Tax Incentives and Domestic Investment:
An Empirical Analysis of the Repatriation Decisions of U.S. Multinational Corporations Following the Implementation of the Homeland Investment Act of 2004

by

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ABSTRACT

I investigate the reaction of states and multinational corporations to §965 of the Homeland Investment Act of 2004. The Act created a temporary tax holiday for dividends returned to the United States parent corporations from controlled foreign corporations. This was a one-time reduction in the tax rate on these dividends which yielded a window in which to observe reactions to tax incentives by two parties.

I first examine the decision process used by states when determining whether to conform to or decouple from federal legislation. Using a logistic regression model, I examine decisions made by states for nine previous federal tax reductions. I find that the only significant predictor of a state's decision to conform to federal legislation is the amount of any spending overruns at the time of the decision. I then investigate the effects of a state's decision to conform to §965 on the repatriation behavior of firms headquartered in that state. My results show that any tax burden at the state level is overwhelmed by the magnitude of the federal tax break, thus rendering the decision of the state inconsequential.

The next portion of my research considers the sources and uses of funds repatriated by firms under §965. In exploring the sources of funds, I find that firms returned a small portion of funds classified as permanently reinvested in foreign subsidiaries, while the remainder of funds repatriated was simply an acceleration of monies already slated to return back to the U.S. Finally, I analyze the uses of these funds and find that, consistent with prior research, firms who repatriated monies under §965 increased share repurchases, even though this activity was specifically prohibited. I also find evidence that they used the monies to increase congressionally permitted investments, but I am unable to pinpoint specific activities.

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CHAPTER I
INTRODUCTION

This dissertation focuses on the effects of IRC Section 965 of the Homeland Investment Act of 2004 (hereafter "the Act") on the behavior of U.S. multinational corporations (MNCs) and of the state legislatures for the states in which they are domiciled. Specifically, I look at the response to the implementation of §965, "Temporary Dividends Received Deduction." Section 965 created a temporary tax holiday for dividends repatriated (returned home) from controlled foreign corporations (CFCs) to U.S. parent companies, reducing the maximum tax rate on these dividends from 35% to 5.25% at the federal level, in the hope that U.S. corporations would repatriate funds being held in foreign subsidiaries and reinvest those funds in the U.S.

Chapter II examines the behavior of state governments and multinational corporations in reaction to the incentives created by the tax holiday. Each time new federal tax legislation is put into effect, state legislators have a choice to either conform to federal legislation or decouple from it. To examine the decision process involved in whether a state conforms or decouples to a particular piece of legislation, I analyze nine different federal tax reductions put into place by the federal government over the past eight years. Using a pooled logistic regression model I study the factors that influence the decision to conform or decouple and find that states are consistently influenced by spending concerns. The sole significant factor in states' decisions to conform to federal legislation across different federal tax acts appears to be whether or not the states have control over spending. When states are in a spending overrun position, they are more likely to decouple from federal legislation providing additional tax deductions in the calculation of taxable income.

With regard to the Homeland Investment Act of 2004, I note that about half the states chose not to allow the special dividends received deduction available for repatriation dividends for U.S. multinationals domiciled in their state. While this may have been a rational position for a particular state from a budgetary perspective, it raises the question of whether states' decisions not to cooperate with the federal legislation may have hampered the ability of the federal tax change to accomplish the objectives of Congress.

Specifically, the question arises whether firms domiciled in states that did not allow the one-time dividends received deduction offered by Section 965 were less likely to repatriate foreign earnings (or were likely to repatriate lesser amounts) relative to firms domiciled in more compliant states. I find no evidence to support this concern. In general, the amount of state tax savings generated under the Act for states that conform did not appear to significantly influence firms' repatriation decisions. This is primarily due to the magnitude of tax savings at the federal level. Thus, states who followed the lead of the federal government forfeited a substantial amount of tax revenue.

Chapter III of this dissertation considers the specific sources and uses of the funds repatriated under §965. Congress intended for firms to repatriate funds designated as permanently reinvested in foreign subsidiaries. I explore two possible sources of funds – those designated as permanently reinvested and those which are temporarily reinvested. If funds are temporarily reinvested, firms are required to establish a deferred tax liability for the return of these funds to the U.S. My results indicate that firms simply accelerated the return of funds already slated to be paid out as a dividend to the U.S. parent corporation, with only a small portion of the funds originating from earnings designated as permanently reinvested.

Finally, I investigate the uses of these funds by studying the changes in both investments designated as "permitted" and "nonpermitted" under §965. Consistent with prior research, I find that firms who repatriated funds under this Act increased share repurchases, even though this activity was specifically prohibited by the Act. I also find some evidence, however, that overall, firms also used these monies to increase investment in congressionally permitted investments. Because of the nature of these investments, I am unable to pinpoint relations with individual permitted investments.

CHAPTER II

STATE CONFORMITY AND THE DECISION TO REPATRIATE

Introduction

At the state level, the §965 deduction raised interesting policy issues. Most state income taxes are based on taxable income computed at the federal level, often with certain exceptions for federal provisions that states choose not to follow. For example, many states choose not to allow the federal deduction for "bonus" depreciation. With regard to §965, 24 states chose not to allow the §965 dividends received deduction for purposes of computing state corporate income tax liability. The purpose of this chapter is twofold. First, I analyze the decisions of states to either conform or not with a series of nine separate federal tax reductions in order to determine what factors lead states to decouple from federal laws providing additional tax deductions in computing taxable income. Second, I estimate the effect, if any, of differential treatment of the §965 deduction at the state level on U.S. multinational corporations' (MNCs) decisions to repatriate funds invested in foreign subsidiaries.

My results suggest that the only significant factor in the decision for a state to conform to or decouple from federal legislation is the state's budget position from a spending perspective. My results from analysis of MNCs' repatriation behavior suggest that states should have more carefully considered the potential revenues forfeited from conforming to federal tax cuts. I find no significant relation between the amount of funds repatriated from foreign subsidiaries by U.S. MNCs and any state tax savings gained from conformity of the state. Thus, states choosing to follow the federal government's lead in allowing the §965 deduction appear to have given up a substantial amount of tax revenue.

Homeland Investment Act of 2004

Homeland Investment Coalition

The Homeland Investment Coalition (HIC) is a corporate tax coalition comprised of 51 multinational corporations and 11 associations who represent the interests of these

corporations.[1] The goal of this coalition was to encourage legislation reducing or eliminating the federal income tax on repatriated foreign earnings. Not surprisingly, it includes some of the world's largest corporations, and the tech and pharmaceutical sectors are heavily represented.

In 2003, the coalition hired PricewaterhouseCoopers, LLP to lobby Congress on its behalf and spent more than $1.5 million in that effort.[2] The HIC sent a letter to House Ways and Means Committee Chairman Bill Thomas on March 21, 2003, asking him to include the dividend tax holiday in new tax legislation being drafted. Under U.S. tax law, income earned by the foreign subsidiaries of U.S. MNCs is not subject to U.S. income tax until it is repatriated, typically in the form of dividends to its U.S. parent. Such foreign dividends are not eligible for the dividends received deduction allowed against domestic dividends and thus are subject to taxation at the full U.S. corporate tax rate (reduced by any foreign tax credit allowed). The coalition argued that allowing a dividends received deduction for these foreign earnings would generate as much as $135 billion of new investment in the U.S. economy by increasing domestic investment in plant, property and equipment, research and development, job creation, business ventures, and pension plan funding. Further benefits were promised in the form of improving the financial strength of U.S. companies through debt reduction, thereby increasing dividend payouts and stock repurchases, and lowering corporate bond rates. The letter also claimed that if this legislation was not enacted, these funds would never be brought back to the U.S.[3]

This was not an empty promise – in June 2004, J.P. Morgan estimated that over $650 billion of profit earned abroad had never been taxed by the United States. In December of 2005, J.P. Morgan adjusted its estimate to $500 billion of profits that could possibly be repatriated. They also predicted that during the years 2006-2007, the economy would see a 1% increase in GDP per year and 500,000 new jobs, in addition to cash flow of $350 billion into financial markets from S&P corporations (Buechner 2007).[4] Again, all

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[1] Many of the same corporations are also members of the Coalition for Fair International Taxation (CFIT), which has a goal of "international tax reforms, including rate cuts and repatriation of foreign income."

[2] Interestingly, spending did not stop after the passage of the Act in 2004. A report from http://www.opensecrets.org shows that the lobby spent $240K in 2005. No spending was shown for 2006. Last viewed 1/18/2008.

[3] See http://www.itaa.org/taxfinance/docs/thomasltr428.pdf for a copy of the letter. Last viewed 1/18/2008.

[4] This was revised within the same article to an after-tax flow of $324 billion. Other benefits include $75-$100 billion of cash flow through debt issuance, $100 billion of foreign currency conversions, and $100-$200 billion in debt reduction/liability management activities.

parties claimed that, without this legislation, these benefits would not flow into the domestic economy.

This disconnect between foreign earnings and domestic benefits occurs because over the past several decades, companies have used the expanding global economy to find creative but legal ways to avoid paying corporate income taxes, such as creating holding companies in low tax or no tax countries.[5] Because U.S. tax law allows companies to defer paying taxes on foreign income until such income is distributed back to the U.S. parent,[6] U.S. MNCs have a tremendous amount of flexibility in determining when, and even whether, to pay U.S. income tax on the earnings of their foreign subsidiaries.[7]

Homeland Investment Act - Section 965

On October 22, 2004, the work of the coalition was rewarded when the American Jobs Creation Act (AJCA) of 2004 was passed and signed into law. The part of the AJCA that addressed dividend repatriation was called the Homeland Investment Act (the Act). Within it, new code §965 gave firms a one-time incentive that allowed them to deduct 85% of certain cash dividends from controlled foreign corporations (CFCs). Federal tax law generally allows a U.S. corporation to claim the dividends received "deduction" equal to 70% of the amount of dividends received from other *domestic* corporations. This special deduction is designed to avoid excessive U.S. taxation of corporation income, and is therefore generally not available to dividends received from non-U.S. corporations. In this case, Congress was offering corporations a one-time opportunity to pay reduced U.S. taxes on foreign income.

The deduction was available for cash dividends in excess of the three-year base-period average of CFC dividends received by the shareholder. The eligible dividend

[5] In fact, top executives make no secret of this tax strategy. Intel spokesman Chuck Mulloy says "Unless we absolutely need it onshore, we'll keep it offshore to avoid paying a 35 percent tax." (Evans 2004). Before the passage of Section 965, John Hassell, HP's director of state and federal affairs argued that "This (the legislation) is a great opportunity to bring cash into the U.S. economy. Under current tax policy, we won't bring the money back." (Evans 2004).

[6] In general, a U.S. shareholder's (in this case, the corporation) share of earnings of a foreign corporation is not taxable in the U.S. until the income is paid out to shareholder as a distribution. For a controlled foreign corporation (CFC), certain categories of income (so-called "Subpart F" income) are considered highly mobile and are subject to U.S. tax whether or not distributed to their U.S. shareholders. However, all earnings not subject to Subpart F avoid U.S. taxation until they are repatriated back to the U.S.

[7] Foley et al (2007) propose that firms actually hold more cash overseas due to repatriation costs. This would only seem logical based on the above discussion, and in fact they find the firms who would incur higher tax costs when repatriating earnings hold more cash overseas.

could not exceed the greater of $500 million or the amount disclosed as permanently reinvested outside the U.S.[8] Taxpayers could choose to repatriate in either any FYE or CYE between 10/22/2003 and 10/22/2004 or any FYE or CYE between 10/22/2004 and 10/22/2005.[9] To claim the dividends received deduction (DRD) the taxpayer must attach Form 8895, "One-Time Dividends Received Deduction for Certain Cash Dividends from Controlled Foreign Corporations" to its federal income tax return. Before claiming the dividend, corporations were required to draw up a domestic reinvestment plan (DRIP) to be approved by management and the board of directors.[10]

Theory and Literature

The first part of this literature review analyzes the decisions of firms to either repatriate or permanently reinvest earnings, the magnitude of foreign earnings, specific issues with income shifting to minimize foreign taxes, and taxes and repatriation of income from CFCs. The latter part of the literature review will examine the impact of state taxes on this decision.

It is also important to note the negative reaction to this legislation. Many opponents characterize *any* tax holiday as an amnesty; including §965 (for example, see Fleming and Peroni 2004 and Clausing 2005). Although it will take several years to know the full effects of the tax holiday, prior research on state and international tax amnesties provides insight into how corporations might behave in the future as a result of §965 and may provide some insight into why many states may have decided not to follow the federal government's lead in excluding the bulk of foreign repatriations from taxable income.

Factors Contributing to the Repatriation Decision

MNCs have many factors to consider when making the decision to repatriate foreign earnings or invest them, either permanently or temporarily, in the foreign countries in

[8] Based on financial statement disclosures on or before June 30, 2003. The amount of dividend deductible would be reduced if the U.S. corporation increases loans to the CFC and no foreign tax credit is allowed with respect to foreign taxes paid on the deductible portion of the dividend.

[9] As discussed below, most firms chose to repatriate in the second period as the Treasury continued to issue guidance into 2004.

[10] The plan was required to be in writing and "must describe how the dividend is to be reinvested in the United States with reasonable detail and specificity."

which they were earned. One major factor in this decision is the effect of foreign and domestic taxes.[11] As discussed above, corporations are not required to pay U.S. tax on CFC earnings until they are repatriated back to the U.S. parent in the form of a dividend.

In effect, the tax code offers MNCs a large loophole. A growing body of literature confirms that corporations are not ignorant of this opportunity. For example, Evans (2004) reports that nearly 47% of U.S. corporations' foreign earnings in 2001 were located in offshore tax havens. When contrasted with the fact that these tax haven units only accounted for 12.6% of the companies' foreign plant, property and equipment and 9% of their foreign employees, it is apparent that U.S. MNCs take full advantage of the U.S. tax code to minimize domestic taxes by taking advantage of a large deferral opportunity for foreign income not repatriated to the U.S. (Evans 2004).

The magnitude of these foreign earnings cannot be ignored. Hobbs (2001) reports that in 1998, U.S. corporations reported $1.9 trillion of total receipts and $3.9 trillion of total assets from CFCs on their U.S. tax returns. Despite this, large amounts of CFC income remain untaxed by the U.S. government. Evans (2004) notes the J.P. Morgan Chase study from June of 2001 that estimated around $650 billion of profits from U.S. companies earned abroad had never been taxed by the U.S.[12] As noted before, many corporations argue that few of these dollars will ultimately be brought back home without a tax break. Even with a reduced rate of 5.25%, companies would owe a combined total of $34 billion in federal income taxes on the earnings held overseas in 2001, if the J.P. Morgan estimate is accurate.

