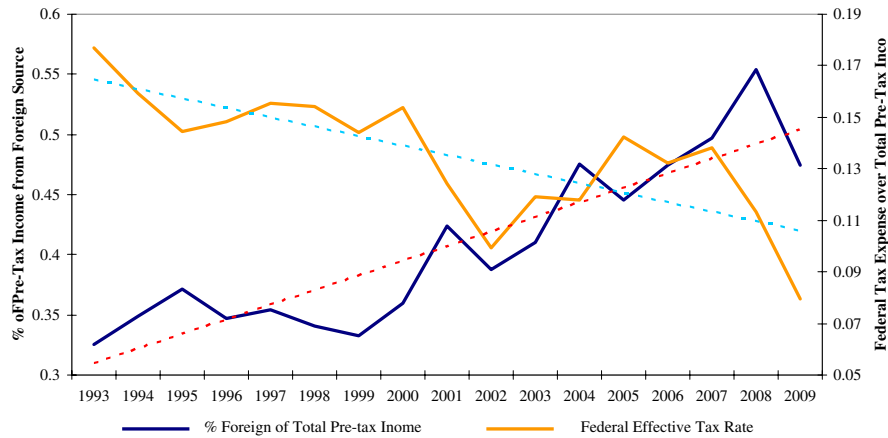


Fig. 2.1 S&P 500 firms percent of pre-tax income reported as foreign-sourced and federal effective tax rates.

This graph provides the ratio of aggregate foreign pre-tax income (Compustat PIFO) over the sum of domestic and foreign pre-tax income (Compustat PIFO + Compustat PIDOM). Federal effective tax rate is federal tax expense (TXFED) over the sum of domestic and foreign pre-tax income. Negative values of PIFO and PIDOM are set to zero.

worldwide income. The other predominant tax system, territorial, taxes firms based on the source of their income.

As the U.S. taxes the worldwide income of U.S.-domiciled corporations, when a U.S. multinational earns foreign source income, both the U.S. and the countries where this income is generated assert the right to tax the income. The U.S. generally does not tax the foreign source income until the income is remitted (or repatriated) back to the U.S., typically in the form of a dividend. If foreign income is reinvested in the foreign business, then taxation of the foreign source income is *deferred* until repatriation. To prevent double taxation, the U.S. allows a credit against any U.S. tax obligation for the foreign taxes already paid on the foreign source income.

Territorial countries generally only tax the income generated within their borders. Unlike the worldwide system, any active business income earned outside of a territorial country's borders is not taxed by the MNCs' home jurisdiction. For both the territorial and the worldwide systems, the income's source country is the first to tax the profits. The source country may also levy withholding taxes on remittances

of income out of the country in the form of dividends, interest, rents, management fees and royalties.

2.2 Deferral

Deferral is a very important component of the worldwide tax system. By deferring taxation until income is distributed by the foreign subsidiary to its parent, worldwide firms are better able to compete in the global economy. However, the availability of deferral is contingent on the way the foreign operations of the U.S. MNC are organized. If they are organized as a branch of the U.S. MNC (i.e., not a separate legal entity), then deferral is not provided and the U.S. immediately taxes the foreign profits — regardless of whether any profits are remitted back to the U.S. Outside of banking and insurance, branches are rare. If the foreign operations are organized as a separate corporate affiliate, then the foreign profits are generally not taxed until they are remitted to the U.S. parent. Because of deferral, multinational corporations generally establish controlled foreign corporate subsidiaries (controlled foreign corporations or CFCs) to conduct foreign operations.¹ These corporations are governed by the laws of the host country in which they are located.

The U.S. recognizes that deferral provides MNCs an incentive to accumulate profits in low-tax jurisdictions rather than repatriate them to the U.S. To prevent firms from permanently avoiding the incremental U.S. tax due on unremitted foreign earnings, the government implemented Subpart F, which restricts deferral treatment on certain types of foreign source income. The Subpart F provisions only apply to income generated on passive assets. For example, interest, royalties, dividends, security gains, and rents often constitute passive income under Subpart F.

The U.S. views passive income as stemming from avoidance techniques generated from U.S. MNCs' incentive to continue to defer taxation of income as long as possible. Due to integrated capital markets and

¹In the U.S., a CFC is an entity which is 50% or more owned by U.S. shareholders. A U.S. shareholder for purposes of the CFC designation is any person (individual or entity) who owns 10% or more of the foreign corporation.

the highly mobile nature of the capital generating this type of income, firms could generate similar returns in the U.S as abroad.² But with lower tax rates available abroad, U.S. MNCs are incentivized to leave capital abroad which can then be lent to high-tax jurisdictions (such as the U.S.). Because of the potential for abuse, the Subpart F rules focus on taxing passive income between related parties. Finally, there are a series of di minimus tests to prevent firms from having undue compliance burdens by generating relatively low levels of Subpart F income (e.g., interest on a bank account).

The Subpart F rules were adopted by the Kennedy Administration (Revenue Act of 1962) as a method to mitigate the perceived erosion of the U.S. tax base as U.S. MNCs expanded their overseas operations (Redmiles and Wenrich, 2007). The tax legislation introduced in 1975 reduced the di minimus thresholds but otherwise the Subpart F rules have been substantially unaltered since their adoption. Prior to 1997, firms had difficulties setting up financing affiliates without triggering Subpart F income. However, the “check-the-box” regulations outlined in Treasury Decision 8697, which allows single member LLCs for tax purposes, alleviates many of firms’ Subpart F troubles. Because single owner LLCs are disregarded entities for income tax purposes (though recognized entities for legal purposes), any interest income received by an LLC from its the foreign affiliate will be considered as belonging to the owning affiliate thereby skirting the Subpart F rules by qualifying for the di minimus thresholds (Altshuler and Grubert, 2008).

2.3 Foreign Tax Credit

The foreign tax credit reduces the possibility that foreign-source income could be taxed twice by allowing a credit against U.S taxes for taxes levied by the foreign affiliate’s country (i.e., the income’s source country). The foreign tax credit has two components. The first, called the direct credit, is a credit for foreign taxes paid directly on the income as it is received by the U.S. parent. Foreign taxes eligible for the direct credit include withholding taxes on remittances to the U.S. parent,

²Note that if the firms’ primary business generates passive income (i.e., banking), then the passive-type income will not constitute Subpart F income.

such as dividend, interest, and royalties, and also income taxes on foreign branch operations. The second component, called the indirect, or deemed-paid, credit is a credit for foreign income taxes paid on the income distributed to the U.S. parent. The deemed-paid credit is available to a CFC's U.S. corporate shareholders who own at least 10% of the voting stock of the foreign corporation.

In the U.S., a worldwide limitation is used to calculate foreign tax credits. The foreign tax credit limitation is determined as follows:

(Foreign-source income/worldwide income) × U.S. tax on worldwide income.

The actual foreign tax credit is the minimum of the foreign taxes paid on the foreign source income or the foreign tax limitation as described above. Therefore, if the foreign tax rate facing the foreign affiliate is less than the U.S. tax rate, there will be an incremental tax liability due on the repatriation of foreign earnings. In this case, the U.S. parent is said to be in an excess *limit* position. On the other hand, if the earnings were taxed at a higher rate in the foreign jurisdiction, the U.S. parent will not have any tax obligation due upon repatriation. The U.S. parent in these cases is said to be in an excess *credit* position.

As noted above, the U.S. allows MNCs to estimate the foreign tax credit limitation based on aggregate foreign source income. This means that firms are able to offset excess credits from high-tax jurisdictions with excess limits from low-tax jurisdictions. This cross-crediting can take three forms. (1) U.S. MNCs can cross-credit by simultaneously receiving dividend remittances from affiliates in high-tax and low-tax countries. (2) If different types of income are taxed disparately, an MNC can cross-credit between income types (e.g., dividends as compared to royalties). (3) Cross-crediting can occur over time using foreign tax credit carryovers.

To prevent abuse, the FTC computation is also calculated separately for two baskets of income. The U.S. limits cross-crediting potential between passive (Subpart F) income and active income by requiring a separate FTC limit calculation for each category. The baskets effectively make Subpart F more costly. As Subpart F income is often generated in low-tax jurisdictions, the basket rules limit the

ability of the firm to use repatriations from active income in high-tax jurisdictions from offsetting the tax obligation created by the passive income generated in the low-tax jurisdiction.

As discussed in Redmiles and Wenrich (2007), there has been significant variation in the FTC rules over time. When the corporate income tax was first adopted, the U.S. mitigated double taxation by allowing U.S. MNCs to deduct the income taxes paid to foreign jurisdictions.³ Since the cost of World War I forced foreign countries to increase their income tax rates, the U.S. implemented the FTC to better prevent double taxation. Initially, the U.S. allowed firms to offset any amount of their U.S. tax obligation with FTCs. Then, in 1921, the U.S. limited the FTC to the maximum of the U.S. tax that would have been assessed on the foreign income. In 1958, the U.S. added provisions to allow for the FTC carryback and carryforward (i.e., credit was eligible for a five-year carryforward and a two-year carryback period).

The U.S. has often considered requiring firms to compute the FTC on a country-by-country basis rather than a worldwide basis. Yet, legislation requiring country-by-country measurement has never passed. In addition, the number of separate limitation baskets has varied substantially. Prior to 1986, the FTC calculation included five income baskets. TRA 1986 increased the number of baskets to nine. The current two baskets have been applicable since 2007 (created in legislation enacted under the American Jobs Creation Act of 2004 or AJCA). The AJCA also decreased the FTC carryback period to 1 year and increased the carryforward period to 10 years.

Finally, the FTC is currently calculated on a last-in-first-out (LIFO) basis. This means that any dividend and the related tax credit first come from the current period's taxable income. To the extent that the

³ Taxpayers prefer receiving a credit for foreign taxes rather than a deduction, even if the foreign tax rate exceeds the U.S. rate. To see this, denote foreign source income as FSI, the U.S. tax rate as t_{us} , and the foreign tax rate as t_f . With a deduction for foreign income taxes, the U.S. tax on FSI is $t_{us}(1 - t_f)FSI$, whereas with a credit the residual U.S. tax is $(t_{us} - t_f)FSI$. From these formulas, notice that if foreign income taxes are deducted, the rate of U.S. tax on the income would equal $t_{us}(1 - t_f)$, which always exceeds the rate of residual U.S. tax after the foreign tax credit, $(t_{us} - t_f)$. If t_f is greater than t_{us} , there is no residual U.S. tax after the credit, but a U.S. tax payment would still be required if the foreign income taxes were simply deducted.

dividend exceeds the current period's earnings, the dividend is then presumed to come from the aggregate pool of earnings using the average tax rate of the aggregate pool. By pooling all past earnings and taxes paid on those earnings, an MNC has very little flexibility in managing the foreign tax credit obligation on any particular dividend from a given affiliate.⁴ Yet, MNCs have substantial flexibility in cross-crediting across different affiliates.

⁴This aggregate pool actually only pertains to the period 1987 and forward. For dividends paid from pre-1987 earnings and profits, there is a separate yearly calculation on a LIFO basis.