Income shifting takes many forms. Grubert and Slemrod (1998) jointly examine the location of real activity and income shifting using data for U.S. firms located in Puerto Rico. They find that the two decisions are interrelated, but that firms find any opportunity to shift income to a low-tax jurisdiction attractive. In 2003, Grubert examined the effect of taxes on direct investment. He found that there are definite benefits for a MNC as

[11] The idea of firms shifting income to avoid or defer tax is not a new one. Slemrod (1995) suggests that income shifting is just another example of tax avoidance, "under which, given an asset of real transactions is reclassified for tax purposes." Examples given are income shifting by multinational corporations, shifting via transfer pricing or financial structure to low-tax countries, converting ordinary income into capital gains, converting corporations into pass-through legal entities and retaining labor compensation within the corporation.

[12] Although $650 billion is a large amount, it is only 25% of foreign profits reported in 2001.

compared to a local (single country) corporation. MNCs are better able to shift debt or intangible assets to minimize tax burdens.

Collins et al. (1998) also investigate income shifting and find that those firms with average foreign tax rates in excess of the U.S. tax rate will shift income from foreign countries into the U.S. Unfortunately for the U.S. government; this is a rare situation in the current worldwide tax environment.

Even when faced with a need to repatriate CFC income, corporations still consider the tax costs. Altshuler and Grubert (1996) examine balance sheets of CFCs from 1992 to study real and financial behavior of U.S. MNCs. The study concludes that CFCs are extremely conscious of taxes and that the U.S. MNCs avoid accumulation of financial assets in locations with high tax rates. Specifically, they find that while low-tax affiliates invest in financial assets (including debt and equity of related affiliates) to avoid residual U.S. taxes on repatriation, high-tax affiliates extend trade credit to low-tax affiliates to enable income shifting.

Hines and Hubbard (1990) find that tax considerations are also important in the timing of dividend repatriations. More specifically, Altshuler et al. (1995) find that transitory variations in tax costs influence dividend repatriations but permanent variations in tax costs do not.[13] Desai et al. (2001), report that U.S. taxation of dividends from foreign subsidiaries reduces the volume and efficiency of flows of financial assets between CFCs and their U.S. parents. They estimate that home country exemption of foreign income would increase annual dividend flows from foreign affiliates by approximately 12.8%. If true, the temporary dividends deduction of §965 would be expected to stimulate a substantial amount of dividends to U.S. MNCs from their foreign subsidiaries.

The studies cited above examine the effects of the U.S. federal income tax on dividend repatriation decisions of MNCs. The general implication is that MNCs consider and plan for the consequences of U.S. federal income taxes on dividend repatriations and make considerable efforts to minimize this tax burden. Surprisingly, there appears to be little or no literature on the effects of state taxes on repatriation decisions. However, some

[13] Average repatriation tax prices or statutory tax rates are highly correlated with the instrumental variable permanent tax costs, but uncorrelated with transitory tax costs. A transitory tax cost would be a temporary decrease or increase in a rate or a temporary change in computing taxable income that affected the amount to be repatriated.

studies have documented that state tax burdens do impact the decisions of U.S. companies regarding the location of new or expanded operations.

In fact, researchers have been interested in whether state taxes and economic climate affect location decisions of firms for nearly 30 years. Using an econometric model of factors affecting location decisions, Carlton (1979) and Carlton (1983) find that state taxes had virtually no effect on where a corporation chose to locate its business activities. Several studies in the 1980s contradict this, finding that state tax rates had moderate to significant negative effects on employment growth and location decisions (Schmenner 1982; Newman 1983; Plaut and Pluta 1983; Bartik 1985; Wayslenko and McGuire 1985).

With the passage of the Tax Reform Act of 1986 (TRA 86), the spotlight was again on firm behavior, with researchers focusing on tax planning and location decisions, but at a multinational level. TRA 86 drastically altered interest allocation rules and limited the foreign tax credit.[14] Because this provision reduced the attractiveness of domestic debt, we saw a shift in firm behavior. Collins and Shackelford (1993) finds that firms issued preferred stock rather than debt, and Froot and Hines (1994) observe that firms in an excess foreign tax credit position reduced borrowing and investing, increased lease commitments and scaled back foreign operations.

Two other concurrent papers studied income shifting related to the passage of TRA 86. Harris (1993) finds that firms that were most capital intensive, and therefore most heavily penalized by the new foreign tax credit limitations, invested in more capital overseas. Other corporations simply shifted income rather than operations. Klassen et al. (1993) examine changes in worldwide income tax rates along with the changes of TRA 86 and find that firms actually shifted income into the U.S. in 1986-87 but then shifted it back out in the next few years as worldwide tax rates declined significantly.[15]

[14] The allowable foreign tax credit is limited to either foreign tax paid, foreign source income times the U.S. tax rate or worldwide income times the U.S. tax rate. When calculating foreign source income prior to TRA 86, interest on U.S. debt was a large allocable deduction. TRA 86 increased this allocation, which lowered foreign source income for all corporations with domestic debt. In effect, firms were forced to choose between maximizing the allowable foreign tax credit and issuing domestic debt.

[15] Also, Kemsley (1998) finds that after TRA 86 firms are willing to make real changes in production decisions and locations on a multinational scale, along with "paper" adjustments using accounting and financing transactions.

Around this time, there was a renewed interest in the effect of taxes on location decisions.[16] Carroll and Wayslenko (1994) look back at all of the previous literature on state tax effects on growth, employment and location decisions. They deduce that a regime-shift occurred during the early 1980s, and at this time state growth rates became less responsive to state taxation.

Lightner (1999) provides an explanation for these results. She studies apportionment systems in individual states to determine the effect of the formula on economic development and corporate tax planning. She concludes that most of the apportionment changes happened in the 1980s (during the regime shift mentioned above) and the differences in the formulary apportionment no longer have a strong effect on employment growth. In fact, she suggests that it is indeed the corporate tax rate that affects employment growth and states should consider lowering state tax rates rather than manipulating apportionment formulas to stimulate employment growth.[17]

Although no research has specifically focused on the effect of state taxes on the repatriation decision, prior research seems to indicate that taxes at the federal level are not the only consideration. State tax rates, income shifting ability, timing and capital structure decisions are all factors that may impact companies' decisions about whether and how much to repatriate under §965.

Hypothesis Development

The previous discussion provides clear evidence that the passage and implementation of tax legislation is not a simple process. Corporations and government agencies alike exhibit various behavioral responses designed to place them in the most advantageous tax positions. I examine the reaction of these firms and the behavior of the states when the structure of taxation was temporarily changed with the passage of the Homeland Investment Act of 2004. I begin that examination by evaluating the monetary impact of the HIA.

[16] An additional stream of literature focuses on capital structure and financing decisions to minimize income taxes. See Mackie-Mason and Gordon (1997), Newberry (1998), Desai et al (2003) and Mills and Newberry (2004).

[17] The findings of Altshuler et al (1998) seem to support this idea as well. They find that on the multinational level, foreign investment of manufacturing firms is sensitive to host country tax rates. In addition, they find the allocation of capital by parents to foreign countries is also sensitive to the host country tax rate.

At the state level, I study the motivations of states to either decouple or conform to nine separate pieces of federal tax legislation. I predict that states will act in accordance with their own self interests, but that they might not choose the most short-term profitable option. For example, states facing a spending overrun or a budget shortfall might decouple from legislation due to a need for additional tax revenue. States with more revenue to lose may also choose to decouple, despite the long-term reputational consequences from being known as a high-tax state.

Next, I examine the effect that state taxes had on the decision of firms to repatriate earnings under the holiday. Specifically, I predict that state taxes will play a part in the decision of a multinational corporation to repatriate earnings under the Act, discouraging firms in states that decouple from repatriating as much income as firms in states that conformed.

States' Decisions to Conform to Federal Tax Law

Although most state income taxes "piggy back" the federal income tax, states often choose not to conform to specific provisions of the federal tax code. For any given federal tax incentive, the anticipated behavior of firms that pay taxes in their states should be a consideration of state legislatures' decision to conform. If firms do not consider state taxes to be an important consideration in their decision to do business in a state or to repatriate earnings, then all states should decouple from federal tax reductions so as not to lose tax revenue. There are a number of reasons that individual states might have chosen not to conform to the provisions of §965 and other federal tax legislation.[18]

Twenty four states chose to conform to §965 and in doing so possibly forfeited a large amount of tax revenue. Examining the factors that contributed to each state's decision to either conform to or decouple from nine separate federal tax reductions should provide insight into the state decision making process. Many factors could contribute to this decision, but it would be logical to assume that states with higher tax rates are less "tax friendly" and would be more interested in the impact of the conformity decision on state revenues than in corporate objections to the increased tax burden. This leads to the following hypothesis, stated in alternative form:

[18] Note that no prior literature exists in this area to assist with my predictions other than the amnesty literature.

H1a*: Controlling for other potentially confounding factors, there is a negative relation between states' decisions to conform to federal tax legislation and the corporate tax rate imposed by the state.*

It would also be reasonable to expect that short-term budget concerns may override longer-term concerns of appearing tax-friendly to corporations. LeBorgne (2006) finds that states facing budget deficits are more likely to declare tax amnesties as a mechanism to raise revenue in the short-term. In this situation, states that are facing heavy budget deficits will be highly unlikely to forgo additional tax revenue by conforming to federal legislation. This leads to the following hypothesis, stated in alternative form:

H1b*: Controlling for other potentially confounding factors, there is a negative relation between states' decisions to conform to federal tax legislation and the amount of state budget deficit or spending overruns.*

The Effect of State Taxes on Corporate Repatriation Behavior

The dividend tax holiday created by the HIA temporarily changed the taxation of foreign income repatriated from CFCs by U.S. MNCs. Firms that were holding cash overseas were given an incentive, in the form of a large tax break, to immediately repatriate foreign earned income not yet taxed by the U.S. government. However, there are a number of disadvantages still facing firms that might discourage them from taking advantage of the opportunity provided by §965. Indeed, this legislation provided firms with a large *federal* tax holiday. The federal tax benefit is offset to some extent, however, when states choose not to allow the deduction in computing state level taxable income. Lippman and Amitay (2005), note that firms should consider state and other local taxes when making the decision to repatriate earnings. Table 2.1 illustrates the cost of repatriation and combined tax burden before and after the legislation.

Table 2.1 State Taxes and the Cost of Repatriation

2004/2005 Cost of Repatriation		
	Company A	**Company B**
State Tax	Indiana	New Hampshire
State Rate	8.50%	8.50%
Conformed to legislation?	Yes	No
Amount repatriated	$500,000,000	$500,000,000
Federal Tax	$500,000,000 * 5.25% = $26,250,000	$500,000,000 * 5.25% = $26,250,000
State Tax	$500,000,000 * 1.275%[19] = $6,375,000	$500,000,000 * 8.50% = $42,500,000
Combined Tax	$32,625,000	$68,750,000

Combined Tax Burden – Before and After Section 965		
	Before §965	**After §965**
State Tax	Indiana	Indiana
State Rate	8.50%	8.50%
Federal Tax	$500,000,000 * 35%= $175,000,000	$500,000,000 * 5.25% = $26,250,000
State Tax (net of federal tax savings)	$500,000,000 * 8.50% = $42,500,000	$500,000,000 * 1.275% = $6,375,000
Combined Tax Burden	$217,500,000	$32,625,000

As illustrated above, the company that repatriates in Indiana, a state that conformed to §965 pays $36,250,000 less tax than the one who repatriates in New Hampshire. This would indicate that firms should consider the large amount of state taxes imposed if the state does not conform to the legislation. The second table demonstrates the combined federal and state tax burdens before and after §965. At the federal level, a firm that repatriates $500,000,000 saves $148,750,000 in taxes by taking advantage of the dividend tax holiday. The magnitude of federal taxes saved substantially exceeds the state tax burden.

Thus, the question is whether state taxes are large enough to significantly impact firms' repatriation decisions. If they are, then states may lose revenue whether or not they conform to federal tax legislation that reduces reported taxable income. If they are not, however, then state legislators may question why a state should ever conform to federal

[19] This number represents 15% of the earnings subject to state tax. 15%*8.50% = 1.275%.

legislation offering additional tax deductions. I test this directly with the following hypothesis:

H2*: Controlling for other potentially confounding factors, there is a positive relation between the amounts repatriated by firms and the tax savings at the state level.*

Model Specification

State Decision Model

I investigate the factors that lead states to either conform or decouple from nine separate federal tax reductions since 2002. My first hypothesis predicts that states with a higher level of state taxes are less likely to conform to federal tax reductions. The decision to conform or decouple is modeled as a function of state tax rate and other variables that could contribute to the decision of the state. I interpret a negative relation between the decision to conform and state tax rate as an indication that there is an association between the decision to conform and the rate of tax imposed by the state.

Hypothesis 1b addresses another aspect of a state's decision to conform to any given federal tax reduction. As discussed above, LeBorgne (2006) finds that states facing a budget deficit are more likely to declare an amnesty to raise revenue in the short-term. I predict that states facing a budget deficit or a spending overrun are less likely to conform to federal legislation, with this effect becoming more significant as the magnitude of the deficit or overrun increases. I examine both hypotheses with a pooled logistic regression that contains state decisions and values for independent variables for nine separate tax reductions.

The state decision model is presented in equation (2.1):

$$\text{logit } P(STATEDECISION_{it} = 1) = \beta_0 + \beta_1 LEGISLATION_{it} + \beta_2 STATERATE_{iti} + \beta_3 BUDGETGAP_{it} + \beta_4 SPENDINGOR_{it} + \beta_5 PARTY_{it} + \beta_6 AMNESTY_{ti} \tag{2.1}$$

where:

$STATEDECISION_{it}$ =1 if state *i* conformed to legislation at time *t*, 0 otherwise;

$LEGISLATION_{it}$ =class variable that represents each of the nine federal tax reductions;

$STATERATE_{it}$ =tax rate in effect for state *i* at time of federal tax reduction;

$BUDGETGAP_{it}$ =amount of state budget deficit for state *i* at time of federal tax reduction;

$SPENDINGOR_{it}$ =amount of spending overrun for state *i* at time of federal tax reduction;

$PARTY_{it}$ =% of Republican legislators for state *i* at time of federal tax reduction; and

$AMNESTY_{it}$ =# of statewide amnesties previously granted by state *i* at time of federal tax reduction.

In this model, the dependent variable of interest is $STATEDECISION_{it}$, a categorical variable set to 1 if the state conformed to the selected legislation and 0 otherwise. Included in the model is a class variable for legislation, which includes a dummy variable in the model for each of nine pieces of legislation. The first independent variable of interest is $STATERATE_{it}$, measured as the maximum state corporate income tax rate in effect at the time of the passage of the federal legislation. Because states that have a high tax rate should be more reliant on corporate tax revenues, I expect this variable to be negatively associated with the decision to conform to any given legislation.

The next two variables test H1b. $BUDGETGAP_{it}$ represents the amount of a budget deficit at the time of the passage of the specific legislation. No states in the sample reported a budget surplus in my sample period. $SPENDINGOR_{it}$ equals the amount of any unplanned spending in any category in the state budget. This is different from a budget deficit in that a state could have a spending overrun but still be within budget parameters due to lower spending in another budget category. Assuming states with budget deficits and spending overruns are in need of additional cash from tax revenue, both variables should be negatively associated with the decision of a state to conform.

I include two additional control variables. The first control variable is $PARTY_{it}$, which represents the percentage of state legislators in each state that are members of the Republican Party. Historically, members of the Republican Party are perceived to favor tax cuts and to view spending cuts as the appropriate response to budgetary shortfalls. If this perception is true, the percentage of state legislators belonging to the Republican Party should be positively correlated with state conformity decisions. Moreover, tax cuts

for the last eight years were passed by a Republican Congress and administration. It is likely that states with Republican-controlled legislatures may have been more supportive of the legislation than states with Democratic controlled legislatures. If true, then those states with a Republican majority would be more likely to conform to federal legislation. I expect a positive association between $PARTY_{it}$ and the decision to conform.

My final variable, $AMNESTY_{it}$, represents the number of amnesties granted by a state in the past. This variable is an indicator of the leniency of the state in tax collection and the willingness to implement tax breaks. I would expect a state that has instituted more amnesties to be more likely to implement the provisions of any tax reduction; therefore $AMNESTY_{it}$ and the decision to conform should be positively related.

Firm Repatriation Model

I now turn specifically to firm behavior related to the provisions of §965.To test my hypothesis that state taxes were an important factor in a firm's decision to repatriate dividends under §965, I examine the relation between amounts actually repatriated by sample firms and whether or not their home states decoupled from §965. For firms included in my sample, I gather amounts repatriated in response to the dividend tax holiday and model them as a function of the state position and several control variables. The amount repatriated is the dollar amount disclosed by the firm as repatriated in the form of a dividend from a CFC under the provisions of §965.

My second hypothesis (H2) predicts a positive relation between the amount repatriated by firms under §965 and the tax savings gained from being domiciled in a state that conforms to the federal tax holiday. The dependent variable in this analysis is amount repatriated, which is bounded at zero. Furthermore, because only 245 firms out of 1,156 took advantage of the dividend tax holiday, many of the variables in the sample take on a value equal to zero. In cases where the dependent variable is bounded at a certain value and a large number of observations in the sample are equal to that bound, Tobit regression is a more appropriate model than ordinary least squares regression (Greene 1981).

The Tobit regression model is motivated using a latent variable (u instead of y), the value of which depends on predictor variables included in the model. Despite

accommodating for the bounded dependent variables mentioned above, Tobit regression also assumes normality in the error terms of the latent variable equation when Tobit is used with the normal pdf (Greene 1981). Therefore, to better conform my data to the normality assumptions of the Tobit model, I log transform the value of *Repatriation*, plus one, as follows to form the observed variable *LNRepatriation.* As noted before, many observations of *Repatriation* have values of zero. Because it is not possible to take the natural log of zero, it is necessary to add 1 to *Repatriation* before log-transforming it. Since the natural log of 1 is equal to zero, adding 1 allows the values of zero to remain at zero and ensures all numbers are positive:

$LNRepatriation_i = LN\ (Repatriation_i + 1)$

where:

$Repatriation_i$ = the dollar amount repatriated by firm *i* in response to §965, for either 2004 or 2005

LNRepatriation is the dependent variable in the regressions that follow. The value of the observable variable, *LNRepatriation,* is defined as equal to the value of the latent variable, *LNRepatriation**, whenever the latent variable's value is greater than zero. The value of the observable variable, *LNRepatriation,* is defined as equal to zero whenever the value of the latent variable, *LNRepatriation**, is less than zero.

The firm repatriation model is expressed in equation (2.2):

$$LNRepatriation^*_i = \tau_0 + \tau_1 STATESAVINGS_i + \tau_2 HIC_i + \tau_3 PRE_i + \tau_4 REPYEAR_i + \tau_5 CASH_i + \tau_6 DTE_i + \tau_7 INCBEX_i + \tau_8 DTA_i + \varepsilon_i \quad (2.2)$$

where:

$LNRepatriation^*_i$ =logged dollar amount repatriated by firm *i* in response to §965;

$STATESAVINGS_i$ =tax savings for firm *i* at the state level for repatriated earnings;

HIC_i =1 if firm *i* is a member of the Homeland Investment Coalition, 0 otherwise;

PRE_i =dollar amount of earnings, in millions, designated by firm *i* as permanently reinvested, scaled by total assets;

$REPYEAR_i$ =1 if firm *i* repatriated in 2005, 0 otherwise;

$CASH_i$ =dollar amount, in millions, of cash, marketable securities, and short term assets for firm *i*, scaled by total assets;

DTE_i =debt-to-equity ratio for firm *i*;

$INCBEX_i$ =dollar amount, in millions, of income before extraordinary items scaled by total assets, for firm *i*; and

DTA_i =dollar amount, in millions, of deferred tax asset scaled by total assets for firm *i*.

Information about individual state decoupling can be found in the tax code for each state. Commerce Clearing House's Tax Research Network (CCH) provides a listing of the states and their treatment of the legislation on its website. States discussed the legislation in various ways in the tax code, but if a state did not honor the 85% dividends received deduction, it was treated as a state that decoupled. If a state allowed the deduction and began with federal taxable income from line 30 of Form 1120, a state conformed to the legislation. Figure 2.1 indicates whether states conformed or decoupled to §965. Green states conformed to the legislation, while those in red decoupled from the legislation. Gray states have no corporate income tax or equivalent, so the decision is not relevant.

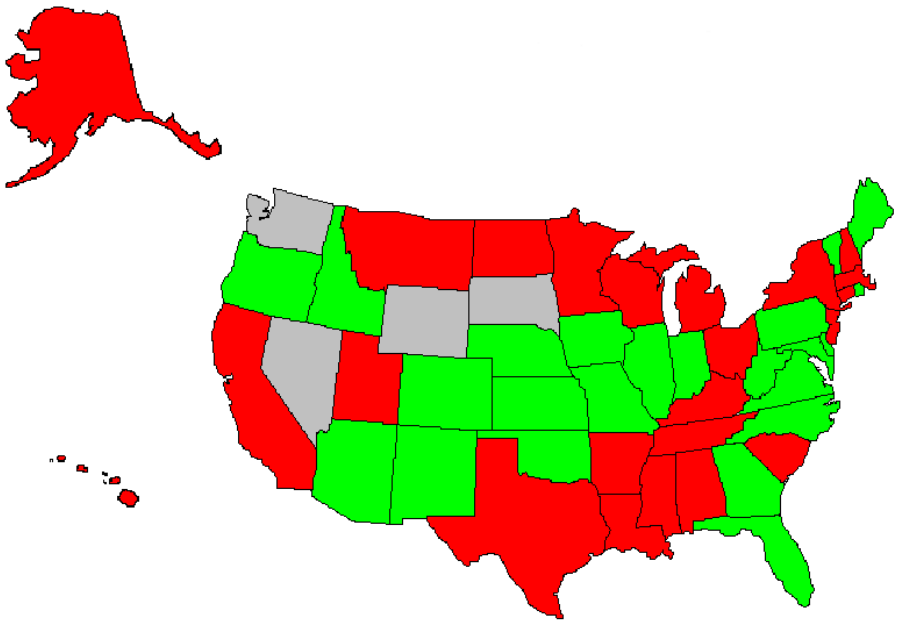

Figure 2.1 State Conformity to §965

Based on the state decision to conform or decouple and the state tax rate, I create a variable called $STATESAVINGS_i$. For firms in states that chose to decouple, this is equal to zero. For firms in states that chose to conform, this is equal to (1-.15) of the state tax rate in effect for 2005. If firms considered the state tax savings when making the decision to repatriate, I expect to see a positive and statistically significant coefficient on this factor.

HIC_i is the next variable in the model. This variable is equal to 1 if firm *i* was a member of the Homeland Investment Coalition and 0 if not. Recall that this group of firms pushed strongly for legislation to reduce the tax rate on foreign earnings either temporarily or permanently. For the most part, these firms did not repatriate on a regular basis and were simply holding cash overseas, waiting for a tax holiday. So, for these firms, I believe that even lack of state tax savings will not deter them from repatriating earnings. Based on that, I expect the coefficient on HIC_i to be positive and statistically significant.

Recall that the dividends received deduction under Section 965 cannot exceed the amount previously designated by the firm as permanently reinvested earnings (PRE). Thus, firms with more PRE have a greater capacity to repatriate earnings under the Act. I include the scaled amount of PRE for each sample firm in the year of repatriation as an independent variable in the model. I expect a positive association between this variable and amount repatriated. I also include a variable to represent the year of repatriation for the firm. This is a dummy variable equal to 1 if the firm repatriated in 2005 and 0 otherwise.

The next variable in the model controls for the level of cash held by a firm. Foley et al. (2007) report that many multinational firms hold cash overseas to avoid the tax on repatriation of funds. If this is the case, then firms with higher levels of cash on their balance sheets should have relatively greater abilities to repatriate foreign earnings. Due to variation in firm size, I scale cash by total assets. Again, I expect the coefficient on $CASH_i$ to be positive and statistically significant.

I also control for a firm's debt-to-equity ratio. Despite the fact that firms were specifically prohibited from borrowing money for purposes of repatriation under §965, firms with lower debt-to-equity ratios would have more financial flexibility to repatriate during the tax holiday. I expect a negative relation between amount repatriated and debt-to-equity ratio. To control for overall profitability of the firm, I included $INCBEX_i$, which is income before extraordinary items scaled by total assets.

Finally, I include the amount of each sample firm's deferred tax asset, scaled by total assets, at time *t-1*. Because firms with a greater amount of deferred tax assets would benefit less from repatriating earnings under §965, I expect a negative relation between DTA_i and amount repatriated.

Measurement of Variables and Sample Selection

State Decision Model Sample

All states were analyzed in this study. A key variable involved identification of state compliance with nine separate pieces of tax legislation. Congress and the Bush administration have implemented four major pieces of tax legislation since 2002 – the Job Creation and Worker Assistance Act of 2002 (JCWAA), the Jobs and Growth Tax

Relief Reconciliation Act of 2003 (JGTRRA), the American Jobs Creation Act of 2004 (AJCA) and the Working Families Tax Relief Act of 2004 (WFTRA).

For purposes of my variable, there are nine times a state could either conform or decouple. These include:

1. 2002 Bonus Depreciation (JCWAA);
2. Net Operating Loss Carryback provisions (JCWAA);
3. 2003 Bonus Depreciation (JGTRRA);
4. Section 179 – Asset Expense Election (AJCA);
5. Section 199 – Manufacturer's Deduction (AJCA);
6. Section 114 – Repeal of Extraterritorial Income Tax (AJCA);
7. Sections 195, 248 and 709 – Start-Up Expenses Deduction (AJCA);
8. Sections 167 and 168 – Depreciation Deductions (WFTRA); and
9. Section 965 – Temporary Dividends Received Deduction (AJCA).

To discern whether a state conformed to each piece of legislation, I searched state tax code in CCH. I also drew state tax rates for relevant years from CCH. I gathered budget gap and spending overrun information from the State Budget Update for the period prior to the passage of the legislation.[20]

The variable $PARTY_i$ is created based on the party in power in the state legislature when each piece of legislation was passed. This information is available from individual state websites.[21] Finally, the $AMNESTY_i$ variable was created based on the number of statewide amnesties granted by states in the period 1982 – 2004.[22]

Firm Repatriation Model Sample

My sample of corporations for analyzing H2 was drawn from COMPUSTAT and Lexis-Nexis. Companies from the 2004 and 2005 COMPUSTAT Geographic Segment database with either foreign sales or foreign assets were selected for the initial sample, which totaled 3,818 observations. Next, I searched Lexis-Nexis EDGAR filings for "American Jobs Creation Act." This yielded an additional 64 companies. I required firms

[20] This is available on the website for the National Conference of State Legislatures at http://www.ncsl.org.
[21] It can also be found collectively at http://www.ncsl.org
[22] This information was obtained from the website http://www.taxadmin.org/fta/rate/amnesty1.html Last viewed 1/18/2008. Note that amnesties granted after the Act was passed were not included in the variable, as these future events should not be predictors of conformity to Section 965.

to have either foreign sales or foreign assets for both 2004 and 2005. After identifying firms that had both and removing duplicate years, I was left with 1,608 firms.

For each of the 1,608 firms, I searched EDGAR for 2004 and 2005 10-K filings. I pulled tax footnotes for each company to gather information pertaining to repatriation and permanently reinvested earnings. I also noted the mailing address and state of incorporation for each company. As I viewed each company, I eliminated ADRs, Trusts, LLCs, LLPs, LTDs, LPs, REITs and any other financial services firms. I also eliminated foreign firms and firms with missing 10-K filings. This left me with a sample of 1,156 firms. I then eliminated firms for which I did not have a disclosure for deferred tax asset. My final sample is 931 firms.

Results and Discussion

Descriptive Statistics

Table 2.2 presents descriptive statistics for the amounts repatriated by the companies in my sample.[23] Because the legislation was passed in late October of 2004, firms were given a choice of a tax holiday in either fiscal 2004 or fiscal 2005. Most firms chose to wait for IRS guidance and repatriate during 2005. In fact, 23 firms repatriated in 2004 and 225 repatriated in 2005. In 2004, firms repatriated a total of $3.283 billion and in 2005 they repatriated $246.44 billion. Overall, then, firms repatriated $250 billion, much higher than the $191 billion that was estimated. Most of the firms disclosed federal tax paid on the CFC distributions. In 2004, the government collected $183 million related to the Act. In 2005, they collected $11.05 billion.