3

Role of Taxation on Investment and Repatriation Decisions

3.1 Investment

As firms become more global, there has been an increased interest in understanding the role of taxation on the cross-border flows of capital and income. Due to the impact on social welfare, there are enormous policy implications to the mobility of capital. Academics and policy makers alike have been involved in studying the specific impact of taxation on the location decisions of MNCs.

3.1.1 Theory

To understand how tax policy affects firms' investment, it is helpful to explore the theoretical literature. I begin by explaining the economic consequences of the territorial and worldwide tax systems. A pure territorial tax system provides capital import neutrality (CIN), whereby all investment is taxed identically regardless of the source of the capital. So, a Swedish firm investing in Sweden will face the same after-tax rate of return as an Italian firm making the identical Swedish investment. A pure worldwide system, on the other hand, provides capital export neutrality (CEN). CEN means that firms will face the same tax rate on investment regardless of where it is located. So, a U.S. firm faces

a 35% tax rate regardless of whether it invests in the U.S. or in the Netherlands.

The relative merits of CIN versus CEN have been argued for decades. It is hard to draw inferences from any empirical work on the topic because (as far as I am aware), there are no countries that face either a *pure* territorial or worldwide system. Figure 3.1 lists the OECD's territorial countries and the limitations or constraints that these countries place on dividend exemption. For example, Canada is deemed territorial but only with countries with which it has treaties. Belgium, on the other hand, requires investment to be in non-haven jurisdictions before it exempts foreign earnings from taxation.

The presence of deferral in a worldwide system leads to the violation of CEN. As firms are able to defer the incremental tax assessed by the home jurisdiction until repatriation, firms have incentives to invest in low-tax jurisdictions until repatriation is imminent.¹ In terms of passive income, the U.S.'s acceleration of taxation under Subpart F moves the U.S. system closer to pure CEN. Whereas territorial countries, who often exclude passive income from the territorial taxation, are moving themselves away from CIN.

Recognizing that the U.S. uses a hybrid system, it is useful to understand how its system affects investment and subsequent repatriation. Hartman (1985) argued that, under a credit and deferral tax system, the repatriation tax on foreign-source income is irrelevant to the investment and dividend payment decisions of foreign affiliates that are financed through retained earnings ("mature" affiliates). However, he points out that for an immature affiliate (i.e., an affiliate that required external capital to finance its investment), the presence of repatriation taxes influences the level of initial capital. Therefore, the greater the anticipated repatriation taxes, the lower the initial foreign direct investment.

When Hartman began his seminal work on the role of worldwide taxation on investment and repatriation decisions, the common

¹For firms with excess tax credits, the ability of U.S. firms to cross-credit the foreign taxes paid in a high-tax jurisdiction on the tax liability created from a low-tax jurisdiction, may violate CEN because investment in the low-tax jurisdiction will be tax-favored over investment in the U.S. or in high-tax countries.

Country	System of Taxation	2009 Effective Corporate Tax Rate	2010 Max. Statutory Tax Rate
Australia*	Territorial	31.5%	30%
Austria	Territorial	20.1%	25%
Belgium***,ϕ	Territorial	20.6%	34%
Canada*	Territorial	19.8%	29.5%
Chile	Worldwide	14.0%	17%
Czech Republic	Territorial	20.2%	19%
Denmarkϕ	Territorial	28.8%	25%
Estonia	Territorial	N/A	21%
Finland	Territorial	37.0%	26%
France***	Territorial	26.5%	34.4%
Germany***	Territorial	28.5%	30.2%
Greece	Worldwide	30.5%	24%
Hungary	Territorial	11.9%	19%
Iceland	Territorial	N/A	18%
Ireland	Worldwide	24.7%	12.5%
Israel	Worldwide	22.4%	25%
Italy***,ϕ	Territorial	30.7%	27.5%
Japan***	Territorial	38.8%	39.5%
Luxembourgϕ	Territorial	25.4%	28.6%
Mexico	Worldwide	24.9%	30%
Netherlandsϕ	Territorial	18.0%	25.5%
New Zealand	Territorial	N/A	30%
Norway**	Territorial	24.2%	28%
Poland	Worldwide	20.1%	19%
Portugal*	Territorial	22.2%	26.5%

Country	System of Taxation	2009 Effective Corporate Tax Rate	2010 Max. Statutory Tax Rate
Slovak Republic	Territorial	N/A	19%
Slovenia***	Territorial	N/A	20%
Spainϕ	Territorial	19.3%	30%
South Korea	Worldwide	22.0%	24.2%
Sweden	Territorial	19.8%	26.3%
Switzerland***	Territorial	20.6%	21.2%
Turkey	Territorial	19.9%	20%
United Kingdom	Territorial	21.3%	28%
United States	Worldwide	25.7%	39.1%
Average		24%	26%
Non-US Average		23.7%	25%
Territorial Average		24%	26%
Non-US Worldwide Average		23%	21.7%

* Exemption by treaty
** Exemption of 97%
*** Exemption of 95%
ϕ Indicates that the country limits exemption to dividends paid from countries with substantially lower tax burdens

Data for this Figure was obtained from Mullins (2006), the President's Advisory Panel on Federal Tax Reform (2005), the Business Roundtable's 2011 Global Effective Tax Rates, Carroll (2010), and the OECD website.

Fig. 3.1 OECD countries' tax systems and rates.

assumption in the theoretical models was that foreign affiliates face a fixed dividend payout schedule (see Horst, 1977). This meant that domestic parents of U.S. MNCs were contributing capital to their foreign affiliates and the affiliates were simultaneously issuing dividends to their domestic parents. The fixed payout assumption was in place in order for firms to maintain their optimal capital structure and, hence, minimize agency concerns. Hartman pointed out that because a parent-controlled affiliate was unlikely to be suffering from agency concerns, it was unlikely that the affiliate required the “discipline of debt”. So, simultaneously contributing equity and paying dividends (“roundtripping funds”) only creates additional tax costs.

As Hartman explains, the decision to invest abroad can be expressed as a function of foreign and domestic tax rates and risk-adjusted after-tax returns. In a world with market imperfections, expected risk-adjusted returns can vary across countries. To illustrate, I assume that the foreign pre-tax return, R_f , is exogenously set. Thus, any change in taxation on repatriation does not affect the return on the incremental investment opportunity. Assume that the U.S. parent faces a tax rate, t_{us} , a discount rate of r^* and its foreign affiliate incurs a foreign tax rate of t_f . In order for the worldwide system to impose an additional cost on foreign earnings, the U.S. tax rate must be greater than the foreign tax rate (i.e., $t_{us} > t_f$). If this is not the case, then the repatriation creates no incremental tax obligation.

So, to show the effect of U.S.’s tax on capital income earned abroad, Hartman begins by showing that, at the end of the period, a foreign affiliate who received an initial capital contribution of I , will have

$$I(1 + R_f(1 - t_f)) \quad (3.1)$$

If the affiliate repatriated its earnings (only its earnings, so I remains abroad) to its U.S. parent, then the parent will have

$$IR_f(1 - t_f) \frac{(1 - t_{us})}{(1 - t_f)} \quad (3.2)$$

If the foreign affiliate retains the proceeds, it will have

$$IR_f(1 - t_f) \quad (3.3)$$

To illustrate the loss from repatriating and then recontributing capital back to the affiliate, assume that the foreign affiliate either repatriates \$1 of its after-tax foreign income or reinvests the \$1 overseas. If the foreign affiliate repatriates the \$1 to the U.S. parent, the U.S. parent will have $\frac{(1-t_{us})}{(1-t_f)}$ after repatriation taxes. However, if the foreign affiliate reinvests its earnings, it will have the entire \$1. So, the loss from “roundtripping” is equal to the difference between what the affiliate earned after repatriation taxes on reinvested earnings

$$(1 + R_f(1 - t_f)) \frac{(1 - t_{us})}{(1 - t_f)} \quad (3.4)$$

and what the affiliate earned assuming that it invested equity that it previously repatriated to its parent

$$\left[\frac{(1 - t_{us})}{(1 - t_f)} (1 + R_f(1 - t_f)) - \frac{(1 - t_{us})}{(1 - t_f)} \right] \frac{(1 - t_{us})}{(1 - t_f)} + \frac{(1 - t_{us})}{(1 - t_f)} \quad (3.5)$$

Note that the second term in Equation (3.5), $\frac{(1-t_{us})}{(1-t_f)}$, represents after-tax proceeds that were received from the parent. As such, it is a non-taxable return of equity. Equation (3.5) simplifies to

$$\frac{(1 - t_{us})}{(1 - t_f)} (1 + R_f(1 - t_f)) \quad (3.6)$$

So, the loss to repatriating while simultaneously contributing capital is the difference between Equations (3.4) and (3.6):

$$\frac{(1 - t_{us})}{(1 - t_f)} R_f(t_{us} - t_f) \quad (3.7)$$

Notice that the loss is growing in the spread between t_{us} and t_f .

When considering the role that worldwide taxation plays on foreign direct investment, the loss from Equation (3.7) implies that firms should finance further investments whenever possible with retained earnings. Because the reinvestment of earnings defers taxation, firms should place relatively less initial capital abroad preferring to fund growth with accumulated earnings. This “loss” of roundtripping represents the reduction in the initial capital contribution as compared to I . By setting the repatriation after reinvestment equal to the repatriation after roundtripping, one can see that the tax cost of repatriation effectively reduces

the amount of the contributed capital needed to invest:

$$I = \frac{[1 + R_f(1 - t_{us})]}{[1 + R_f(1 - t_f)]} < 1 \quad (3.8)$$

So, the incremental tax on repatriations effectively reduces the amount of initial capital contributed by the parent into the foreign affiliate. The parent is better off reducing the initial capital contribution and allowing the remainder of the investment to be funded through accumulated earnings. Hence, it is not clear that the worldwide system of taxation automatically results in greater capital investment abroad (see Boskin and Gale, 1987). Sinn (1991, 1993) and Hartman (1985) provide comprehensive analyses of this issue. They show the larger the initial capital contribution, the sooner the repatriations may begin. Overall, it is important to remember that the above analysis pertains only to immature firms who lack adequate capital to fully fund their investment.

3.1.2 Empirical Evidence of the Role of Taxation on Investment

Several papers find evidence consistent with U.S. firms' location decisions being sensitive to tax rates.² In general, these studies document a negative association between a country's tax rate and the level of foreign investment (i.e., the elasticity of foreign direct investment to a country's tax rate). These studies focus on investment from retained earnings to investigate the role of taxation because it is presumed that investment financed by new equity is discouraged by anticipated repatriation taxes (i.e., the Hartman (1985) result from Section 3.1.1).

Hartman (1981, 1984) and Boskin and Gale (1987) find that foreign direct investment (both U.S. firms investing abroad and foreign firms investing in the U.S.) is sensitive to domestic tax policy. Because U.S. tax policy reduces the returns to investment, higher U.S. tax rates lead U.S. and foreign firms to invest less in the U.S. and relatively more abroad.³ Note that these results are not contrary to the

²Note that the majority of the empirical literature focuses on the investment decisions of all firms regardless of maturity level.

³See also Slemrod (1990) and Jun (1990).