[23] In 2004, when the legislation was passed, a small percentage of the firms in my sample disclosed their plans related to the legislation. Out of 1,156 companies, 495 mentioned the AJCA and §965. Out of those, 142 stated that they anticipated repatriation under the Act. Some of those firms were more specific in their disclosures. Overall, 132 firms disclosed estimates of dollar amounts that might be repatriated, even though 10 of those firms said they did not anticipate repatriating any of that money. Per the estimates of these firms, the total range of dollar amounts repatriated would be between $2.75 and $191 billion. Ninety-eight of the firms disclosed estimated taxes owed on repatriated amounts, which in total could range from $28.6 million and $10 billion. Total dollar amounts repatriated were a little higher than estimated - $199 billion – and taxes are $9.2 billion.

Table 2.2 Repatriation Descriptive Statistics

Variable	Mean	Min	Standard Deviation	Lower Quartile	Median	Upper Quartile	Max	Skewness	Kurtosis	Sum
$REP2004_i$	142.76	0.00	385.65	0.00	17.00	0.00	1,300.00	3.05	8.25	3,283.40
$FEDTAX2004_i$	7.97	-16.10	20.67	0.73	2.69	0.00	91.00	3.33	12.63	183.38
$REP2005_i$	1,095.28	0.00	3,313.58	30.70	147.00	696.35	37,000.00	6.96	64.54	246,438.55
$FEDTAX2005_i$	49.10	-372.00	165.65	0.60	4.80	36.65	1,700.00	5.86	48.27	11,046.59

n = 248 (REP2004 n=14, FEDTAX2004 n =22, REP2005 n =214, FEDTAX2005 n =206)

$REP2004_i$ =dollar amount, in millions, of earnings repatriated from CFCs for firm *i* for the fiscal year 2004;

$FEDTAX2004_i$ =dollar amount, in millions, of federal income tax on repatriated earnings reported by firm *i* for the fiscal year 2004;

$REP2005_i$ =dollar amount, in millions, of earnings repatriated from CFCs for firm *i* for the fiscal year 2005; and

$FEDTAX2005_i$ =dollar amount, in millions, of federal income tax on repatriated earnings reported by firm *i* for the fiscal year 2005.

As an initial test for differences between firms that repatriated earnings versus firms that did not, I performed simple t-tests for differences between mean values for the two groups. The results of these t-tests are presented in Table 2.3. For the variables used in my model, the two groups differed significantly on HIC membership, cash and deferred tax assets. Not surprisingly, the t-tests suggest that as predicted, firms that repatriated funds under §965 were more likely to be members of the Homeland Investment Coalition and have larger cash balances. Contrary to expectations, firms who repatriated on average had larger deferred tax assets.

Table 2.3 Firm Descriptive Statistics
Repatriaters vs. Non-repatriaters

Variable	Repatriaters	Non-repatriaters	t-stat	p-value
$STATESAVINGS_i$	1.94%	1.99%	0.24	0.81
HIC_i	0.12	0.01	7.75	<0.01
PRE_i	5.73	7.85	0.18	0.86
$CASH_i$	3.09	0.35	3.75	<.001
DTE_i	1.41	0.05	1.51	0.13
$INCBEX_i$	0.02	-0.06	0.20	0.84
DTA_i	0.56	-0.01	2.69	0.01

n =931

$STATESAVINGS_i$ =tax savings for firm *i* at the state level for repatriated earnings;

HIC_i =1 if firm *i* is a member of the Homeland Investment Coalition, 0 otherwise;

PRE_i =dollar amount of earnings, in millions, designated by firm *i* as permanently reinvested, scaled by total assets;

$REPYEAR_i$ =1 if firm *i* repatriated in 2005, 0 otherwise;

$CASH_i$ =dollar amount, in millions, of cash, marketable securities, and short term assets for firm *i*, scaled by total assets;

DTE_i =debt-to-equity ratio for firm *i*;

Table 2.3 continued

$INCBEX_i$ =dollar amount, in millions, of income before extraordinary items scaled by total assets, for firm *i*; and

DTA_i =dollar amount, in millions, of deferred tax asset scaled by total assets for firm *i*.

I perform a similar analysis for conforming versus decoupling states for variables in the state decision model. Because I examine nine separate pieces of legislation, I present descriptive statistics in a graphical form in Figure 2.2 below

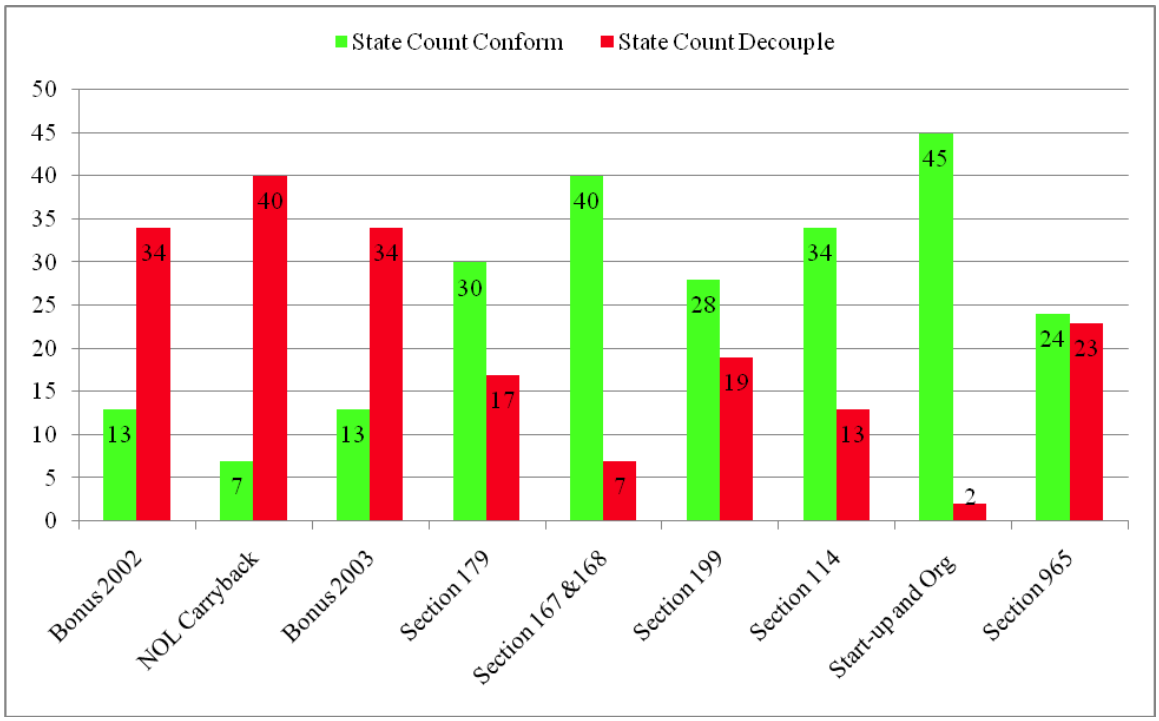

Figure 2.2 State Conformity for Legislation

This graph represents the number of states conforming versus decoupling across the different pieces of legislation. The pieces of legislation are presented in order passed, with Bonus 2002 being the first legislation passed and Section 965 coming at the end in 2004. Interestingly, more states decouple from the earlier pieces of legislation than those in later years.

Perhaps the reason for this can be seen in the next two figures. Figure 2.3 presents the total dollar amount of budget deficits for conforming states vs. decoupling states at

the time of each piece of legislation, while Figure 2.4 presents the total spending overrun amounts. Budget gaps were most severe at the time of the passage of the first three tax reductions, likely contributing to the propensity to decouple from federal legislation. Spending overruns are prevalent throughout the time period, but less severe in later periods.

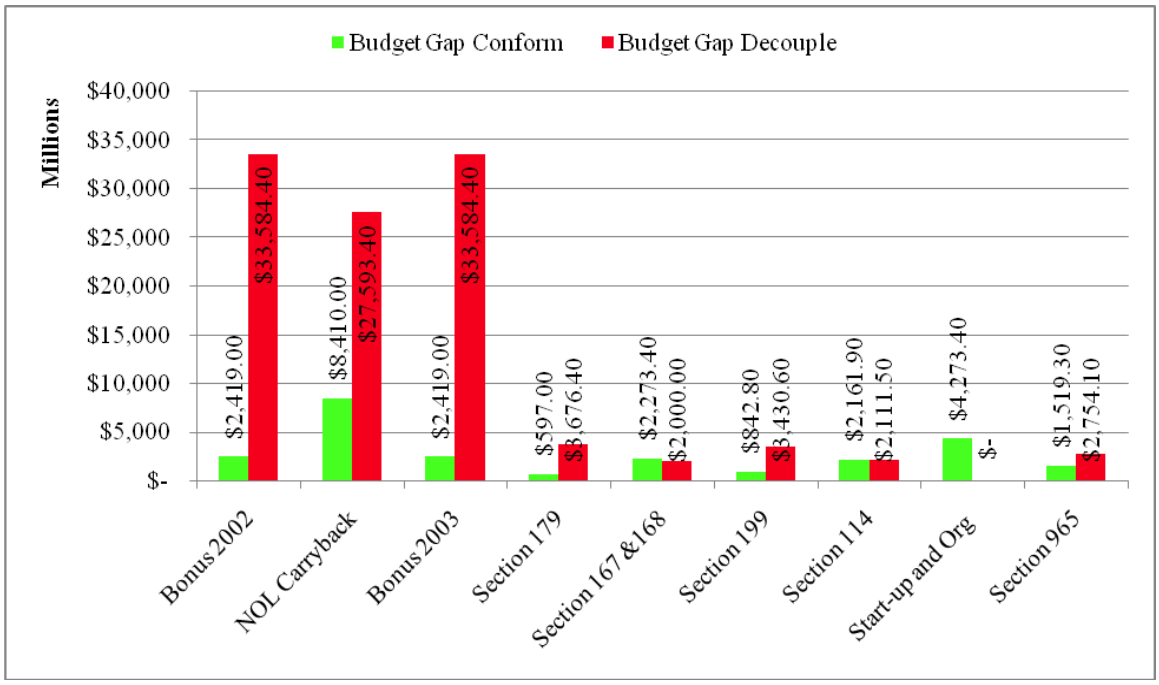

Figure 2.3 State Budget Gap Amounts: Conforming vs. Decoupling

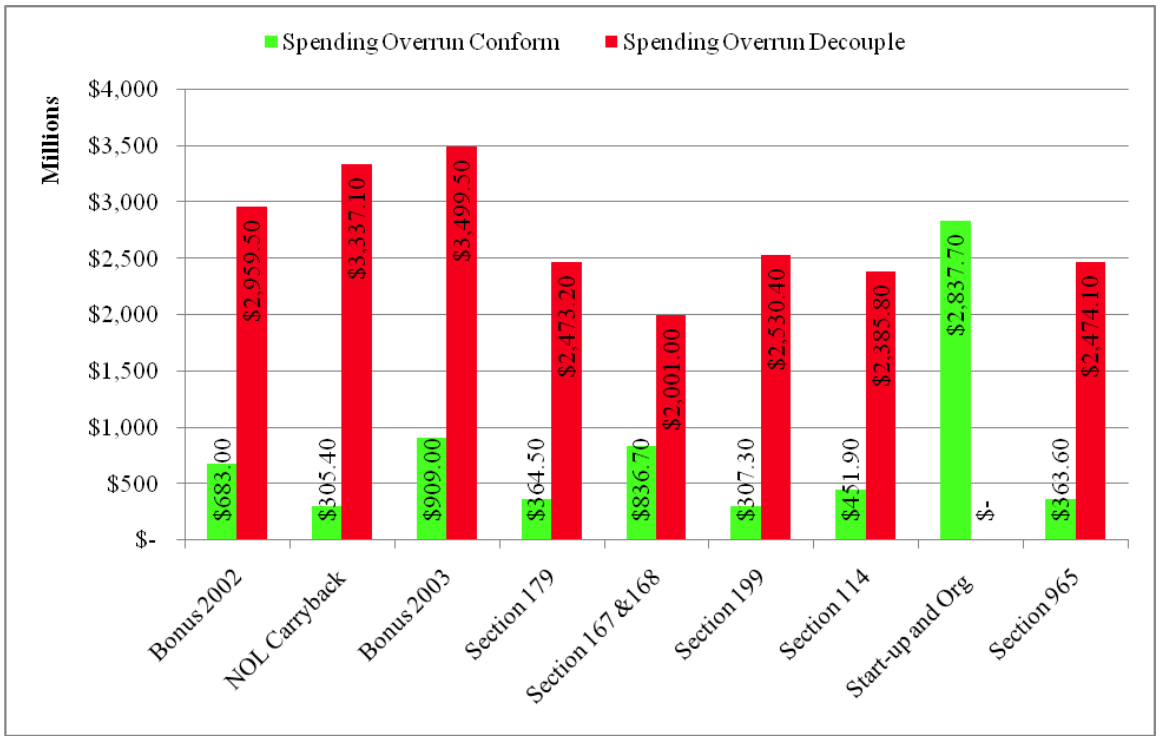

Figure 2.4 State Spending Overrun Amounts: Conforming vs. Decoupling

In untabulated analyses, I perform t-tests for differences in mean values for all variables. I find significant differences between conforming and nonconforming states on average budget gap amounts and average spending overrun amounts, but not on any of the other independent variables.

State Decision Model

Hypotheses 1a and 1b attempt to determine those factors that led states to either conform or decouple from §965. Table 2.4 summarizes the results for the state decision model.[24] Hypothesis 1a predicts that states with higher tax rates are less likely to conform to §965. The coefficient on this variable is positive, but not significant.

The next variable, $BUDGETGAP_{it,}$ is negative but not significant, indicating that there is an association between the amount of a state's budget deficit and the probability of a decision to conform, but it is not significant.

[24] For this model, VIFs were extremely low, so multicollinearity is not a concern. Also, I interacted the class variable *LEGISLATION* with each independent variable. No interactions were significant so I assume that each variable affects state decision consistently across different types of legislation.

On the other hand, $SPENDINGOR_{it}$ is negative and significant, consistent with H1b. The greater the dollar amount of spending overruns in any one category for a state, the greater the odds that a state will decouple from federal tax reduction legislation. This is not surprising, considering the graphs indicating the large difference in spending overruns between conforming and decoupling states.

None of the remaining variables in the model are significant. Contrary to expectations, neither the party in power nor the prevalence of past amnesties was significantly associated with state decisions to conform to federal tax reduction legislation.

Table 2.4 Results for State Decision Model

$$\text{logit } P(STATEDECISION_{it} = 1) = \beta_0 + \beta_1 LEGISLATION_{it} + \beta_2 STATERATE_{iti} + \beta_3 BUDGETGAP_{it} + \beta_4 SPENDINGOR_{it} + \beta_5 PARTY_{it} + \beta_6 AMNESTY_{ti}$$

Variable	Parameter Estimate	Chi-Square	Pr > Chi-Square
$STATERATE_{it}$	5.83	0.86	0.35
$BUDGETGAP_{it}$	-0.002	1.83	0.18
$SPENDINGOR_{it}$	-0.001	5.02	0.03
$PARTY_{it}$	0.91	1.67	0.20
$AMNESTY_{it}$	-0.13	1.22	0.27
Psuedo R^2			0.45

n = 423 (includes District of Columbia, no state tax in NV, SD, WA, WY)

$STATERATE_{it}$ =tax rate in effect for state *i* at time of federal tax reduction;

$BUDGETGAP_{it}$ =amount of state budget deficit for state *i* at time federal tax reduction;

$SPENDINGOR_{it}$ =amount of spending overrun for state *i* at time of federal tax reduction;

$PARTY_{it}$ =% of Republican legislators for state *i* at time of federal tax reduction; and

$AMNESTY_{it}$ =# of statewide amnesties previously granted by state *i* at time of federal tax reduction.

Firm Repatriation Model

My second hypothesis (H2) predicts a negative relation between the amount repatriated by firms under §965 and state tax savings on §965 dividends. Data related to amounts repatriated can be found in Table 2.2. Out of 47 states[25], twenty-four chose to conform and the remainder decoupled.[26] The results of the firm repatriation model are presented in Table 2.5.[27]

Table 2.5 Results of Firm Repatriation Model

$$LNRepatriation^*_i = \tau_0 + \tau_1 STATESAVINGS_i + \tau_2 HIC_i + \tau_3 PRE_i + \tau_4 REPYEAR_i + \tau_5 CASH_i + \tau_6 DTE_i + \tau_7 INCBEX_i + \tau_8 DTA_i + \varepsilon_i$$

Variable	Parameter Estimate	t-statistic	p-value
$STATESAVINGS_i$	-6.56	-2.97	<.001
HIC_i	0.92	4.80	<.001
PRE_i	0.003	2.08	0.04
$REPYEAR_i$	0.98	3.44	<.001
$CASH_i$	0.002	0.54	0.59
DTE_i	-0.003	-0.08	0.94
$INCBEX_i$	-0.005	-0.77	0.44
DTA_i	-0.03	-1.70	0.09
Psuedo R^2 (a)			0.12
AIC Statistic (b)			621

[25] Includes District of Columbia, no state tax in Nevada, South Dakota, Washington and Wyoming

[26] For the subsample of HIC members, 6 of the 39 companies were located in states that conformed to §965. All 39 HIC companies were located in thirteen of the states, with the bulk of those (14) located in California. In 2004, 31 of these companies mentioned the HIA and 23 said they anticipated repatriation in 2005. This in itself seemed odd – these companies lobbied for this legislation and spent a lot of money in the process. Yet eight of them didn't even mention the HIA in their tax footnotes. In the end, twenty-eight of the companies did repatriate under the tax holiday. Total amount repatriated was approximately $118.67 billion, or about 48% of the total amount repatriated by all firms.

[27] Again, variance inflation factors were extremely low for this model, so multicollinearity was not a concern.

Table 2.5 continued

n = 223

$STATESAVINGS_i$ =tax savings for firm *i* at the state level for repatriated earnings;

HIC_i =1 if firm *i* is a member of the Homeland Investment Coalition, 0 otherwise;

PRE_i =dollar amount of earnings, in millions, designated by firm *i* as permanently reinvested, scaled by total assets;

$REPYEAR_i$ =1 if firm *i* repatriated in 2005, 0 otherwise;

$CASH_i$ =dollar amount, in millions, of cash, marketable securities, and short term assets for firm *i*, scaled by total assets;

DTE_i =debt-to-equity ratio for firm *i*;

$INCBEX_i$ =dollar amount, in millions, of income before extraordinary items scaled by total assets, for firm *i*; and

DTA_i =dollar amount, in millions, of deferred tax asset scaled by total assets for firm *i*.

(a) This is a goodness of fit statistic that represents the percentage reduction in variance of the TOBIT latent variable underlying the responses.
(b) The AIC statistic is a penalized log-likelihood statistic that can be used to compare model fit, with a lower AIC indicating a better fit (Dayton 2003).

Hypothesis 2 is not supported. Contrary to expectations, state tax savings had a negative and significant effect on the amount repatriated by MNCs. Although there is no theoretical explanation for this behavior based on the findings of prior literature, it is likely that firms simply were not considering the state tax burden because of the magnitude of the federal tax break.

The next three variables are highly significant. As expected, membership in the HIC was a significant factor in the amount repatriated under §965.[28] The level of reported permanently reinvested earnings is also significant, indicating that firms with a higher level of permanently reinvested earnings were more likely to repatriate under the dividend tax holiday. The year of repatriation was highly significant – firms repatriated

[28] In addition, I test the model with a variable representing the state savings for firms who were not members of the HIC. Similar to the state savings variable, this variable was negative and statistically significant.

more money in 2005. As noted previously, most firms waited for additional clarification of the guidelines for repatriation and brought back more cash in 2005.

Level of cash is insignificant, as is debt to equity ratio and income before income taxes. Interestingly, the level of deferred tax asset at time *t-1* is negative and marginally significant. This supports the idea that firms with deferred tax assets receive less benefit from repatriation under §965, so they were less likely to repatriate.

Conclusion

In this chapter of the dissertation, I investigate the reaction of MNCs and state governments to §965 of the Homeland Investment Act. To do this, I hand collect data from tax footnotes of the MNCs about amounts repatriated and other disclosures related to the HIA. I also collect state level data on tax rates, conformity with tax legislation, and budget and spending amounts.

My results suggest that state lawmakers have one main consideration when making the decision to conform to state legislation-budgetary pressure. Other factors such as state tax rate, party affiliation and previous amnesties granted are not significant in this decision.

My analysis also suggests that the amount of funds repatriated from foreign subsidiaries by U.S. MNCs was not influenced by differences in state tax savings based on conformity decisions of home states. This is not surprising given the magnitude of the federal tax break. By that token, those states allowing the §965 deduction appear to have forfeited a substantial amount of lost revenue.

Chapter III of this dissertation further examines the behaviors of MNCs related to this dividend tax holiday. The intent of the HIA was to encourage repatriation of earnings previously designated as permanently reinvested in foreign countries. Firms were also required to invest in specified activities and not to invest in others as a condition of receiving the §965 deduction.

While it appears that §965 was certainly successful in encouraging firms to bring a substantial amount of money back to the U.S., the questions of whether they invested these funds in prescribed activities, and whether the funds they brought back would have been repatriated at some point in the future had §965 not been enacted remain unanswered. This is the focus of the next chapter.

CHAPTER III
SOURCES AND USES OF FUNDS

Introduction

As mentioned above, the purpose of §965 was to encourage domestic corporations to repatriate earnings being held in foreign subsidiaries for reinvestment in the U.S. Accordingly, the deduction was available only for the excess of dividends received in the elected year over the average amount of dividend income received from CFCs over the three preceding years.[29] Moreover, to be eligible for the deduction, extraordinary dividends received from the controlled foreign subsidiaries had to be reinvested "in the United States (other than as payment for executive compensation), including as a source for the funding of worker hiring and training, infrastructure, research and development, capital investments, or the financial stabilization of the corporation for the purposes of job retention or creation."[30]

Thus, implementation of the temporary dividends received deduction of §965 suggest a number of interesting research questions. One question looks at the source of funds brought back by firms. While many firms legitimately reinvest foreign earnings in positive net present value investments overseas, others simply hold the cash to avoid paying U.S. income taxes. Foley et al. (2007) report that multinational firms that face higher repatriation tax burdens hold higher levels of cash abroad in affiliates that will have high tax costs when the earnings are repatriated.[31]

Because of this suspected sheltering, the HIA was designed to encourage firms to bring back those funds designated as permanently reinvested. I examine changes in deferred tax liabilities in the four years surrounding the dividend tax holiday to determine whether firms indeed brought back funds previously classified as permanently reinvested overseas. My results indicate that firms repatriated funds that were already earmarked for eventual repatriation with or without the tax holiday. There appears to be

[29] Average dividends received from CFCs over the five-year base period include both actual cash dividends and "deemed" dividends under Subpart F of the *Internal Revenue Code*.

[30] IRC Section 965(b) (4).

[31] Note that Foley et al (2007) used a proxy for the tax burden in lieu of reviewing actual tax footnotes. The authors subtract foreign tax paid from the product of marginal effective tax rate and foreign pretax income. This is scaled by total firm assets for their variable Tax Costs of Repatriating Earnings.

little to no reduction in amounts designated as permanently reinvested by firms that repatriated funds under the Act.

The second research question analyzes how firms invested the funds once repatriated. Throughout the passage of the Act, researchers speculated on its possible effects. It was touted as legislation that would stimulate the economy and spur investment in the U.S. by MNCs. Early on, this claim was met with serious doubt. Clausing (2005), for example, predicted that the Act would not generate new investment and would damage the integrity of the U.S. international tax system, implying the tax holiday was nothing more than amnesty for firms who had "misbehaved" by sheltering earnings overseas. I specifically examine permitted and nonpermitted investments to determine how firms reinvested repatriated funds. My results indicate that while firms appear to have used some repatriated funds to increase permitted investments overall, they also appear to have increased payouts to their shareholders. The former activity was permitted by the legislation, while the latter was not. This result is clearly not consistent with Congressional objectives.

Notice 2005-10

As stated by Congress, the purpose of §965 was to encourage domestic corporations to repatriate earnings being held in foreign subsidiaries to be invested in the U.S. Notice 2005-10, issued by the Treasury after the passage of the Act, provided further guidance for the tax holiday. First, before claiming the dividend on Form 8895, corporations were required to draw up a domestic reinvestment plan (DRIP) to be approved by management and the board of directors. The plan was required to be in writing and "must describe how the dividend is to be reinvested in the United States with reasonable detail and specificity."

The notice further stated that the plan should be sufficiently detailed, including type of investment, time period for investment, and specific dollar amounts to be repatriated. Firms were also required to identify alternative investment plans, as the DRIP could not be changed after the dividend was paid.

The notice identified several "permitted" and "non-permitted" reinvestment expenditures under the Act. The lists were "non-exclusive" but relatively thorough. Permitted expenditures were as follows (quoted directly from the notice):

- Funding of worker hiring, training, and other compensation (generally, expenditures for hiring new workers and training new and existing workers, compensation and benefits);
- Infrastructure and capital investments (physical installations and facilities that support the business and other assets integral to the conduct of business, provided the infrastructure and investments are located and used in the United States);
- Research and development (generally, expenditures that qualify under Reg. §1.174-2 for research and development conducted in the United States);
- Financial stabilization of the corporation for purposes of job retention or creation (including repayment of taxpayer debt, satisfaction of an obligation to fund a qualified pension plan and other expenditures that contribute to this purpose under the facts and circumstances);
- Acquisition of interests in business entities (such as a corporation or partnership and regardless of whether the entity is foreign or domestic, if the taxpayer owns directly or indirectly at least 10 percent of the value of the business entity after the acquisition);
- Advertising and marketing expenditures (expenditures with respect to trademarks, trade names, brand names or similar intangible property if the activities are performed in the United States); and
- Intangible property (purchased or licensed if the rights to the property are used in the United States).

Non-permitted investments include the following:

- Executive compensation;
- Intercompany distributions, obligations and transactions (as defined by Reg. §1.1502-13);
- Dividends and other distributions with respect to stock;
- Stock redemptions (repurchases);
- Portfolio investments in business entities;
- Acquisition of debt instruments or other evidences of debt; and
- Tax payments.

Although the notice identified specific investments that were permitted and not permitted under the Act, it provided no penalties for not complying with these directives. Indeed, Notice 2005-10 specifically states that "taxpayers will not be required to trace or segregate the specific dividend proceeds received to demonstrate proper investment, and, as long as a sufficient amount of funds is properly invested pursuant to the plan, nonpermitted investments will not generally affect the eligibility of the

dividend." Thus, an interesting and important policy question is whether firms actually invested repatriated funds in a manner consistent with the intentions of the Act.

Theory and Literature

Factors Contributing to the Repatriation Decision

CFC earnings generally are not taxable until they are repatriated back to the U.S. parent corporation in the form of a dividend.[32] For purposes of financial accounting, SFAS No. 109 generally requires that companies determine that portion of the earnings of their foreign subsidiaries that will eventually be repatriated, and record a deferred tax liability for the U.S. income tax that will be imposed on those earnings at repatriation. No deferred tax liability is recorded for those earnings designated by a firm as permanently reinvested (PRE) in the foreign country in which the foreign subsidiary operates. Thus the U.S. Internal Revenue Code creates a strong incentive for firms to hold foreign earnings overseas, while U.S. GAAP creates an incentive to permanently reinvest those earnings overseas.

A J.P. Morgan Chase study in June 2001 estimated that $650 billion of profits from U.S. companies earned abroad had never been taxed by the U.S. (Buechner 2007).[33] If corporations were to repatriate all of these funds under the dividend tax holiday, they would owe a combined total of $34 billion in federal income taxes (as compared to nearly $230 billion which would be owed at regular U.S. corporate income tax rates).

Code §965 reversed these incentives, though only for a very short while. Firms taking advantage of the temporary foreign dividends received deduction could repatriate foreign source income to the U.S. at a very low tax rate, and with a minimal impact on their financial statements. In fact, repatriation of funds *not* designated as permanently reinvested would *increase* reported earnings, as a large portion of amounts previously recorded as deferred tax liability on these earnings would be reversed. On the other hand, repatriation of funds designated as permanently reinvested would decrease reported

[32] In general, a U.S. shareholder's (in this case, the corporation) share of earnings of a foreign corporation is not taxable in the U.S. until the income is paid out to the shareholder as a distribution. For a CFC, certain categories of income (so-called "Subpart F" income) are considered highly mobile and are subject to U.S. tax whether or not distributed to their U.S. shareholders. However, all earnings not subject to Subpart F avoid U.S. taxation until they are repatriated back to the U.S.

[33] Although $650 billion is a large amount, it is only 25% of foreign profits reported in 2001.

income, as income taxes not previously recorded on this income would have to be expensed, albeit at a relatively low rate.