Hartman (1985) findings as they are studying the relative proportion of investment between foreign and domestic jurisdictions rather than the relative amount of capital required for incremental foreign investment. In a more direct test of Hartman (1985), Hines (1994) finds that the worldwide system of taxation not only leads MNCs to reduce their initial capital infusions into foreign affiliates but that it also leads to substantial amounts of debt to be located in foreign affiliates.⁴

Using 1982 Bureau of Economic analysis data, Grubert and Mutti (1991) and Hines and Rice (1994) both regress capital investment in foreign affiliates on a measure of foreign tax rates. Consistent with high levels of earnings reinvestment, their findings suggest that lower foreign tax rates lead to increased investment in U.S.-controlled foreign affiliates. Grubert and Mutti (2000) and Altshuler et al. (2001) both study tax return data for the 10 years between 1982 and 1992 and find that U.S. multinational firms' investment sensitivity to foreign jurisdiction taxes increased over this period. The authors conjecture that their results are consistent with increasing international capital mobility.

In terms of non-U.S. analyses of foreign direct investment, Devereux and Freeman (1995) extend Slemrod's (1990) analysis to seven additional countries and find that the spread between the various pairs of home and source country tax rates affects foreign direct investment. As the EU explores tax harmonization, several papers have begun exploring whether worldwide versus territorial systems of taxation lead to erosion of the corporate tax base (see Gropp and Kostial, 2000; De Mooij and Ederveen, 2003; Barrios et al., 2009).

Two additional studies merit mention in the discussion of foreign direct investment. Kemsley (1998) investigates whether U.S. MNCs ratio of export activity to foreign production (i.e., domestic investment to foreign direct investment) varies by the tax incentives. He finds that U.S. firms increase export sales when selling to customers in high tax jurisdictions and that U.S. firms became more sensitive to foreign tax rates after TRA 1986 reduced U.S. tax rates; results consistent with

⁴De Mooij and Ederveen (2003) provide a nice summary of the elasticities of investment to taxation documented by various studies.

taxes affecting investment. Wilson (1993) uses a field study at nine U.S. multinational firms to investigate the role of taxation of firms' production location decisions. Interestingly, he documents that tax concerns are only of primary importance when other non-tax considerations, such as infrastructure, are small. Overall, the literature provides clear support for an association between taxes and capital investment.

3.2 Repatriation

Various opponents of current tax policy argue that the U.S. international tax system has a negative effect on the competitiveness of U.S. firms and creates incentives for multinational firms to “park” foreign affiliate profits overseas. In a June 2007 speech, Treasury Assistant Secretary for Tax Policy, Eric Solomon, called our current tax system “a blend of full inclusion and territorial systems”, whereby MNCs can defer U.S. tax on earnings of foreign affiliates until the earnings are repatriated (“repatriations”) to the U.S. As of 2010, MNCs held an estimated \$1.3 trillion abroad (Zion et al., 2011), which suggests a growth of 32% from 2008 levels (Zion et al., 2010). As a result, there is enormous interest in the role of the U.S. tax system in dislodging these large pools of undistributed foreign earnings from abroad.

3.2.1 Theory of Repatriation

Once an MNC reaches maturity, which is defined as having adequate accumulated earnings to fund investment, the MNC shifts its focus from identifying the marginal source of investment (i.e., either accumulated earnings or capital contributions) to whether it should repatriate any accumulated earnings or not. Hartman's (1985) insight on repatriations was that, since the repatriation tax is unavoidable, it reduces the opportunity cost of investment and the return to investment by the same amount. As a result, the tax does not affect a mature affiliate's choice between reinvesting its foreign earnings and repatriating funds to its U.S. parent.⁵

⁵Hartman's analysis is essentially an application of the “new view” or “tax capitalization view” of dividends taxation put forward by King (1977), Auerbach (1979), and

Continuing from (3.1) above, I assume that foreign and domestic risk-adjusted *after-tax* returns, r_f and r_{us} , are exogenous and constant over time.⁶ So, if a firm invests an amount, I , overseas, the investment yields the following accumulation after n periods:

$$I[(1 + r_f)^n - 1] \quad (3.1^*)$$

For an MNC with foreign earnings on an existing foreign investment, the repatriation decision requires a comparison of the after-all-taxes returns to reinvesting the foreign earnings abroad and repatriating to the U.S. Allow EP to represent the cumulative amount of foreign earnings that are reinvested abroad (Equation (3.1*)) and assume that foreign and domestic tax rates and after-tax returns are constant over time. If a firm repatriates at the beginning of the period and then invests the amount available after taxes in the U.S. for one period, at the end of the period the firm has (assuming a one period model):

$$EP(1 + r_{us}) - \frac{EP}{(1 - t_f)}(t_{us} - t_f)(1 + r_{us}) = \frac{EP(1 - t_{us})}{(1 - t_f)}(1 + r_{us}) \quad (3.9)$$

where $t_{us} > t_f$.

If instead the firm leaves the earnings abroad and then repatriates after one period it has:

$$EP(1 + r_f) - \frac{EP(1 + r_f)}{(1 - t_f)}(t_{us} - t_f) = \frac{EP(1 - t_{us})}{(1 - t_f)}(1 + r_f) \quad (3.10)$$

A firm will repatriate at the beginning of the period when (3.9) > (3.10).⁷ In a one period model, this relation simplifies to $r_{us} > r_f$, thus illustrating Hartman's insight that firms will repatriate foreign earnings when the domestic after-tax rate of return exceeds the foreign after-local-tax return, and the U.S. tax on repatriations does not influence the repatriation decision.

Bradford (1981). The new view holds that taxes on dividends (if constant over time) have no distortionary effects on the real investment decisions of domestic corporations.

⁶ So $r_f = R_f(1 - t_f)$ and $r_{us} = R_{us}(1 - t_{us})$.

⁷ In Equations (3.9) and (3.10) EP is grossed up by the foreign tax rate because U.S. firms pay U.S. taxes on the pre-tax income.

3.2.2 Empirical Evidence of the Role of Taxation on Repatriation

Contradicting Hartman's theoretical result, numerous empirical studies have found evidence that repatriations *are* sensitive to tax rates. Kopits (1972) finds that repatriations from U.S. controlled CFCs are positively (negatively) related to foreign (U.S.) income tax rates consistent with repatriation taxes deterring dividend remittances. Kopits' results have been confirmed over the years using a variety of time periods and data sources.⁸ This body of work consistently documents an inverse relationship between repatriations and the estimated U.S. repatriation tax burden.⁹

One of the predominant criticisms of the Hartman model is that multinational firms can tax plan in a manner that creates intertemporal variation in tax rates.¹⁰ Several theoretical papers relax the assumption of constant tax rates by considering the two different manners in which the repatriation tax can vary: (1) differences in the definitions of taxable income between the U.S. and foreign jurisdictions and (2) variation in whether the firm's foreign tax credit position is one of excess credit or excess limitation. Hines (1994) and Leechor and Mintz (1993) both allow the repatriation tax to be endogenous to investment. These

⁸ Mutti (1981) found significant tax effects associated with dividend repatriations using 1972 U.S. tax return data. Hines and Hubbard (1990) and Goodspeed and Frisch (1989) also found evidence of a negative association between tax rates and dividend repatriations using 1984 tax return data. Using microdata from 1986 tax returns, Altshuler and Newlon (1993) develop a more refined measure of the tax cost of repatriation and find that it is negatively associated with repatriations. Desai et al. (2001, 2007) use Bureau of Economic Analysis microdata data (Desai et al. (2001) study Bureau of Economic Analysis data from 1982 to 1997 whereas Desai et al. (2007) study Bureau of Economic Analysis data from 1982 to 2002) to study the role of taxation on repatriations and find that repatriations vary inversely with the tax rate of the foreign affiliate. In addition, because affiliates organized as branches instead of corporations are taxed immediately, Desai et al. (2001) find that repatriations from corporate affiliates are more sensitive to foreign tax rates than branch affiliates.

⁹ As an interesting aside, Power and Silverstein (2007) document the counterintuitive result that U.S. parents in loss situations are less likely to repatriate than profitable firms. Because repatriation converts domestic net operating losses, which are carried forward for 20 years, into foreign tax credits, which are carried forward for only 10 years, the repatriation by a loss parent decreases the likelihood that the tax attribute will be utilized before expiration.

¹⁰ Recall that the Hartman analysis only applied to investment in mature firms facing constant tax rates.

papers point out that because the U.S. and foreign jurisdictions calculate taxable income in different manners, repatriation taxes are a function of the ratio of the U.S. defined taxable income to the foreign defined taxable income. As this ratio may vary over time, investment incentives could be influenced by the repatriation tax. In these models, the Hartman result holds only when the ratio of U.S. defined taxable income to the foreign defined taxable income is constant over time. Altshuler and Fulghieri (1994) develops a model in which the U.S. parent's tax rate varies over time as it moves into and out of the excess foreign tax credit position. In this model, repatriation tax irrelevance only holds when the MNC's foreign tax credit position is stationary.

Altshuler et al. (1995) (ANR) points out that none of the studies of the association between repatriations and taxes described above have "departed from the Hartman result: the level of the repatriation tax does not by itself affect the incentive to repatriate income rather than reinvest it". Each of these papers study aggregate repatriations which includes firm-created intertemporal variation in the repatriation taxes. To the extent that MNCs tax plan, they have the opportunity to limit repatriations to periods when repatriation tax rates are relatively low. If Hartman's predictions are correct, then the failure to distinguish between the effects of permanent and transitory variation in the repatriation tax obligation could confound results. Most studies presume that all variation in repatriation taxes is permanent thereby mixing firm reactions to transitory changes in tax rates with permanent changes in tax rates.

ANR explains that firms often can temporarily reduce their potential repatriation tax burden through FTC cross-crediting (both across time and jurisdictions). Recognizing that Hartman's theoretical analysis only pertains to permanent tax rates, ANR specifically tests whether repatriations are sensitive to permanent or transitory tax costs of repatriation. ANR uses information about cross-country differences in tax rates to estimate separate effects for the permanent and transitory components of repatriation tax burdens to investigate whether cross-sectional variation in countries' average tax rates is correlated with the permanent component of repatriation taxes and not with the transitory component. Ultimately, ANR finds that repatriations are

(not) correlated with the transitory (permanent) component of any repatriation tax obligation.

To date, I am unaware of any other papers that attempt to disentangle the transitory from the permanent component of repatriation tax rates in the study of the role of taxation on regular repatriations.¹¹

Finally, Altshuler and Grubert (2003) discusses several mechanisms that enable affiliates to effectively repatriate funds without triggering any repatriation tax. For example, by reinvesting earnings in passive assets, the affiliate provides an asset against which the parent can borrow. If the rate of return on the passive asset approximates the parent's borrowing rate, then the firm has achieved a tax-free repatriation. Altshuler and Grubert (2003) then tests for and finds evidence of U.S. MNCs reducing their repatriation tax burdens using these methods.¹²

I believe that we still do not have a complete understanding of the role of tax planning on the level of repatriations. Researchers should continue to pursue work which helps us understand whether costly repatriations are primarily a result of MNCs' increased tax planning or growth in real foreign investment. Said another way, are large repatriation tax obligations attributable to extensive tax planning or to overseas expansion?