Prior research suggests that multinational corporations respond to changes in tax incentives by changing their behavior.[34] Generally speaking, firms are understandably reluctant to repatriate funds designated as permanently reinvested. Indeed, to the extent such funds have been invested in illiquid and immobile assets, such as foreign plants and property, it is difficult for such firms to bring those funds back to the U.S. Because of this, firms employ other strategies, such as income shifting and timing of repatriation, to minimize tax burdens. The studies mentioned in Chapter II indicate that firms will diligently shift income and production locations between countries to avoid high corporate tax rates.

Despite careful planning, parent corporations are not always able to completely avoid tax on CFC earnings. A 1996 study by Altshuler and Grubert finds that MNCs plan for situations where they might need to repatriate earnings by avoiding the accumulation of financial assets in locations with high tax rates.

Timing is also an important consideration in the decision to repatriate. Hines and Hubbard (1990) find that taxes are important in firm decisions regarding when to repatriate dividends. Altshuler et al. (1995) specifically conclude that transitory variations in tax costs influence dividend repatriations but permanent variations in tax costs do not. They find that the average repatriation tax prices or statutory tax rates are highly correlated with the instrumental variable permanent tax costs, but uncorrelated with transitory tax costs.[35] Desai et al. (2001) find that U.S. repatriation taxes reduce the volume and efficiency of flows of financial assets between CFCs and their American parents by around 12.8%.

With all of these considerations, it is evident that there are large limitations in the ability of firms to repatriate funds from CFCs without incurring an unwanted tax burden. The studies cited above find ample evidence that firms are well aware of this fact. A recent study by Oler et al. (2007) finds evidence that investors recognize this unwanted

[34] Many studies examine these incentives as they relate to capital structure and production location. See Collins and Shackleford (1992), Froot and Hines (1994), Newberry (1998), Mills and Newberry (2004), Desai et al (2003), Kemsley (1998) and Altshuler et al (1998).

[35] As defined by Althsuler et al (1995), a transitory tax cost would be a temporary increase or decrease in a rate or a temporary change in computing taxable income that affected the amount to be repatriated.

tax burden as well. They study the investor reaction to the passage of §965 and conclude that investors recognized the magnitude of the tax savings associated with the 85% deduction for cash dividends. Their results suggest that investors anticipated that MNCs would take advantage of this one-time opportunity and repatriate earnings designated as permanently reinvested.

Reinvestment of Repatriated Earnings

Prior literature essentially ignores the reinvestment strategies of firms who repatriate foreign earnings. The HIA gives us reason to pay attention to the reinvestment of these earnings, however, because it was specifically intended by Congress to increase U.S. corporate investment in certain specified types of activities in the U.S. Thus, the question whether firms satisfied Congress' expectations is an important issue for policy makers.

In addition to identifying certain "permitted" investment activities, the law also identified certain investments that were *not* to be financed with earnings repatriated under §965. A particularly interesting aspect of this statute was the lack of any penalty for not complying with the stated investment goals accompanying the change in legislation. As noted previously, the Treasury specifically stated that investment of the proceeds in nonpermitted activities would *not* reduce the tax deduction, presumably so long as firms also made investments in "permitted" activities. Thus, it would appear that the primary incentive for U.S. MNCs to comply with Congress' wishes is the desire to see similar legislation enacted in the future.[36]

One of the stated prohibited activities for repatriated earnings was stock repurchases. Blouin and Krull (2006) examine stock repurchases in the period surrounding passage of the Act. Despite the fact that it was specifically prohibited, Blouin and Krull (2006) suggest that firms increased stock repurchases as a result of repatriations under §965. Their evidence suggests that during 2005, firms that repatriated foreign earnings to take

[36] Many researchers characterized the dividend tax holiday as an amnesty, rewarding the bad behavior of firms who held money overseas waiting for a tax break. If this is similar to an amnesty, it is unlikely to work, as findings in the amnesty literature indicate two things. First, while the government may indicate a revenue increase stemming from an amnesty in the short-run, often they have just accelerated future tax payments. There are usually no long-term effects on behavior, so the revenue gain does not last and the tax evasion problem still exists. In addition, an unintended consequence is to reinforce the bad behavior, as tax evaders will anticipate another amnesty in the future. See Alm and Beck (1993), Marchese and Cassone (1998), Marchese and Privileggi (1999), Ritsema (2003) and LeBorgne (2006).

advantage of the lower tax rate increased share repurchases by $28.95 billion more than non-repatriating firms. Overall, they find that firms with low investment opportunities benefited the most from repatriating under the Act, and that for these firms the most economically efficient use of the cash was stock repurchases. They did not analyze the extent to which "permitted" investment activities may have differed between repatriating and non-repatriating firms.

Hypothesis Development

The dividend tax holiday created by §965 temporarily changed the taxation of foreign income repatriated from CFCs by U.S. MNCs. Firms who were holding cash overseas were given an incentive, in the form of a large tax reduction, to immediately repatriate foreign earned income not yet taxed by the U.S. government.

I first analyze whether such repatriations as did occur came from PRE or from other, non-restricted retained earnings of foreign subsidiaries. As discussed above, the intent of the legislation was to encourage firms to remit foreign earnings that were classified as permanently reinvested. To the extent that tax holiday dividends were financed with non-PRE retained earnings, the charge by critics of the legislation that the temporary incentive merely accelerated the repatriation of funds that were going to be repatriated anyway gains credence.

I test this question both directly and indirectly. My first set of hypotheses analyzes whether funds repatriated came from permanently or non-permanently reinvested earnings. To the extent that such funds came from permanently reinvested earnings, reported levels of PRE should decline for repatriating firms *relative to non-repatriating firms*. This leads to the following hypothesis, stated in alternative form:

H1a*: All else equal, there is a positive relation between reported levels of PRE and amounts repatriated under §965.*

I test this hypothesis for both my full sample, and for a subsample consisting of only those firms that chose to repatriate dividends under the act. The first analysis indicates whether reported levels of PRE were significant predictors of whether a firm would

choose to repatriate earnings under the act, and the second analysis provides a stronger test of whether firms that did repatriate may have done so from PRE versus other earnings.

An alternative approach to investigating this question is to analyze firms' deferred tax liabilities (DTL). Although it is not possible from publicly available data to determine the portion of DTL attributable to foreign versus domestic earnings, the relationship between amounts repatriated by firms and *changes* in deferred tax liability should still provide some indication of whether firms brought back earnings previously identified as PRE. As discussed previously, to the extent a firm's repatriation dividends come from *non*-PRE sources, the firm will be required to reverse previously recorded DTL. Since no DTL has previously been recorded for amounts designated as PRE, an analysis of changes in reported levels of DTL should provide information regarding the source of repatriation dividends. Thus, hypothesis H1b, stated in alternative form, is as follows:

H1b*: All else equal, reported levels of deferred tax liability will decline for firms that repatriated earnings under IRC §965 relative to the year preceding repatriation.*

Having analyzed whether the statute was effective in encouraging firms to repatriate earnings from those earnings previously designated as permanently reinvested, I next turn to the question of whether firms that did repatriate made observable investments in prescribed activities as intended by Congress in granting the temporary benefit. Specifically, I analyze two types of investments. The initial hypothesis focuses on whether firms appear to have engaged in the list of approved investments identified by the IRS in Notice 2005-10.

The hypothesis is then expanded to address this question from the other direction. That is, did those firms that repatriated large amounts of foreign earnings engage in any of the activities that the IRS specifically identified as "nonpermitted investments?" This is a particularly relevant question, as the IRS specifically provided that "nonpermitted investments will not generally affect the eligibility of the dividend." Given that the government indicated that no penalty would be imposed for using the repatriated funds to make nonpermitted investments (and the deduction would still be allowed), an interesting

question becomes whether firms in fact avoided such investments, or whether they diverted repatriated funds to purposes other than those envisioned by Congress in implementing §965.

This leads to the following hypotheses:

H2a: *Controlling for other potentially confounding factors, amounts repatriated by firms under §965 are associated with permitted investments in the year following repatriation.*

H2b: *Controlling for other potentially confounding factors, amounts repatriated by firms under §965 are associated with nonpermitted investments in the year following repatriation*.

Model Specification

As an initial test of the hypothesis that firms reacted to the implementation of §965 by repatriating funds previously designated as permanently reinvested, I analyze the relationship between amounts repatriated and initial (i.e., pre-tax act) levels of permanently reinvested earnings and deferred tax liability. The model takes the following form:

$$LNrepatriation^*_i = \tau_0 + \tau_1 PRE_{i,t-1} + \tau_2 ETR_{i,t-1} + \tau_3 CASH_{i,t-1} + \tau_4 LNASSETS_{i,t-1} + \varepsilon_i \quad (3.1)$$

where:

$LNRepatriation^*_i$ =logged dollar amount repatriated by firm *i* in response to §965;

$PRE_{i,t-1}$ =dollar amount, in millions, of earnings designated by firm *i* as permanently reinvested in year prior to repatriation, scaled by total assets;

$ETR_{i,\,t-1}$ =effective tax rate for firm *i* in year prior to repatriation, scaled by total assets;

$CASH_{i,\,t-1}$ =dollar amount, in millions, of cash, marketable securities, and short term assets for firm *i* in year prior to repatriation, scaled by total assets; and

$LnASSETS_{i,\,t-1}$ =logged dollar amount of assets for firm *i* in year *t-1*.

In this model, the dependent variable of interest is $LNRepatriation_i$, as defined below in the model discussion. The first independent variable of interest represents the amount of earnings disclosed by the firm as permanently reinvested in the year preceding the repatriation dividend. If the act was successful in encouraging firms to repatriate earnings previously designated as permanently reinvested abroad, then those firms with the highest levels of such earnings should have repatriated the most. I test this model in two ways – first with the entire sample of firms, and then with a subset consisting only of those firms that actually repatriated earnings under §965.

The variable $ETR_{i,\ t-1}$ is a firm's tax rate divided by pretax income, both from COMPUSTAT. Not all firms disclose these amounts so this is a rough proxy for the rate, but I use it as a control for the decision to repatriate. Because firms can claim a credit against their U.S. tax liability for foreign income taxes paid on repatriated earnings, the incentive provided by §965 increases with decreases in foreign tax rates. That is, for firms whose foreign tax rates equal or exceed the U.S. rate, dividends received from CFCs are already sheltered from U.S. tax by the foreign tax credit. Thus, §965 provides an incentive to repatriate foreign earnings only for those firms with earnings in relatively low foreign tax jurisdictions. Based on that, I expect a negative relation between effective tax rate and amount repatriated.

Finally, I include two control variables. The first is $CASH_{i,\ t-1}$, which is the dollar amount, in millions, of cash, short-term assets and marketable securities for a firm as of the end of the year prior to repatriation. The amount of cash available to the firm affects the ability to repatriate, so I predict a positive relation between cash and amount repatriated. $LnASSETS_{i,\ t-1}$ is included as a proxy for size, with larger companies more likely to repatriate greater amounts. Therefore, I expect a positive relation between the log of total assets and amount repatriated. Note that all independent variables, with the exception of assets, are scaled by total assets.

For firms included in my sample, I gather amounts repatriated in response to the dividend tax holiday and model them as a function of PRE and several control variables. The amount repatriated is the dollar amount disclosed by the firm as repatriated in the form of a dividend from a CFC under the provisions of §965. This variable is of course bounded at zero. Furthermore, because only 245 firms out of 1,156 took advantage of the

dividend tax holiday, many of the variables in the sample take on a value equal to zero. In cases where the dependent variable is bounded at a certain value and a large number of observations in the sample are equal to that bound, Tobit regression is a more appropriate model than ordinary least squares regression. (Greene 1981).

As discussed in Chapter II, the Tobit regression model is motivated using a latent variable (u instead of y), the value of which depends on predictor variables included in the model. Despite accommodating for the bounded dependent variables mentioned above, Tobit regression also assumes normality in the error terms of the latent variable equation (Greene 1981). Therefore, to better conform my data to the normality assumptions of the Tobit model, I log transform the value of *Repatriation*, plus one, to form the observed variable *LNRepatriation*.[37]

An alternative approach to analyzing this relationship is to compare changes in both deferred tax liability and permanently reinvested earnings to the amount of funds repatriated from CFCs under §965. As noted above, the level of reported PRE should fall if a firm repatriates funds previously declared permanently reinvested, while the firm's deferred tax liability would be unaffected. Alternatively, if the repatriated funds are not from sources previously designated as permanently reinvested, deferred tax liability should fall, while PRE will be unaffected. Thus, another way of investigating whether firms repatriated permanently reinvested earnings in response to IRC §965 is to analyze changes in these two accounts. Since changes in these accounts do not occur in a vacuum, this approach offers the additional advantage of allowing me to control for the effects of other variables expected to impact deferred taxes or permanently reinvested earnings.

Deferred tax liability has long been a subject of interest to accounting researchers. Numerous papers have investigated the effect of the deferred tax asset or liability on the value of the firm – recording, reversing, short-term, long-term (Sansing 1998; Guenther and Sansing 2000; Amir et al. 2001; Dotan 2002; Guenther and Sansing 2004). Other research has explored the possibility that management uses the deferred tax asset valuation account and deferred tax expense, with all its inherent complexities, to manage earnings (Miller and Skinner 1998; Visvanathan 1998; Bauman et al. 2001; Mills and

[37] As noted before, many observations of *Repatriation* have values of zero. Because it is not possible to take the natural log of zero, it is necessary to add 1 to *Repatriation* before log-transforming it.

Newberry 2001; Burgstahler et al. 2003; Phillips et al. 2003; Frank and Rego 2004; Schrand and Wong 2004; Phillips et al. 2004). However, the items that contribute to changes in the deferred tax asset or liability have been largely ignored in academic literature.

To test my hypothesis that the amount repatriated contributes to changes in the deferred tax liability, I use a pooled regression of data for the three years 2004-2006. Because I use the same firms three times throughout the analysis, I control for time-series correlation using a Toeplitz (3) covariance structure. This structure assumes that there are three lags, i.e. years, in my study and controls for the correlated errors over time.