3.2.3 The Impact of the 2004 American Jobs Creation Act on Repatriations

The 2004 American Jobs Creation Act (AJCA) led to resurgence in the interest of the role of taxation on repatriations. The AJCA is a particularly powerful setting to investigate the role of taxation on repatriations because it generated a clear transitory change in repatriation taxes. In Blouin and Krull (2009), the authors modified the Hartman (1985) analysis to incorporate the temporary effect of the AJCA on the tax cost of repatriating and the firms' ability to borrow. The AJCA allowed a temporary 85% dividends received deduction for

¹¹ Notable exceptions are the studies surrounding the American Jobs Creation Act of 2004 which is discussed in Section 3.2.3.

¹² Drucker (2011) also provides a description of some additional techniques used by firms to mitigate repatriation tax burdens.

repatriations in 2005.¹³ They also implicitly assumed that domestic tax rates are higher than foreign rates. Though the converse may hold, these firms likely did not benefit from the reduction in the U.S. tax rate on repatriations. Therefore, the AJCA changed the decision to reinvest versus repatriate because tax rates are not constant over time: the U.S. tax rate on repatriations was lower if the firm repatriated in 2005 than if the firm reinvested the profits abroad and repatriates later. Blouin and Krull (2009) lets t_{uso} represent the U.S. tax on repatriations that benefit from the tax holiday.¹⁴ Following from the theory in Section 3.2.1, assuming that repatriations at the beginning of the period benefit from the tax holiday, if the firm repatriates at the beginning of the period then reinvests the after-tax amount in the U.S. at the end of the period the firm has:

$$\text{EP}(1+r_{\text{us}}) - \frac{\text{EP}}{(1-t_{\text{f}})}(t_{\text{uso}} - t_{\text{f}})(1+r_{\text{us}}) = \frac{\text{EP}(1-t_{\text{uso}})}{(1-t_{\text{f}})}(1+r_{\text{us}}) \quad (3.11)$$

where $t_{\text{uso}} < t_{\text{us}}$.

Notice that (3.11) is equivalent to (3.9) with t_{uso} replacing t_{us} .

¹³The actual terms of the AJCA are as follows. First, the AJCA limits the amount eligible for the dividends received deduction to extraordinary dividends, defined as the excess of repatriations during the year over the average amount of repatriations during the previous five years, excluding the highest and lowest years. All else equal, firms that have been systematically repatriating in the past will not benefit as much under the AJCA as firms that have never repatriated. The AJCA further limits the eligible dividend amount to the greater of (1) \$500 million, (2) the earnings reported as permanently reinvested on the last audited financial statements filed on or before June 30, 2003, or (3) if the amount of permanently reinvested earnings (PRE) is not reported, the amount of U.S. tax liability attributable to PRE reported in the last audited financial statements filed on or before June 30, 2003, divided by 0.35. The Act also reduces the amount eligible for the dividends received deduction by any increase in related-party debt incurred by foreign subsidiaries between October 3, 2004 and the close of the tax year for which the firm claims the dividends received deduction. Finally, the benefits of the AJCA could be utilized in 2004. Firms could choose to repatriate under the Act either during 2004 or 2005 tax years.

¹⁴The following details the explicit computation of t_{uso} .

$$\begin{aligned} & \text{EP} - \frac{\text{EP}}{(1-t_{\text{f}})}(t_{\text{us}} - t_{\text{f}}) + \frac{0.85\text{EP}}{(1-t_{\text{f}})}(t_{\text{us}} - t_{\text{f}}) \\ & = \text{EP} - \frac{0.15\text{EP}(t_{\text{us}} - t_{\text{f}})}{(1-t_{\text{f}})} = \frac{\text{EP}(1 - 0.85t_{\text{f}} - 0.15t_{\text{us}})}{(1-t_{\text{f}})}. \end{aligned}$$

So, $t_{\text{uso}} = (0.85t_{\text{f}} + 0.15t_{\text{us}})$

However, if the tax holiday is not available when the firm reinvests its profits in the foreign country and repatriates at the end of the period, then the amount the firm has after repatriating to the U.S. at the end of the period is the same as Equation (3.10), the after-all-taxes return to reinvesting for one period then repatriating to the U.S. before the tax holiday. The firm will repatriate at the beginning of the period as long as (3.11) > (3.10). Therefore, the firm will repatriate immediately taking advantage of the tax holiday when:

$$r_{us} > (1 + r_f) \left[\frac{(1 - t_{us})}{(1 - t_{uso})} \right] - 1 \quad (3.12)$$

Now, suppose that the firm moves from a 1-period to an n -period investment horizon:

$$r_{us} > (1 + r_f) \left[\frac{(1 - t_{us})}{(1 - t_{uso})} \right]^{\frac{1}{n}} - 1 \quad (3.12^*)$$

Notice that as the period of investment increases, the relative importance of the tax benefit decreases (recall, $t_{us} > t_{uso}$). As firms approach an indefinite investment horizon ($n \rightarrow \infty$), reinvestment only depends upon the relation of r_{us} to r_f . Therefore, unless the firm intends to repatriate in the near term, the tax holiday has relatively little impact on the MNC's repatriation decision (see Altshuler et al., 1995; Hartman, 1985; Clausing, 2005).

The preceding discussion suggests that if firms have adequate foreign investment opportunities, then the reduction in the repatriation tax on foreign earnings will have no effect on repatriation behavior. However, to the extent that firms have relatively limited investment opportunities they can benefit from the AJCA. Consistent with the effects of the AJCA being temporary and firms benefiting from the AJCA facing relatively few investment opportunities, Blouin and Krull (2009) finds evidence that firms increased repatriations by over 400%.

Now, let z (where $1 \geq z \geq 0$) represent the proportion of the overseas earnings that the firm plans to repatriate under the AJCA. Upon repatriation, the firm will have:

$$z \left[\frac{EP(1 - t_{uso})}{(1 - t_f)} \right] (1 + r_{us}) + (1 - z) \left[\frac{EP(1 - t_{us})}{(1 - t_f)} (1 + r_f) \right] \quad (3.13)$$

If the firm reinvests all the earnings abroad, it will again have the amount represented in Equation (3.10). Suppose that the firm has reinvested all of its cash into operations. If the firm intends to repatriate under the AJCA, it would be required to borrow. So, Equation (3.13) becomes (3.13*)

$$z \left[\frac{\text{EP}(1 - t_{\text{uso}})}{(1 - t_f)} \right] (1 + r_{\text{us}}) + (1 - z) \left[\frac{\text{EP}(1 - t_{\text{us}})}{(1 - t_f)} (1 + r_f) \right] - z \left[\frac{\text{EP}(1 - t_{\text{us}})}{(1 - t_f)} \right] i \quad (3.13^*)$$

where i is the firm's after-tax cost of borrowing.¹⁵

If (3.13*) > (3.10), then the firm should repatriate. Therefore, the firm will remit earnings when:

$$r_{\text{us}} > \left[\frac{(1 - t_{\text{us}})}{(1 - t_{\text{uso}})} \right] (1 + r_f + i) - 1. \quad (3.14)$$

Since the firm did not repatriate prior to the AJCA, when t_{uso} was equal to t_{us} , we can infer that $r_{\text{us}} < r_f$. Because the firm did not borrow and invest in the incremental domestic investment opportunity, we can also infer that $r_{\text{us}} < i$. Therefore, for a firm to consider repatriating under the AJCA, the following relation must hold:

$$i > r_{\text{us}} > \left[\frac{(1 - t_{\text{us}})}{(1 - t_{\text{uso}})} \right] r_f. \quad (3.15)$$

Notice that this relation implies that r_{us} is low but not necessarily that r_f is below i . If $r_f > i$, then the firm should not repatriate, but should invest in the foreign country. If r_f is less than i then the firm's EP could be "trapped" overseas. If this EP is in cash, then the firm could face an agency problem (Jensen, 1986).

Consistent with firms effectively having cash trapped abroad, Blouin and Krull (2009) find that repatriating firms had higher free-cash flows

¹⁵ Assume that i represents the firm's after-tax cost of borrowing, that it is identical across all countries and that the firm always has the option to use its overseas assets to secure its borrowing. In the Blouin Krull (2009) analysis, the authors also assume the cost of borrowing, i , is exogenous, i.e., that i is not dependent upon whether the incremental investment project is situated in the U.S. or abroad. Furthermore, i is set independent of the shift in firms' capital structure that results from the borrowing. See Hines (1994) for a full equilibrium model of foreign investment that incorporates capital structure.

and lower investment opportunities. If firms do repatriate under the AJCA, then their theory suggests that these firms have excess cash and that the cost of repatriation under U.S. tax laws in effect before the AJCA exceeded the cost of over-investment. Firms that benefit from the AJCA chose not to repatriate before the AJCA because domestic investment opportunities were limited ($r_{\text{us}} \leq r_f$), so repatriation of foreign funds does not eliminate the over-investment problem. When a firm's capital exceeds its investment opportunities, it can either retain the excess cash or distribute it to its shareholders. Because firms can mitigate the agency costs of free-cash flow by distributing excess cash to shareholders, Blouin and Krull (2009) investigate and find evidence that repatriating firms abnormally increase share repurchases in the post-AJCA period.

Ultimately, Blouin and Krull (2009) documents that, after controlling for other predictors of repurchases, repatriating firms increase share repurchases during 2005 by \$60.85 billion more than non-repatriating firms.¹⁶ This increase represents 20.9 percent of the total amount of repatriations under the AJCA reported by their sample firms (\$291.6 billion). They find evidence that, in spite of having plans to invest in approved activities (which were required under the provisions of the AJCA), repatriating firms significantly increase payments to shareholders, and that the amount of this increase is related to the amount of repatriation. Although these results suggest that firms are using repatriated funds for a non-permitted purpose, the AJCA does not require a direct tracing of the use of funds.¹⁷ Due to the fungible nature of cash, firms could have made the investments stated in their reinvestment plan, but then used other freed up funds for share repurchases. Though this may deviate from the intention of the AJCA, these firms are putting overseas profits back into the U.S. economy — just not

¹⁶The mean increase in affected firms is 0.277 percent of assets per quarter and the cumulative assets for the affected firms is \$5.492 trillion.

¹⁷The Act only specifically disallows using repatriated funds for executive compensation and does not require firms to demonstrate that repatriated funds are used for the purpose stated in the approved plan. However, subsequent guidance issued by the IRS, Notice 2005–2010, lists dividends, share repurchases, tax payments, and purchases of debt instruments or a less-than-ten percent interest in a business entity as additional non-permitted uses.

in the manner that Congress intended. Whether distribution to shareholders is the preferred way to put the funds into the U.S. economy is the subject to debate. Nonetheless, the Blouin and Krull (2009) results provide useful information about how firms respond to a temporary tax holiday. Using Bureau of Economic Analysis data, Dharmapala et al. (2011) confirms the Blouin and Krull's (2009) findings.^{18,19}

3.2.4 The Role of the Foreign Tax Credit on Repatriations

In this section, I discuss the details of the foreign tax credit (FTC) calculation used in the analyses in the previous sections. Much of the theoretical analysis above assumes that MNCs' home country tax rates exceed those in the source country. For U.S. MNCs, this suggests that firms are in an excess limitation position (i.e., $t_{us} > t_f$). Since U.S. corporate income tax rates are among the highest in the world (see Figure 3.2), this is likely a reasonable assumption. However, Figure 3.2 shows that the weighted average tax rate of the non-U.S. OECD countries exceeded the U.S. statutory tax rate until 1999.

In order to derive the real tax cost of repatriations under a worldwide system, one needs to consider the interplay of the U.S.'s calculation of the foreign tax credit with the tax policies of the source countries. In the preceding analysis, I presumed that the tax cost of repatriation was simply the spread between the U.S. tax rate and the source country's tax rate. In reality, the computation is far more complex as withholding taxes and variation in the definitions of taxable income complicates the FTC calculation.²⁰ Notice that the tax cost of remitting income through dividend payments depends not only on the

¹⁸Note that Dharmapala et al. (2011) concludes that a far greater proportion of the AJCA repatriations were distributed to shareholders as either repurchases or dividends. However, it is important to recognize that their research design prevents a direct comparison to Blouin and Krull (2009) of the magnitude of the incremental AJCA-related repurchases.

¹⁹Brennan (2011) and Faulkender and Petersen (2011) argue that there is little evidence that repatriating firms increased repurchases. Rather, these papers argue that they provide evidence that financially constrained firms took advantage of the AJCA to repatriate and invest domestically. I look forward to work that reconciles this work to the Blouin and Krull's (2009) and the Dharmapala et al. (2011) results. See also Albring et al. (2011).

²⁰I only discuss the worldwide system of dividend taxation whereby dividends are taxed by the source jurisdiction and then again by the parent's home country. Split-rate and imputation systems are used by other countries. Essentially, these systems effectively tax

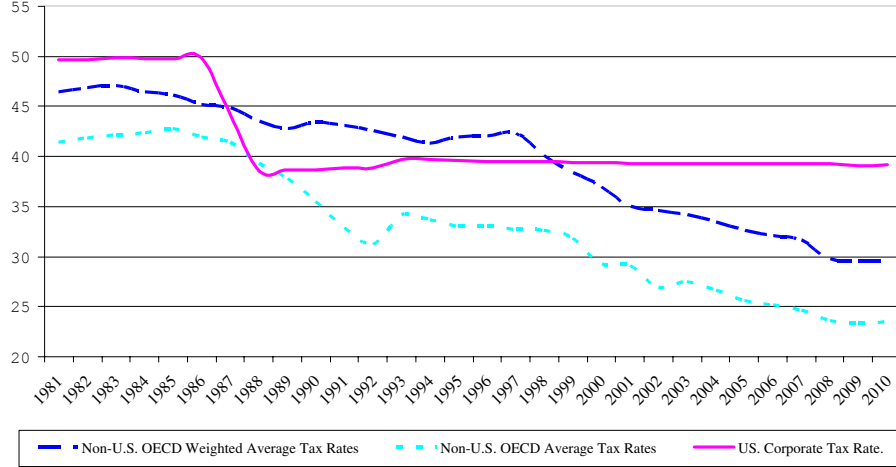


Fig. 3.2 U.S. versus non-U.S. OECD countries' statutory tax rates. Data for this Figure was obtained from the OECD website. The Weighted Average Tax Rate was weighted by 2009 GDP.

tax rates but also on the source country's system for taxing corporate income.²¹

As explained in Altshuler and Newlon (1993), under a worldwide system, the U.S. taxes the dividend only when it crosses into the U.S. The only incremental foreign jurisdiction tax is any withholding taxes required as the dividend leaves the source country. So, the total foreign tax (t_f) is:

$$t_f = t_{sf}R_{fus} + [(1 - t_{sf})R_f]w_f \quad (3.16)$$

where t_{sf} is the applicable statutory foreign income tax rate, R_{fus} is the foreign affiliate's pre-tax rate of return defined using U.S. tax law, R_f is the foreign affiliate's pre-tax rate of return based on the source country's laws and w_f is the applicable withholding rate on dividend distributions. As discussed above, the aggregate taxes paid on any dividend is the sum of the direct and deemed paid taxes. So, the first term

distributed income at a rate lower than retained income. See Altshuler and Newlon (1993) for more details.

²¹ Recall from Section 2 that the FTC is calculated based on the U.S.'s definition of taxable income thereby potentially undermining the source country's tax policies.

in (3.16), $t_{sf}R_f$, represents the deemed paid dividend and the second term of (3.16) represents the withholding tax on any dividends remitted into the U.S. (i.e., the direct taxes paid).

If the U.S. parent is in an excess credit position (so, $t_{sus}R_{fus} < t_f$), there is effectively no repatriation tax. So, $t_{us} \leq 0$. On the other hand, if the parent is in excess limitation (as presumed due to the relatively high U.S. statutory tax rate), then the U.S. tax liability attributable to the dividend payment is:

$$t_{us} = (t_{sus} - t_{sf})R_{fus} - (1 - t_{sf})R_f w_f. \quad (3.17)$$

where t_{sus} is the statutory U.S. tax rate. Note that (3.17) could be negative if $t_{sf} > t_{sus}$, $w_f > (t_{sus} - t_{sf})R_{fus}/(1 - t_{sf})R_f$ or $R_{fus} > (1 - t_{sf})R_f w_f/(t_{sus} - t_{sf})$. If any of these situations occur, then the repatriation creates excess credits that are available to either offset repatriations from other jurisdictions (cross-crediting) or available to carryback or carryforward to other periods. Notice that the total tax price, t_t , of a dividend remittance is $t_t = t_{us} + (1 - t_{sf})R_f w_f$.

If the parent is in excess credit, then the only taxes due at remittance are the withholding taxes on the dividend, $t_t = (1 - t_{sf})R_f w_f$. The tax cost of the incremental dollar of dividend is then $dt_t/d(1 - t_{sf})R_f = w_f$. If the parent is in excess limitation, the total tax effect of an additional dollar of dividend is $(t_{sus} - t_{sf})/(1 - t_{sf})$.

So, when considering the role of taxation on repatriations, it is critical to consider the aggregate worldwide FTC position of the firm. Although U.S. tax rates do exceed current rate in most jurisdictions, as Figure 3.2 illustrates, this was not always the case. Since FTCs attach to the aggregate earnings pool of a foreign affiliate, it is possible that the FTC on past earnings could result in a firm being in an excess credit position and, therefore, relatively less sensitive to the current spread between U.S. and foreign tax rates.

Anecdotal evidence suggests that firms engage in significant tax planning in order to maximize the FTCs associated with repatriations (i.e., FTC accelerators). Legislation in 2010 specifically attacks these transactions. To date, we have little evidence regarding the impact that these transactions have on MNC investment and/or repatriation behavior. Almost all research presumes that U.S. repatriation tax

liabilities are simply the spread between U.S. and foreign tax rates. Work that analyzes taxable income differences could provide insights into MNCs' true foreign income tax positions. Interestingly, Kleinbard (2011) argues that MNCs' clamoring for an additional tax holiday is the result of their opportunities for relatively inexpensive repatriations are becoming more limited.

3.2.5 Non-dividend Repatriations

There are other mechanisms by which affiliates can effectively repatriate their earnings. Grubert (1998) discusses that, in addition to dividend remittances, firms also have the option to distribute income in the form of royalties, rents and interest. These alternate tax-deductible distribution mechanisms can result in an aggregate tax liability of $(t_{\text{us}} - t_f)$.²² Hence, U.S. MNCs generally prefer that remittances from high-tax-rate-domiciled affiliates are in some tax-deductible form rather than paid as a dividend.

Notice that if $t_{\text{us}} > t_f$, then the firm is indifferent between paying interest (which is tax-deductible) or dividends between its parent and affiliate. However, consider the situation when $t_f > t_{\text{us}}$. In this case, the firm is better off paying interest between the parent and the affiliate because the interest permanently reduces the aggregate tax burden. The firm shields t_f and only pays t_{us} . If a \$1 was paid as a dividend, there is no t_f savings. The t_f provides a credit against any repatriation taxes but if the firm is in an excess FTC limit position then there is little current value to the incremental credit.

However, the withholding tax rates on the tax-deductible remittances may be substantially higher than the withholding rates on dividends. If this is the case, then a U.S. MNC's incentive to move away from dividend remittances from high-tax affiliates is attenuated.

Several studies offer evidence that the use of alternatives to dividends, such as interest and royalty payments, is also sensitive to the tax cost of repatriation. Hines and Hubbard (1990) find that the average foreign tax rate paid by affiliates remitting nonzero interest to

²² Note that t_{us} and t_f now represent MNCs' marginal tax rates on U.S., and foreign income, respectively.

their U.S. parents in 1984 exceeds the average foreign tax rate paid by affiliates with no interest payments, while the reverse pattern holds for dividend payments. Using 1990 IRS data, Grubert (1998) estimates separate equations for dividend, interest, and royalty payments made by roughly 3,500 foreign affiliates to U.S. parents, finding that high corporate tax rates in countries in which U.S. MNC's affiliates are located are correlated with higher interest payments and lower dividend payout rates.²³ Desai et al. (2004) report that, within groups of affiliates controlled by the same U.S. parents, debt levels are significantly higher among affiliates located in countries with higher tax rates. Note that these non-dividend remittances are often used as a mechanism to income shift (see Section 4).

3.3 An Aside on Havens

Many argue that U.S. MNCs are transferring too much income into tax havens (see Drucker, 2011). Hines and Rice (1994) documents that havens hold a disproportionate amount of foreign direct investment and profits of U.S. MNCs. Hines (1996) reports that major tax havens have less than 1% of the world's population but have 5.3% (8.4%) of the employees (property, plant and equipment) of U.S. MNCs.²⁴ However, the crux of the debate is whether havens are stripping revenue from the U.S. In order to answer this question, it first must be determined whether investment in the haven is a complement or a substitute of domestic investment.

Evidence discussed above in Section 3.1.2 suggests that investment is highly sensitive to local tax rates. Yet, U.S. MNCs are typically not building manufacturing facilities in haven jurisdictions.²⁵ Rather, firms appear to use haven operations to move profits from relatively high-tax foreign jurisdictions into the low-tax havens (see Drucker, 2011 for an example). Notice that by moving foreign profits into lower tax jurisdictions, U.S. MNCs are actually increasing their potential repatriation

²³ Hines (1994, 1995) also provides evidence of firms' use of interest as an alternative repatriation mechanism.

²⁴ Desai et al. (2006) find that foreign affiliates whose parent companies have nearby tax haven operations pay lower taxes as a fraction of sales than do other affiliates.

²⁵ This is not necessarily the case with Ireland.

tax liability (recall that the U.S. receives a tax payment of roughly the spread between t_{us} and t_f). So the negative impact of havens on U.S. revenue is indirect because as the incremental repatriation tax burden increases firms may be less reluctant to repatriate (e.g., Desai et al., 2007). To date, there is no consensus as to whether havens are detrimental to U.S. welfare.