The model for change in deferred tax liability is expressed in equation (3.2):

$$\begin{aligned}\Delta DTL_{it} = {} & \beta_0 + \beta_1 965REP_{it} + \beta_2 \Delta PRE_{it} + \beta_3 NETINCOME_{it} + \beta_4 ETR_{it-1} + \beta_5 DEPEXP_{it} \\ & + \beta_6 COGS_{it} + \beta_7 INTINC_{it} + \beta_8 AMORT_{it} + \beta_9 SALE_{it} + \beta_{10} \Delta STDR_{it} \\ & + \beta_{11} \Delta LTDR_{it} + \varepsilon_{it}\end{aligned} \tag{3.2}$$

where*:*

ΔDTL_{it} =change in dollar amount, in millions in deferred tax liability for firm *i* from year *t-1*, scaled by total assets*;*

$965REP_{it}$ =dollar amount, in millions, repatriated by firm *i* at time *t*, scaled by total assets*;*

ΔPRE_{it} =change in dollar amount, in millions, of PRE disclosed by firm *i* from time *t-1*, scaled by total assets*;*

$NETINCOME_{it}$ =dollar amount, in millions, of net income before extraordinary items for firm *i* at time *t*, scaled by total assets*;*

ETR_{it-1} =calculated effective tax rate for firm *i* at time *t-1*, scaled by total assets*;*

$DEPEXP_{it}$ =dollar amount, in millions, of depreciation expense for firm *i* at time *t*, scaled by total assets*;*

$COGS_{it}$ =dollar amount, in millions, of cost of goods sold for firm *i* at time *t*, scaled by total assets*;*

$INTINC_{it}$ =dollar amount, in millions, of interest income for firm *i* at time *t*, scaled by total assets*;*

$AMORT_{it}$ =dollar amount, in millions, of amortization expense for firm *i* at time *t*,

scaled by total assets;

$SALE_{it}$ =dollar amount, in millions, of fixed asset sales by firm *i* at time *t*, scaled by total assets;

$\Delta STDR_{it}$ =change in dollar amount, in millions, of short-term deferred revenue for firm *i* from time *t-1*, scaled by total assets; and

$\Delta LTDR_{it}$ =change in dollar amount, in millions, of long-term deferred revenue for firm *i* from time *t-1*, scaled by total assets.

The dependent variable of interest in this model is ΔDTL_{it}. This is the change in the net amount of deferred tax reported by the company in its tax footnote for the current year relative to the preceding year. I calculate the change in this variable from one year to the next for the years 2003-2006.

The first independent variable of interest is $965REP_{it}$, which is the amount repatriated, in millions, under §965, disclosed in the firm's tax footnote. As noted above, I predict that firms were more likely to repatriate earnings that were already earmarked for return to the parent company, so I expect this variable to be negatively associated with the changes in the deferred tax liability.[38]

Next, I include a variable representing the amount of earnings disclosed by the firm as permanently reinvested. As mentioned above, I suspect that PRE_{it} is a good proxy for foreign earnings, therefore I expect this variable to be positively related to the change in deferred tax liability. The next two variables included in the model are $NETINCOME_{it}$ and ETR_{it}. $NETINCOME_{it}$ is income before extraordinary items, while ETR_{it} is calculated as the firm's income tax expense divided by the firm's pretax income. I expect changes in both of these to be positively related to change in deferred tax liability.

The remaining variables in the model are based on reconciling items from the Form M-3.[39] Although I hand-collected total deferred tax liability (asset) amounts from tax footnotes, the items that comprise these are not as easy to discern. Many firms combined items or provided vague labels that made it difficult to determine what the items

[38] This variable represents the excess of the amount repatriated in the applicable year over the average amount repatriated for the preceding 3 years.

[39] Schedule M-3 is required for taxpayers with total assets of $10 million or more to reconcile book-tax differences in income.

referenced. That being the case, I selected items from the M-3 that were available in COMPUSTAT.

The expense variables in the model are depreciation expense, cost of goods sold and amortization expense. I also included interest income, a variable that represents the sale of assets, short-term deferred revenue and long-term deferred revenue.[40] I make no specific predictions as to the relation between these variables and changes in the deferred tax liability.

Reinvestment Models

Finally, I study the reinvestment decisions of the firms that repatriated foreign earnings during the dividend tax holiday. I hypothesize that, all else equal, firms that repatriated dividends under §965 will have a greater increase in permitted activities than firms who did not repatriate earnings under §965. Stated another way, if firms invested repatriation dividends in permitted activities, there should be a positive relationship between amounts repatriated and investments in permitted activities, controlling for other factors expected to influence such investments. Alternatively, if firms invested repatriation dividends in nonpermitted activities, such activity should be evident in a positive relationship between amounts repatriated and such nonpermitted investments, again controlling for other factors expected to influence such investments.

My analysis examines only those firms who repatriated monies in 2005. Only 23 firms repatriated in 2004, and after controlling for outliers[41] I was left with only 18 of these firms in the sample. Because of this small sample size, generalized inferences cannot be made.

[40] In the initial model, control variables were also included for interest expense, estimated doubtful accounts and deferred compensation. These variables exhibited a high degree of multicollinearity with other variables in the model and were subsequently removed. For the remainder of the variables, variance inflation factors indicated that multicollinearity was not a problem.

[41] All variables were scaled by total assets to control for firm size. An observation is considered an outlier if the value of the dependent variable was greater than three standard deviations away from the mean value of the scaled variable for all firms. I estimate models with and without outliers – inferences are unchanged but model fit is more appropriate without the outliers in the analysis.

Permitted investments

I examine five of the permitted investments listed in Notice 2005-10 – pension contributions, change in long-term debt, change in plant, property and equipment (PP&E), research and development (R&D) expense and change in intangible assets.[42] I estimate a model with combined amounts of permitted investments to determine if there was an increase in permitted investments in the aggregate. I measure these investments in the aggregate because the nature of each category of investments is intertwined. For example, a firm might pay down long-term debt as suggested by Notice 2005-10, but then finance PP&E with long-term debt. Moreover, to the extent that a firm pays down long-term debt with its repatriation dividend, it will not be able to use that same money to fund additional research and development. To control for this interdependency, I model these investments in the aggregate. I also perform sensitivity analysis for each individual investment as discussed below.

If firms invest repatriated earnings in permitted investments, I expect a significant and positive relation between amounts repatriated and permitted investments. Because amounts repatriated under §965 occurred throughout the year, I expect most investments of these funds to take place in the year following the repatriation.[43] My analysis compares the activities of firms who repatriated §965 dividends in 2005 to those firms in my sample who did not repatriate dividends in either year. I estimate a simple model of permitted investments in equation (3.3)

$$PERMITTED_i = \beta_0 + \beta_1 LAGPERMITTED_{it-1} + \beta_2 965REP_i + \beta_3 NETINCOME_i + \beta_4 CASH_i + \varepsilon_i \quad (3.3)$$

where:

$PERMITTED_i$ =dollar amount, in millions, of permitted investments (as defined below) by firm *i* in 2006, scaled by total assets;

$LAGPERMITTED_{i,t-1}$ =dollar amount, in millions, of permitted investments by firm *i* in

[42] I omit advertising expense because of the lack of a good model. I also omit investing cash flows as that encompasses the investments of long-term debt, PP&E, R&D and intangibles. Finally, I omit analysis of change in number of employees due to measurement of that variable. I find some evidence that firms who repatriated earnings decreased the level of employees in the following year. Unfortunately, this number is an aggregate employee number, so I am unable to ascertain whether they decreased foreign or domestic employees. Congressional intent was to increase domestic employees, but I cannot draw any conclusions that this is evidence of activity inconsistent with Congressional intent.

[43] Similar analysis of 2005 permitted investments does not yield significant results.

2005, scaled by total assets*;*

$965REP_i$ =dollar amount, in millions, repatriated by firm *i* in 2005, scaled by total assets*;*

$NETINCOME_i$ =dollar amount, in millions, of net income for firm *i* in 2006, scaled by total assets*;* and

$CASH_i$ =dollar amount, in millions, of cash, marketable securities, short term assets for firm *i* for 2006, scaled by total assets.

I estimate a cross-sectional OLS regression model for 2006. The dependent variable of interest for this model is $PERMITTED_i$. This is the dollar amount of permitted investments by firm *i* for 2006. This variable is composed of five different amounts – amount of pension contributions for 2006, change in long-term debt from 2005 to 2006, change in PP&E from 2005 to 2006, R&D expense and change in intangible assets.

Pension data was hand collected from footnotes of 10-Ks, while all other variables were gathered from COMPUSTAT. I then include a variable to represent permitted investments from the previous year. All else equal, I would expect a firm's permitted investments to track prior year permitted investments; I expect this variable to be positively related to changes in 2006 permitted investments. The next independent variable is §965 dividends repatriated. If firms used these dividends as intended by Congress, I should see a positive and significant relation between $965REP_i$ and $PERMITTED_i$.

The next two variables – $NETINCOME_i$ and $CASH_i$ – control for additional funds that may be available to increase spending on permitted investments. I expect these to be positively related to changes in pension contributions.

I next analyze two categories of non-permitted investments under Notice 2005-10: dividends and stock repurchases. Models used to analyze these investments are explained below.

Dividends

Notice 2005-10 specifically states that §965 dividends are not to be used to finance increased payouts to U.S. shareholders. Payouts addressed in the Notice include both

dividends and stock repurchases. In the next stage of the analysis, I analyze whether firms appear to have used amounts repatriated under the act to finance either of these two types of nonpermitted activities.

It is likely that firms using §965 dividends to increase payout to their own shareholders would use repurchases rather than increasing dividends. Dozens of academic papers have examined the factors that lead a firm to issue dividends. In general, firms only want to issue a dividend if they know it is sustainable. Firms are reluctant to issue a dividend in the short term and then reduce it later on because of the negative signal that it sends and the resulting negative market response. (DeAngelo and DeAngelo (1990); DeAngelo et al. (1992); and Denis et al. (1994)). Megginson (1997, p. 357) finds that firms are often punished so severely that they experience stock declines up to 50%. Furthermore, Michaely et al. (1995) find that although firms experience a positive reaction with a dividend increase, a dividend decrease causes a much larger negative stock price reaction.

I analyze the relationship between repatriation dividends under the Act and payout to shareholders of U.S. MNCs in two separate models. To analyze the effect on dividends, I use the model developed by Fama and Babiak (1968). Copeland et al. (2004) identify this model as one of the best predictors of next-period dividends. I test this model and add to it a factor for earnings repatriation in equation (3.4).

$$\begin{aligned}\Delta DIVPAYOUT_i = {} & \beta_0 + \beta_1 LAGDIVPAYOUT_{it-1} + \beta_2 965REP_i + \beta_3 NETINCOME_i \\ & + \beta_4 LAGNETINCOME_{i,t-1} + \varepsilon_t\end{aligned} \tag{3.4}$$

where:

$\Delta DIVPAYOUT_i$ =change in percent dollar amount of dividends issued to total shares outstanding of firm *i* from 2005*;*

$LAGDIVPAYOUT_{i,\,t\text{-}1}$ =percent dollar amount of dividends issued to total income of firm *i* in 2005*;*

$965REP_i$ =dollar amount, in millions, repatriated by firm *i* in 2005, scaled by total assets*;*

$NETINCOME_i$ =dollar amount, in millions, of net income for firm *i* in 2006, scaled by total assets; and

$LAGNETINCOME_{i,\,t\text{-}1}$ =dollar amount, in millions, of net income for firm *i* in 2005.

The variable $\Delta DIVPAYOUT_i$ is the change in dollar amount of dividends issued to shareholders of the firm divided by total common shares outstanding for the firm. Following Fama and Babiak (1968), I include the lagged dividend payout amount, which is the dividend payout for year *t-1*. This is found to be the best predictor of dividend payout in the current period, and should be positively and significantly related to the change in dividend payout.

The next independent variable of interest is $965REP_i$, which is the dollar amount repatriated by the firm in 2005. If firms used repatriated earnings to increase dividend payout, despite the fact that it was prohibited under Notice 2005-10, this variable should have a positive and significant association with the changes in dividend payout.

My final two variables also follow Fama and Babiak (1968) – $NETINCOME_i$ and $LAGNETINCOME_{i,\,t-1}$. This controls for additional cash that a firm would have to issue dividends. Despite the fact that signaling theory indicates that firms would not increase dividends unless they were sustainable into the future, this could possibly affect changes in dividends.

Repurchases

A second nonpermitted investment was for firms who repatriated dividends under §965 to increase stock repurchases. Blouin and Krull (2006) study treasury stock repurchases in the aggregate following the implementation of §965 and conclude that repurchases increased after the passage of the Act. Using firm-level data, I test a model of repurchases to determine if firms that repatriated dividends under §965 increased treasury stock repurchases in comparison to other MNCs in my sample.

A long string of literature examines the factors contributing to treasury stock repurchases. Treasury stock repurchases may be undertaken for several reasons. Firms may choose to repurchase stock to signal good news to investors by indicating that the firm is undervalued and stimulate positive abnormal stock returns (Dann 1981; Vermaelen 1981; Comment and Jarrell 1991; and Ikenberry et al. 1995). Firms may also decide to repurchase stock to reduce agency costs and free cash flows (Rozeff 1982; Easterbrook 1984; and Jensen 1986).

Lightner (2007) posits that the tax rate differential between dividend and capital gains income will have on effect on whether a firm chooses to issue dividends or repurchase stock. As the tax rate differential increases, she finds a positive association between the percentage of individual ownership of a firm and the percentage of corporate payout that is in the form of repurchases. Lightner (2007) uses a model of repurchases similar to that in equation (3.5), where I have added a variable for amount repatriated.

$$REPURCHASES_i = \beta_0 + \beta_1 LAGREP_{i,t-1_i} + \beta_2 965REP_i + \beta_3 CASH_i + \beta_4 NETINCOME_i + \beta_5 NONOP_i + \beta_6 AVGLEVIND_i + \beta_7 INDAMKBK_i + \varepsilon_t \tag{3.5}$$

where:

$REPURCHASES_i$ =dollar amount of repurchases by firm *i* in 2006, scaled by total assets*;*

$LAGREP_{i,\,t-1}$ =sum of the dollar amount, in millions, of repurchases for firm *i* for the years 2002-2005, scaled by total assets*;*

$965REP_i$ =dollar amount, in millions, repatriated by firm *i* in 2005, scaled by total assets*;*

$CASH_i$ =dollar amount, in millions, of cash, marketable securities, short term assets for firm *i* before repurchases in 2006, scaled by total assets*;*

$NETINCOME_i$ =dollar amount, in millions, of net income for firm *i* in 2006, scaled by total assets*;*

$NONOP_i$ =dollar amount, in millions, of nonoperating income for firm *i*, in 2006, scaled by total assets;

$AVGLEVIND_i$ =average level of repurchases for the industry of firm *i* for 2006; and

$INDAMKBK_i$ =the ratio of the average total market value of equity to total book value of equity for firm *i*'s industry, subtracted from the total market value of equity to total book value of equity for firm *i*, in 2005.