Notice that MNCs in territorial tax regimes have a greater incentive to use havens because much of the haven-induced tax savings is permanent (i.e., there is no incremental repatriation tax burden). So, in addition to quantifying the aggregate effects of havens on MNC tax burdens, an interesting avenue for future work would be analyses which consider whether there is a disproportionate use of havens by MNCs in territorial tax regimes relative to MNCs facing a worldwide system of taxation.

4

Income Shifting/Transfer Pricing

The complexities of multinational taxation arise because a firm does business in multiple jurisdictions where there may be no similar unrelated (or arms' length) economic activity. For example, an MNC may manufacture a consumer product which is designed in one country, from components which are procured in a number of other countries. These components may then be assembled into a finished product in yet some other country, perhaps chosen for its proximity to the markets for the product. The distribution and sales of the product may take place from within the countries which represent the markets for the product, or alternatively may take place from outside the majority of countries concerned. Where an MNC or its affiliates undertake a range of activities in different tax jurisdictions, it is necessary to determine the price at which goods and services are charged between companies with the group; i.e., the transfer prices. Whereas transactions between unrelated parties will generally be at arm's length and, hence, reflect market prices, transfer pricing within a group will inevitably be somewhat artificial, as it is not subject to arm's length market forces.

Sometimes there may not even be a market outside the group for goods or services which are sold intra-group. However, in accordance

with fundamental tax and accounting principles, these transfer prices should be based on the arm's length principle. Such transfer prices are essential to enable each entity in the consolidated group to report economic activity under the relevant conventions in the foreign jurisdictions in which they operate. The accounting for this business activity forms the basis for determining and assessing tax liabilities. The inherent artificiality of transfer prices has led tax authorities to suspect that they are set at levels designed to minimize taxes.

The example of the multinational manufacturer discussed above could occur where a highly sophisticated and complex component, which was manufactured in a high-tax country, was sold intra-group at a relatively low profit with a disproportionate profit accruing in the low-tax country in which assembly took place. This could be justified on the basis that assembly, as the final stage of the production process, creates the finished product which should attract a large share of the overall profit. Alternatively, it could be argued that the production of the sophisticated and complex component should attract a larger share of the profit because of its technical complexity.

When firms have a presence in high-tax jurisdictions, they may have an incentive to divert profits by fragmenting an activity or transaction into various constituent elements to which only limited profits can be attributed. Modern commercial and industrial activity occurring across borders provides MNCs with substantial tax planning opportunities. Transfers of intangible assets, for example, have become a very effective way to shift income between jurisdictions. This migration of intangibles often results in precipitous reductions in MNC tax obligations.¹

Income shifting is the concept that multinational companies have the ability to adjust the location of their profits. As discussed in Section 3, the deductibility of interest makes it attractive to use debt to finance foreign affiliates in high-tax jurisdictions and equity to finance affiliates in low-tax jurisdictions. Transfer pricing is effectively a special category of income shifting.

¹ As an example, see the reduction in Google's effective tax rate in the 2004–2006 period which resulted from the movement of Google's European licensing rights from the U.S. to Ireland. See Joint Committee on Taxation (2010) for an additional discussion of intangible issues.

4.1 Theory

The immediate tax savings of income shifting is clear. By shifting from a high-tax jurisdiction (i.e., t_{hf} = tax rate in a high-tax foreign jurisdiction) to a relatively low-tax jurisdiction (tax rate = t_{lf}) the firm currently saves $(t_{hf} - t_{lf})$ for each dollar of income shifted. For firms facing territorial systems, this savings is permanent. However, the value of the savings for worldwide firms depends on several conditions. First, if $t_{hf} > t_{us}$ then income shifting away from the high-tax jurisdiction is always a dominant strategy. Although profits facing t_{hf} may lead to the creation of excess FTCs, the benefit of these credits is only realized (a) upon repatriation and (b) upon cross-crediting with repatriations from other low-tax jurisdictions. Therefore, unless repatriation is imminent, the firm loses the time value of money on the extra tax payment. Second, as alluded to above, shifting income to t_{lf} is only beneficial to the extent that the tax savings exceed the cost of shifting. Notice that the benefit of shifting to low-tax jurisdictions is mitigated by repatriating these low-tax earnings. For an MNC in a worldwide regime, this is because shifting to a low-tax jurisdiction only results in the deferral of tax savings. This movement of income to low-tax jurisdictions likely increases those taxes due upon repatriation. Therefore, if repatriation is imminent, the relative benefit of shifting is small (i.e., just the time value of money of the tax savings less the cost of shifting).

The theoretical literature on transfer pricing focuses on two areas: tax planning/compliance in multinational firms and managerial/economic incentives within the multinational firm. Early work on transfer pricing examined the effect of taxes on pricing and production when a single agent is responsible for intercompany transactions (Horst, 1971; Halperin and Srindhi, 1987; Harris and Sansing, 1998). Recent work focuses on decoupling transfer pricing for tax and managerial reporting purposes (i.e., use one transfer price for tax purposes and another for performances pay). For example, Baldenius et al. (2004) documents that firms may not be able to jointly optimize tax planning and managerial incentives with a single transfer price.

4.2 Empirical Evidence

There is an enormous body of empirical research studying income shifting. Consider that much of the work studying the role of taxation on the choice between dividend and non-dividend remittances provides evidence consistent with income shifting incentives. For example, Hines and Hubbard (1990) and Grubert (1998) provide evidence of U.S. MNCs choosing to have high tax affiliates pay interest instead of dividends, which effectively shifts income out of high-tax jurisdictions to the U.S. parent. Similar to Grubert (1998), Collins and Shackelford (1998) also study whether dividend, interest, royalty, and management fee payments are explained by tax incentives. Collins and Shackelford (1998) find that taxes not only explain payments between foreign affiliates and their domestic parents, but also payments between foreign affiliates. Grubert (2003) attempts to document the precise mechanisms firms use to shift income by studying whether MNCs' shifting is undertaken using royalties related to research and development. Grubert (2003) argues that roughly half of the tax-induced income shifting can be explained from income derived from research and development based intangibles.

Income shifting is conjectured to be a driver of firms' internal capital structure. By choosing to have high tax affiliates pay interest instead of dividends, MNCs effectively shift income out of high-tax jurisdictions to lower tax jurisdictions resulting in a reduction in their worldwide tax burdens. Desai et al. (2004) and Huizinga et al. (2008) both provide evidence that debt levels are positively related to affiliates' tax rates. Collins and Shackelford (1992), Newberry (1998) and Newberry and Dhaliwal (2001) all investigate whether an MNC's capital structure is affected by its global tax position. Using publicly available financial statement data, Collins and Shackelford (1992) and Newberry (1998) find that U.S. MNCs' estimated tax cost of repatriation (i.e., the firm's foreign tax credit status) influences whether firms substitute equity financing for domestic financing.²

² Collins and Shackelford (1992) study the 1986 Tax Act whereas Newberry (1998) studies firms' behavior in the 1988–1991 period.

Newberry and Dhaliwal (2001) finds evidence that U.S. MNCs firms locate their debt abroad when the firms' tax cost of repatriations is low (i.e., firm is in an excess FTC limit position). Finally, Mills and Newberry (2004) documents that foreign-controlled U.S. corporations, facing relatively low foreign tax rates, use significantly more debt than foreign-controlled U.S. corporations facing relatively high tax rates consistent with these firms using interest to strip earnings out of the U.S. As these studies illustrate, because the U.S. is a relatively high-tax jurisdiction, U.S. MNCs typically prefer to have relatively high levels of domestic debt. However, to mitigate the benefits of such behavior, the U.S. has adopted rules that force firms to allocate domestic interest to worldwide operations, which results in MNCs losing the benefit of the FTC with domestic debt.^{3,4}

Although high tax rates could be correlated with other location and firm-specific attributes that reduce the profitability of foreign investment, in equilibrium, after-tax rates of return across high and low tax jurisdictions should be equal. Therefore, many studies investigate whether there is a negative correlation between pretax profitability and local tax rates to infer evidence of active tax avoidance generated via tax-motivated income shifting. Grubert and Mutti (1991) and Hines and Rice (1994) analyze the aggregate reported profitability of U.S. affiliates in different foreign locations in 1982 and report that high taxes reduce the reported after-tax profitability of affiliates. Specifically, Hines (1994) documents that a one percent difference in tax rates reduces pre-tax profitability by 2.3 percent.⁵ More recently, Huizinga and Laeven (2008) develop a model that not only considers income shifting between the parent and affiliates but also between different affiliates. Using the model and a sample of European multinational

³In the United States, firms are subject to earnings stripping rules under 163j.

⁴Note that many other jurisdictions have also implemented "thin capitalization" rules which limit interest deductibility. A couple of author groups have begun studying the role of these rules on internal capital structure as anecdotal evidence suggests that these rules don't sufficiently constrain MNCs' interest deductions (see Buettner et al., 2008; Blouin et al., 2011a). Also, see Hines (2008) for a discussion of the effects of interest non-deductibility on U.S. MNCs.

⁵In a related study, Collins et al. (1998) study a sample of U.S. MNCs over 1984–1992 and find a similar pattern of greater foreign profitability among firms facing foreign tax rates below the U.S. rate.

firms, Huizinga and Laeven (2008) finds evidence of substantial revenue losses by European governments due to parent/affiliate and affiliate/affiliate income shifting.

Several studies have investigated income shifting by U.S. MNCs over time. Harris (1993) and Klassen et al. (1993) both investigate whether the 1986 Tax Act affected income shifting behavior. Harris (1993) finds that the 86 Act's reduction in the statutory tax rate led firms to move income into the U.S. Incremental to Harris (1993), Klassen et al. (1993) investigates other countries' tax rate changes in conjunction with the U.S. tax rate decrease. Klassen et al. finds evidence that U.S. MNCs shifted from (to) the U.S. to Europe (from Canada) in 1985 and 1986. However, in 1987 firms began shifting to the U.S. from Europe. In an interesting extension of Harris et al. (1993), Jacob (1996) studies whether the cross-sectional variation in the volume of intra-firm trade explains the link between profitability in geographic segments and tax rates. Basically, Jacob shows that firms with a greater opportunity (or flexibility) to shift income are more likely to income shift. Finally, Klassen and Laplante (2011) documents that U.S. MNCs have increased their income shifting between 1988 and 2009.

Another line of the income shifting research focuses more explicitly on documenting evidence that prices reflect tax motivated income shifting — i.e., transfer pricing. Clausing (2000) studies intra-firm trade and documents that 43% (36%) of imports (exports) in 1994 are attributable to intra-firm trade. Consistent with transfer prices reflecting tax incentives, she documents that the U.S. has a less favorable trade imbalance with low-tax jurisdictions suggesting that U.S. sales to low tax jurisdictions are underpriced and U.S. purchases from high tax jurisdictions are overpriced.⁶ Swenson (2001) also takes a more direct approach in her analysis of transfer pricing by studying customs duties and finds that tariff duties are positively associated with transfer prices.

Note that most countries assess duties on the import of goods into their jurisdictions. These duties can alter a firm's transfer pricing

⁶ Clausing (2003) extends Clausing (2000) and finds that U.S. intrafirm export prices are lower and intrafirm import prices are higher as source country taxes decrease.

incentives. Bernard et al. (2006) documents that firms have internal and external prices for their goods (with internal prices typically being lower than external prices). These authors argue that the difference, or “wedge”, between the two prices is larger when the goods are being sold into countries with low corporate tax rates or high import tariffs; behavior consistent with tariff and income tax minimization. Blouin et al. (2011b) investigates trade-offs firms make when tariffs and income tax transfer pricing incentives conflict (e.g., high import prices increase cost of goods sold therefore reducing income taxes but increase import duties which are assessed on import prices). For U.S. MNCs facing relatively high tariff burdens, evidence suggests that these firms undertake more extensive planning for tariff minimization than income tax minimization.

Finally, there are a series of papers that investigate whether foreign-controlled U.S. companies appear to be more aggressively income shifting. Grubert et al. (1993) and Mills and Newberry (2004) both study whether foreign controlled U.S. companies pay less U.S. tax than non-foreign controlled U.S. companies. Grubert et al. (1993) documents that foreign-controlled U.S. firms have a lower ratio of taxable income to assets as compared to domestic firms and that 37% of its sample of foreign-controlled corporations report near-zero taxable income on a persistent basis. The authors recognize that the difference between the taxable income of foreign-controlled corporations and U.S.-controlled corporations could be explained by purchase accounting, exchange rate fluctuations and differences in leverage ratios. Yet, even after controlling for such items, Grubert (2003) still finds evidence that foreign-controlled corporations engage in significant tax motivated transfer pricing.

However, in his discussion of Grubert et al. (1993), MacKie-Mason finds the effect of transfer pricing on profitability, which the authors suggest accounts for up to 50% of the difference in reported profits, to be too large. Blouin et al. (2005) extends Grubert et al. (1993) by comparing the taxable income of U.S. firms that were acquired by foreign corporations to the taxable income of U.S. firms acquired by domestic firms. Consistent with MacKie-Mason’s skepticism of the Grubert results, Blouin et al. (2005) finds no evidence that

foreign-acquired corporations pay significantly different levels of U.S. tax than domestically-acquired corporations.

Somewhat related to the notion that multinational firms tax plan to the detriment of the U.S. Treasury, several papers investigate whether foreign activity reduces firms' tax burden on domestic earnings. Collins and Shackelford (1995) use 1982–1991 Global Vantage data to investigate two questions: (1) Do U.S. multinational firms face a different tax burden than companies that only do business domestically? (2) Do U.S. multinationals have different tax burdens than multinationals incorporated in other jurisdictions (Canada, Japan, and the United Kingdom)? Ultimately, Collins and Shackelford (1995) documents that Japanese firms face the highest domestic tax costs and that U.S. and U.K. multinational firms faced greater domestic tax burdens than their domestic-only peers.⁷ Markle and Shackelford (2010) expands the Collins and Shackelford (1995, 2003) analyses to 79 countries. Their results confirm that Japanese firms appear to face the highest income tax burdens. Interestingly, Markle and Shackelford (2010) also documents that firms' effective tax rates have been steadily dropping over time. However, the paper finds little evidence that multinational firms face greater tax burdens than their domestic counterparts.

Harris et al. (1993) reports that the U.S. tax liabilities of U.S. MNCs with tax haven affiliates are significantly lower than those of otherwise similar U.S. firms over the 1984–1988 period, which may be indirect evidence of aggressive income shifting by firms with tax haven affiliates. In a study similar to Harris et al. (1993), Dyreng and Lindsay (2009) documents that U.S. multinational firms with affiliates located in tax havens have a 1.5% lower effective tax rates.

Finally, there is some work that is attempting to explain the policy implications of transfer pricing. Bartelsman and Beetsma (2003) investigates income shifting among OECD countries. Consistent with firms responding to cross-country tax incentives, the authors document that over 65% of the potential revenue of a unilateral tax increase is lost due to a decrease in the reported tax base. The Bartelsman and Beetsma

⁷ Collins and Shackelford (2003) revisits the Collins and Shackelford (1995) findings and adds Germany to their analysis. The paper has similar inferences as Collins and Shackelford (1995).

results suggest that income shifting within the OECD is so pervasive that countries' abilities to use tax rates to raise revenue is essentially non-existent. Markle (2011) endeavors to understand the roll of territorial and worldwide systems of taxation on firms' transfer pricing behavior. To date, it is an unanswered question as to whether MNCs facing a worldwide regime are less incentivized to shift profits because these firms' tax savings are merely deferred (i.e., there is eventually a repatriation tax), rather than permanent as is typical for MNCs domiciled in a territorial regime. Using 2006 data, Markle (2011) finds evidence that territorial firms undertake more income shifting than worldwide firms. This result will certainly be of interest to U.S. policy makers as they continue to struggle with the decision to maintain the U.S.'s worldwide tax regime.

Overall, the literature provides a substantial body of evidence indicative of MNC transfer pricing activity. However, we have very little evidence about the non-tax trade-offs that firms make when considering the level of income shifting. Hence, I believe that empirical work which attempts test theories put forth in papers such as Baldenius et al. (2004) will be of interest to the academy.

5

Non-Tax Considerations

Although tax considerations are an important in firms' choices of investment location, they are clearly second order effects relative to the reason a firm invests overseas. Said another way, a firm is not likely to move tangible assets overseas solely for tax reasons.¹ However, once the decision to go abroad has been made, taxes become a priority. Although the focus of this review is the role of taxes on foreign direct investment, my analysis would not be complete without some discussion of the relevant non-tax considerations. After all, the limits to tax planning are correlated with non-tax considerations.

Consider that a country's tax regime could be correlated with the level of its infrastructure. For manufacturing enterprises, infrastructure requirements likely dominate any tax planning incentives. However, this may not be the case for sales or distribution centers. Another constraint to tax planning maybe the reluctance of firms to alter their internal transfer pricing regime. If firms are unable to decouple tax-related transfer pricing from managerial incentive-related transfer pricing then firms may forfeit the tax savings in order to preserve its

¹This is not the case, however, for highly mobile capital such as intangibles (see Drucker, 2011).

compensation/evaluation structure. Finally, there has been some recent work regarding the role of accounting in firms' investment and repatriation decisions. In particular, researchers have been investigating whether the accounting rules pertaining to tax obligations on future repatriations may real firm behavior.

5.1 Non-tax Issues Related to Location Decision

For manufacturing location decisions, non-tax considerations are very important (Wilson, 1993). Without the appropriate infrastructure, it would be too costly to develop a manufacturing facility regardless of the tax benefits. In particular, industry, production, country and/or firm-specific non-tax attributes likely drive much of firms' location decisions.

Consider that country-specific attributes, such as the availability of skilled labor, are critical in pre-production stages (e.g., research and development or regulatory approval). However, industries facing disparately high pre-production costs typically have low marginal costs of production (e.g., high tech and pharmaceuticals) and, therefore, can locate manufacturing in a variety of jurisdictions. Hence, at this production phase, country-specific factors become relatively less important, particularly as tax considerations grow in importance. High intangible businesses are typically able to move capital and profits thereby creating the opportunity for relatively aggressive income shifting activity. Clearly firm-specific concerns (e.g., managerial incentives, coordination issues) and/or governmental restrictions will decrease the scope of a firm's tax planning opportunities. Wilson (1993) ultimately finds that governmental restrictions, rather than a firm's internal constraints, are the greatest inhibitor to aggressive tax planning via transfer pricing.

5.2 Accounting Considerations

Section 3.2.1 above describes how the deferral of any applicable repatriation tax burden alters MNCs' investment decisions. However, another interesting angle of repatriation activity is how deferral also provides the opportunity for firms to manage the repatriation tax expense for financial reporting purposes. As described in Blouin et al. (2012a),

financial reporting rules prescribe the amount and timing of MNCs' expense recognition in accounting earnings for the repatriation tax. The general rule under FASB ASC 740 — Income Taxes (ASC 740) requires MNCs to recognize a repatriation tax expense for the actual or expected repatriation tax when earnings are generated in affiliates located in low-tax countries. Consequently, when MNCs reinvest foreign earnings abroad, ASC 740 requires them to estimate and recognize a repatriation tax expense in accounting earnings before the MNCs pay the repatriation tax.

Under accrual accounting, it might seem obvious that firms ought to accrue the anticipated repatriation taxes at the point the foreign earnings inure to the firm. However, FASB ASC 740-30-25-17 — Indefinite Reversal Exception (formerly APB No. 23 and hereafter referred to as the Indefinite Reversal Exception) provides an exception to the general rule whereby an MNC can defer recognition of any repatriation tax expense until repatriation. In order to qualify for this exception, the MNC must claim that the foreign earnings are indefinitely reinvested abroad (hereafter referred to as permanently reinvested earnings or “PRE”). Thus, the Indefinite Reversal Exception introduces financial reporting consequences to reinvestment and repatriation decisions for MNCs that routinely utilize the PRE designation on undistributed foreign earnings.

Specifically, when an MNC reinvests foreign earnings and designates them as PRE, it recognizes the foreign income with no corresponding repatriation tax expense, thereby increasing accounting earnings relative to earnings when foreign earnings are either repatriated or not designated PRE. If the MNC eventually repatriates these earnings, it must recognize the repatriation tax expense with no corresponding income, resulting in a large decrease in earnings. As a result, the Indefinite Reversal Exception creates reporting disincentives to repatriate foreign profits incremental to tax factors documented in existing literature.

Further, if a firm uses the PRE designation regularly, even a decision to repatriate current earnings will decrease earnings relative to prior periods. This decrease occurs because the MNC recognized foreign earnings but not a repatriation tax expense in those prior periods. In contrast, an MNC that foregoes the PRE designation recognizes

	I		II		III	
	Year 1 and Year 2 Repatriate current earnings	Year 1 Do not repatriate current earnings & do <i>not</i> designate as PRE	Year 2 Repatriate current and prior earnings <i>not</i> previously designated as PRE	Year 1 Do not repatriate current earnings & designate as PRE	Year 2 Repatriate current and prior earnings previously designated as PRE	
Pre-tax earnings	\$3,000 (\$1,000 Foreign and \$2,000 Domestic)	\$3,000 (\$1,000 Foreign and \$2,000 Domestic)	\$3,000 (\$1,000 Foreign and \$2,000 Domestic)	\$3,000 (\$1,000 Foreign and \$2,000 Domestic)	\$3,000 (\$1,000 Foreign and \$2,000 Domestic)	
Foreign Tax Expense	100	100	100	100	100	
US Tax on US Earnings	700	700	700	700	700	
Repatriation Tax Expense	250	250	250	0	500	
After-tax earnings	1,950	1,950	1,950	2,200	1,700	
Repatriation Tax paid	250	0	500	0	500	
Effective Tax Rate	35%	35%	35%	26.67%	43.33%	

Fig. 5.1 Tax and financial reporting effects of repatriation.

both foreign earnings and a repatriation tax expense in the accounting period during which the earnings are generated, thereby separating the reinvestment and repatriation decisions from their financial reporting consequences.

Figure 5.1 illustrates the interaction between tax and financial reporting. In scenario I, the MNC is presumed to repatriate all current foreign earnings over a two year period. Because the MNC faces a 35% U.S. tax rate, the MNC accrues and pays a \$250 repatriation tax. The MNC's aggregate tax expense for each year is \$1,050 which is 35% of its \$3,000 of worldwide income. Scenario II illustrates the financial reporting implication to the MNC when it chooses not to repatriate year 1 earnings until year 2. In addition, the MNC does not designate any of its unremitted foreign earnings as PRE. Notice that the financial reporting consequences to the MNC in scenario II are identical to those in scenario I: the MNC has accrued tax expense of \$1,050 in both periods resulting in a 35% effective tax rate. The key difference between the two scenarios is that the year 1's tax payment is deferred until period 2.

Once a firm designates foreign earnings as PRE, recognition of the repatriation tax expense in a subsequent accounting period will decrease earnings relative to prior periods because it must recognize the

repatriation tax expense that it deferred in prior years. Thus, accounting expense recognition is an additional consequence of repatriation because after-tax financial accounting earnings decrease when firms repatriate earnings that were previously designated as PRE. Scenario 3 illustrates this result because MNCs that designate earnings as PRE in year 1 (Scenario III) report lower after-tax earnings in year 2 than MNCs that did not designate earnings as PRE (Scenario II). Notice that even if an MNC only repatriates its current earnings (Scenario I), if the firm had regularly been designating its undistributed foreign earnings as PRE (Year 1 of Scenario III), it will still face a relatively greater aggregate tax expense in the year of the repatriation as compared to periods when it designated all foreign earnings as PRE. Consistent with the importance of tax expense deferral, Graham et al. (2011) report that U.S. MNC executives rate expense deferral as an important factor in the decision to reinvest foreign earnings.

In Blouin et al. (2012a), the authors find evidence that U.S. MNCs' real behavior (i.e., the decision to repatriate cash from abroad) is affected not only by the cash outflows attributable to repatriation taxes but also by the financial reporting implications of the repatriation taxes. Although firms are required to disclose the magnitude of the repatriation tax burden in the footnotes of their financial statements very few do. Some have argued that this is because the average U.S. MNCs' tax liability on repatriations is small. However, anecdotal evidence seems inconsistent with this conjecture. First, MNCs have lobbied extensively for an additional repatriation holiday (see Chambers and Catz, 2010). If MNCs' anticipated repatriation taxes were inconsequential then why would MNCs incur these lobbying costs? The level of effort involved in lobbying suggests that the estimated repatriation tax liability is fairly significant. Second, U.S. MNCs are borrowing domestically rather than repatriating funds abroad. In the fall of 2010, Microsoft borrowed \$4.75 billion even though it reported \$36.8 billion in cash on its balance sheet. Although Microsoft received very favorable terms for its borrowing, the firm still incurred the costs to secure the borrowing and is paying interest rather than the incremental repatriation tax burden (see Burne, 2010). Third, U.S. MNCs lobbied extensively to have the Indefinite Reversal Exception included

in International Reporting Standards (IFRS). While both U.S. GAAP and IFRS allow firms to avoid recognizing the potential U.S. repatriation tax liability, the topic received scrutiny as part of the IASB and FASB short-term convergence project on income taxes. In fact, the Global Oversight Committee of the Financial Executives Institute claims that the adoption of a non-U.S. accounting standard treatment for unremitted earnings would have been “a disaster for U.S. companies” because U.S. tax and accounting structures are fundamentally different from European structures. The group successfully lobbied to the European Roundtable to have the issue of Indefinite Reversal Exception rescission removed from the Financial Accounting Standards Board and International Accounting Standards Board convergence project.² Once again, it seems unlikely the MNCs’ repatriation tax obligations are immaterial given the lobbying efforts and the comments of the Financial Executives Institute.³

Also, a unique feature of the AJCA was that the Act limited the benefits of the tax holiday to the greater of \$500 million or the firm’s reported PRE in its financial statement filed on or before June 30, 2003. Interestingly, this requirement seems to have prevented some firms’ repatriations under the terms of the AJCA (see, for example, Caterpillar’s 2005 10-K). Because of this instance of book-tax conformity (i.e., the benefits of the AJCA were potentially limited based on the financial reporting construct of PRE), the AJCA highlighted the notion of PRE to the public.

Much has been written about MNCs’ level of PRE subsequent to the AJCA. Essentially, may conjecture that firms’ PRE represents overseas cash that firms are somehow hiding from the U.S. tax authorities (See <http://www.efinancialnews.com/story/2011-06-20/us-seeks-deals-for-foreign-cash-stash>). Although some PRE is likely in cash, a

²[http://www.thefreelibrary.com/Technical+committee+profile:+Global+Oversight+Committee+\(GOC\).-a0130779987](http://www.thefreelibrary.com/Technical+committee+profile:+Global+Oversight+Committee+(GOC).-a0130779987).

³MNC management may be disinclined to disclose repatriation tax obligations as Collins et al. (2001) and Bryant–Kutcher et al. (2008) both find evidence that the market discounts the value of the firm for the estimated repatriation tax obligation. Consistent with PRE designations being predicated by capital markets incentives, Krull (2004) finds that firms designate more earnings as PRE (thereby recognizing relatively lower income tax expense) when the firm is more likely to miss an earnings target.

substantial amount is also likely to be invested in non-cash assets. If PRE is not in liquid assets, then it is harder for policy makers to argue to these unremitted profits are an easy revenue source. Work by Blouin et al. (2012b) attempts to measure where and in what type of assets PRE is located.⁴ I believe that research that helps us understand the role of the PRE assertion on firm liquidity will be of great interest to many constituencies. Note that this work can potentially provide insight on the consequences of the shift by the U.S. to a territorial regime. If U.S. MNCs have reinvested earnings into assets such as property, plant and equipment, then PRE can help us ascertain whether companies will have to divest of hard assets in order to pay any transition taxes associated with the conversion to a territorial regime.

⁴Blouin et al. (2012b) find evidence suggesting that less than a third of PRE is in cash.

6

Recent Developments in the Taxation of U.S. Multinational Corporations

The Kennedy, Carter and, recently, the Obama administrations have all considered or proposed repealing deferral which would subject all unremitted foreign profits to immediate U.S. taxation. However, the repeal has never made significant headway in the legislature. Rather, as discussed above, Congress typically resorts to adjusting or tightening various techniques MNCs have used to either reduce any taxable repatriations or increase the FTC attached to the repatriated earnings.

U.S. MNCs have been using mergers and acquisition transactions, the treaty network, and complex foreign structures to artificially inflate foreign source income which typically increases the creditable amount of foreign taxes. Recent legislation effectively prevents U.S. MNCs from claiming foreign tax credits on foreign source income that is not subject to current U.S. taxation. In 2010, Congress focused on eliminating techniques that U.S. MNCs have developed to split foreign taxes from the foreign income on which those taxes were paid.¹ In 2008, the U.S.

¹For example, in Pub. L. No. 111-226, the *Education, Jobs and Medicaid Assistance Act of 2010*, \$10 billion of revenue to cover elementary and secondary education teacher salaries was projected to be generated by altering various rules that corporations leverage to calculate their foreign tax credits and foreign-source income. These provisions attack methods

attacked transactions that could be viewed as defacto repatriations (e.g., Killer B, Deadly D, etc).

However, one reason that U.S. MNCs pursue aggressive tax planning is because much of their competition, non-U.S. domiciled MNCs, faces a territorial system. U.S. MNCs often argue that because they are unable to repatriate income to the U.S. without paying an incremental tax that they are unable to invest as efficiently domestically thereby deterring economic growth. MNCs argued that a reduction of the repatriation tax rate would yield benefits such as increasing domestic job opportunities (see Chambers and Catz, 2010). Others have argued that deferral has led firms to move much of their incremental investment abroad. Therefore, domestic job opportunities will increase if the preferential treatment of foreign source income is repealed.

Opponents of deferral also believe that its repeal will lead to increased tax revenues. However, there is substantial uncertainty in the amount revenue that would be raised. Although in 2011 firms have over \$1.3 trillion in foreign earnings reinvested abroad, the revenue sought to be raised may be elusive either because the tax hikes will harm U.S. exports and jobs or because U.S. MNCs will merely alter their organizational structure to avoid the tax. Also, critics argue that the repeal of deferral may lead U.S. MNCs to sell their foreign operations to foreign controlled firms (Keis, 2007). If a territorial-based MNC only faces a 10% tax rate on a foreign business's profits but a worldwide-based MNC faces an additional 25% tax on all earnings, all else equal, the foreign business will be more valuable to the territorial-based MNC. This may result in the repeal of deferral driving more jobs overseas instead of creating them domestically. Lastly, it is difficult to see the merits of raising taxes on U.S. MNCs when the U.S. needs to be taking steps to promote competitiveness.

Interestingly, while the Obama administration is attempting to limit MNCs repatriation tax planning, many U.S. MNCs have been actively

that U.S. MNCs have developed to utilize the foreign tax credits to reduce their U.S. tax without incurring any additional tax on the corresponding foreign income. See Byrnes (2010).

lobbying for an additional temporary reduction in repatriation taxes.² As the theory above addresses, worldwide taxation does not impede U.S. domestic investment. Rather it decreases the competitiveness of the U.S. MNC as compared to its territorial-based foreign competitors. If there were investment opportunities in the U.S., U.S. firms should be able to borrow and invest. As there was little evidence that the AJCA increased domestic employment, it is unlikely that any subsequent tax holiday will have any effect on domestic employment.

Regardless of which side of the debate one falls, data does suggest that as MNCs increase foreign investment they also increase domestic investment (Desai et al., 2005). If aggregate investment creates jobs, then as MNCs increase employment abroad, they also increase employment domestically. But simply reducing domestic tax rates on foreign earnings, does not necessarily directly increase domestic investment. Recall that Blouin and Krull (2009) and Dharmapala et al. (2011) document that the marginal use of funds repatriated under the AJCA was share repurchases. Clearly, work that helps inform policy makers about the ramification of either the repeal of deferral or the impact of adoption of the territorial system would be of broad interest to academics and policy makers alike.

²See the Working to Invest Now (WIN) in America coalition: <http://www.winamericacampaign.org/supporters/>.

7

Conclusion

In this review, I attempt to aggregate the large body of international tax literature in a manner that may be useful to researchers interested in understanding the role of taxation on multinational corporate investment. Although research clearly suggests that taxes have a substantial effect on MNC investment and tax planning, the difference in welfare consequences between territorial and worldwide systems of taxation still is not clear. As Japan and the U.K. have recently dropped their worldwide tax regimes in favor of a territorial system, the U.S. is the remaining major economy still using the worldwide regime. Now, U.S. MNCs will likely increase the pressure on the current administration to either implement another repatriation tax holiday or, even, adopt the territorial system. Regardless of what regime shifts U.S. firms face in the coming years, taxes will likely continue to significantly influence MNC behavior.

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