The dependent variable in this model is the level of the nonpermitted investment $REPURCHASES_i$. This is the dollar amount of repurchases by firm *i* in 2006. The first independent variable is $LAGREP_{i,\,t-1}$, representing the sum of the dollar amount of repurchases for the years 2002-2005. This variable controls for repurchase programs that span more than one period and for those firms who could be considered common

repurchasers. (Lightner 2007). As discussed above, Blouin and Krull (2006) find that stock repurchases increased more overall for firm who repatriated under §965. The variable $965REP_i$ represents dollar amounts repatriated by firms in 2005. If firms used repatriation dividends to fund additional stock repurchases, I expect to see a positive association between $REPURCHASES_i$ and amount repatriated.

Other factors may have contributed to a firm deciding to repurchase stock in addition to the passage of §965. I include three control variables from previous literature. The first variable in the model is $NETINCOME_i$, controlling for additional funds that might available to repurchase stock. This variable should be positively related to repurchases

Next, Bagwell and Shoven (1989) and Barth and Kasznik (1999) find that the level of cash held by a firm affects whether or not they repurchase stock. In this model, cash is the sum of cash, marketable securities and short –term assets before repurchases, scaled by total assets at time *t-1*. Because of previous research and because firms must have cash held overseas in order to repatriate, I expect a positive association between $REPURCHASES_i$ and $CASH_i$.

I include $NONOP_i$, the dollar amount of non-operating income for the firm in the year of repurchase. In a previous paper, Jagannathan et al. (1999) found that firms who repurchase shares rather than increasing dividends have significantly more non-operating income than those firms who only increase dividends. I expect this variable to be positively related to $REPURCHASES_i$.

I then include a variable to control for industry level of repurchases. $AVGLEVIND_i$ represents the average level of repurchases for the industry of firm *i* at time *t*. Finally, I include a variable to control for undervaluation. Anecdotal evidence indicates that management will repurchase shares if they feel that their stock is undervalued. Some prior research reports results consistent with this expectation - firms repurchase stock if they feel that their stock is undervalued relative to others in their industry. (Dann 1983, Wansley et al. 1989). The $INDAMKBK_i$ variable controls for that effect on repurchases in my model.

Measurement of Variables and Sample Selection

Amounts Repatriated Model and Deferred Tax Liability Model

My sample of corporations for all hypotheses was drawn from COMPUSTAT and Lexis-Nexis. Companies from the 2004 and 2005 COMPUSTAT Geographic Segment database with either foreign sales or foreign assets were selected for the initial sample, which totaled 3,818 observations. Next, I searched Lexis-Nexis EDGAR filings for "American Jobs Creation Act." This yielded an additional 64 companies. I required firms to have either foreign sales or foreign assets for both 2004 and 2005. After identifying firms that had both and removing duplicate years, I was left with 1,608 firms.

For each of the 1,608 firms, I searched EDGAR for 2004 and 2005 10-K filings. I pulled tax footnotes for each company to gather information pertaining to repatriation and permanently reinvested earnings. I also noted the mailing address and state of incorporation for each company. As I viewed each company, I eliminated ADRs, Trusts, LLCs, LLPs, LTDs, LPs, REITs and any other financial services firms. I also eliminated foreign firms and firms with missing 10-K filings. This left me with a sample of 1,156 firms.

For this sample of firms, I gathered disclosed deferred tax liabilities and assets from tax footnotes. For a firm to remain in my sample, it had to have a disclosure for the deferred tax liability or asset for the years 2002-2006. For these two models, my final sample of firms was 931.

Reinvestment Models

To analyze how firms invested repatriation dividends, I began with the same sample of companies as for H1. The first item I collected was pension contributions. COMPUSTAT data for pension contributions is incomplete, so I hand-collected pension footnotes. Dependent variables for the next five models were collected from COMPUSTAT and were limited by data availability. My final sample size for the permitted investments model is 896.

I also collected data for the nonpermitted investments. COMPUSTAT data for treasury stock repurchases is incomplete, so I hand-collected cash flow statements for firms in my sample to determine the amount of treasury stock repurchases for each one.

My final sample for cross-sectional repurchases models is 778. Finally, I collected dividend data from COMPUSTAT to create the dividend payout variable. The final sample for the dividend payout model is 776.

Results and Discussion

Descriptive Statistics

Table 2.2 above presents descriptive statistics for the sample of hand collected tax footnotes. The full sample contains 1,156 firms. Because the legislation was passed in late October of 2004, firms were given a choice of a tax holiday in either fiscal 2004 or fiscal 2005. Most firms chose to wait for IRS guidance and repatriate during 2005. In fact, 23 firms repatriated in 2004 and 225 repatriated in 2005. In 2004, firms repatriated a total of $3.283 billion and in 2005 they repatriated $246.44 billion. Overall, then, firms repatriated $250 billion under §965. Most of the firms disclosed federal tax paid on the CFC distributions. In 2004, the government collected $183 million related to the Act. In 2005, they collected $11.05 billion.

Figure 3.1 displays total dollar amounts of deferred tax liabilities (assets) for firms in my sample for the years 2002-2006. The sample is split between repatriaters and non-repatriaters, which numbered 224 and 710, respectively. It is immediately obvious from the graph that a larger percentage of firms classified as repatriaters were in a deferred tax liability position, as opposed to the non-repatriaters, who were generally in a deferred tax asset position. Also noteworthy is the steady increase in deferred tax liabilities for repatriaters through 2005, followed by a precipitous decrease in 2006 after the repatriation of funds under §965.

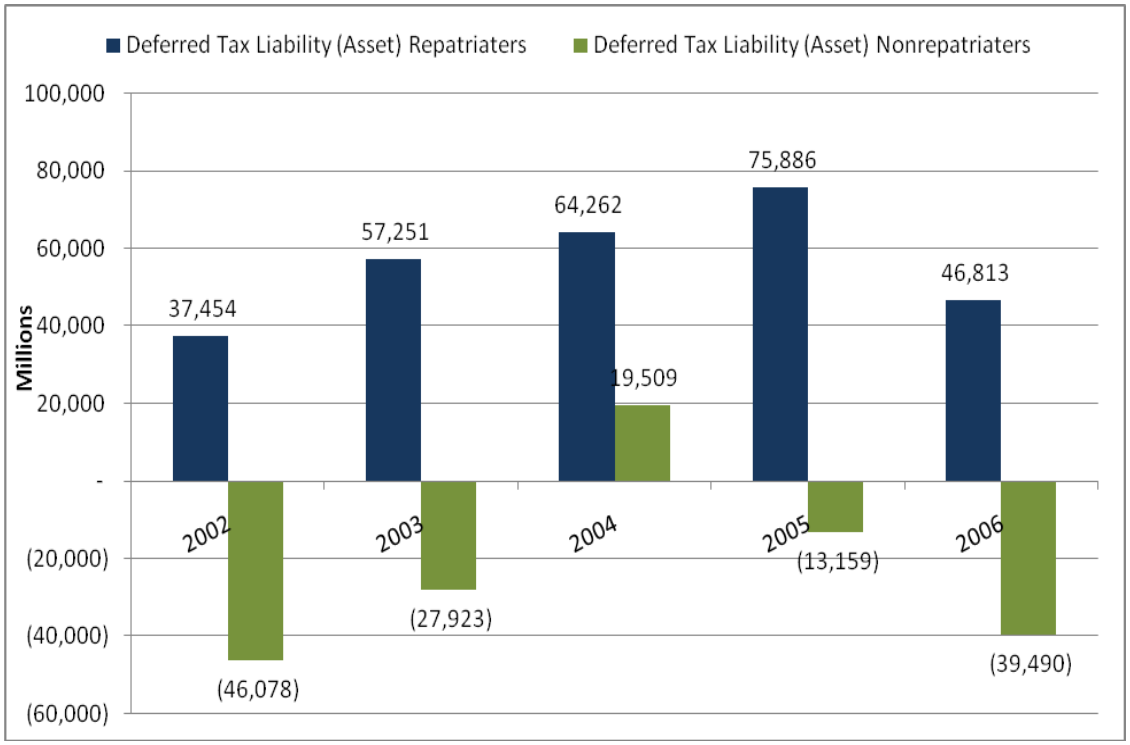

Figure 3.1 Level of Deferred Tax Liabilities (Assets)
Repatriaters vs. Non-Repatriaters

Figure 3.2 exhibits total dollar amounts of permanently reinvested earnings for repatriaters vs. non-repatriaters for the years 2003-2006. Again, when comparing the 224 repatriaters to the 710 non-repatriaters in my sample, there is a large difference in the level of permanently reinvested earnings. The repatriaters have significantly more earnings classified as permanently reinvested. For the non-repatriaters, level of PRE is low but rises steadily over the four years in my sample. On the other hand there is a slight dip in PRE for 2005 for the repatriaters, indicating that some of the funds repatriated were likely those classified as permanently reinvested. This amount is very small, though, compared to total PRE, and the level of PRE rises again in the next year to near pre-§965 levels.

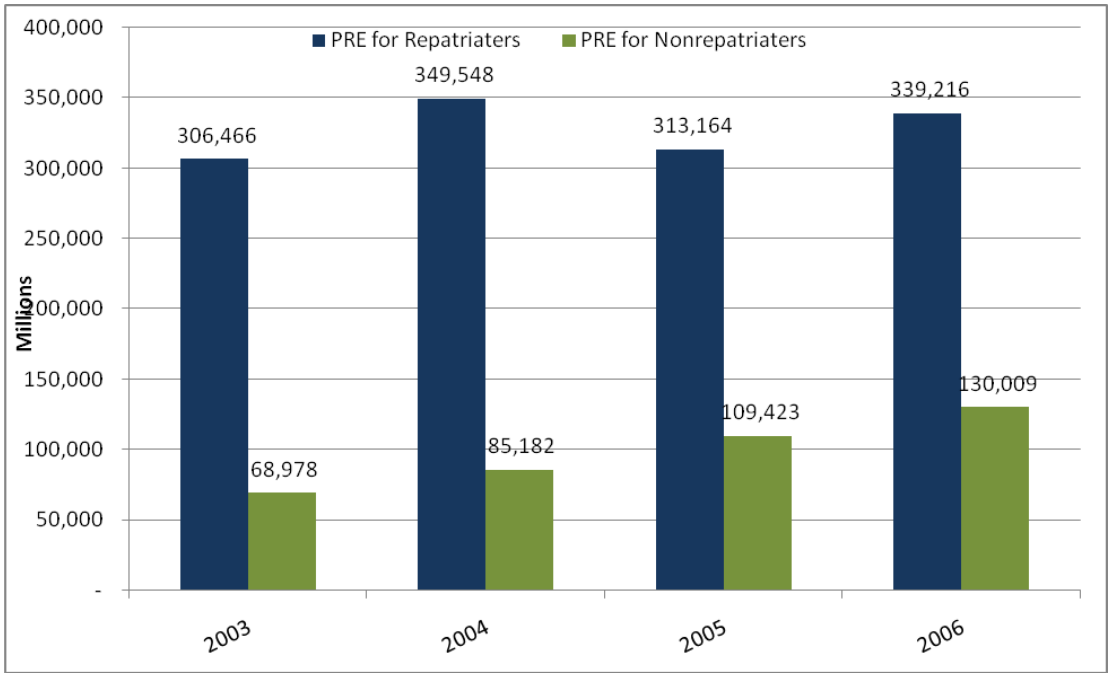

Figure 3.2 Level of Permanently Reinvested Earnings
Repatriaters vs. Non-Repatriaters

Finally, Figure 3.3 presents the total dollar amounts of firm stock repurchases for repatriaters vs. non-repatriaters for the years 2002-2006.

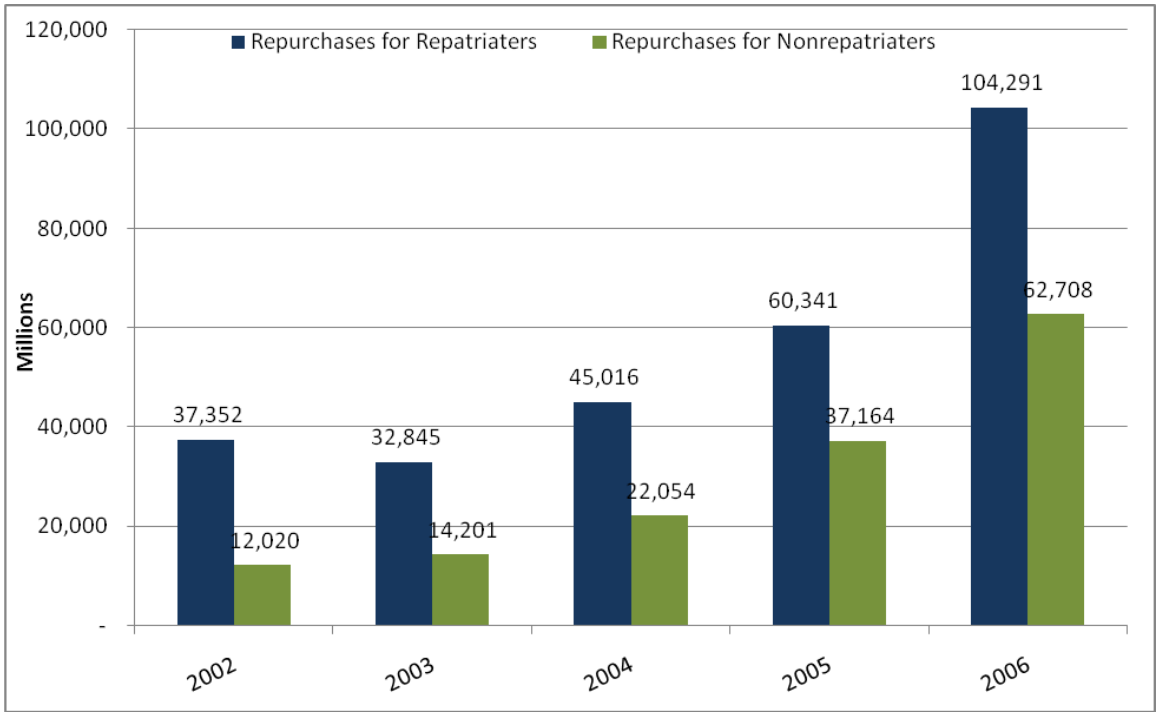

Figure 3.3 Level of Repurchases
Repatriaters vs. Non-Repatriaters

As with the previous graphs, the level of repurchases for the 192 repatriating firms represented is much higher than the level of repurchases for the 730 non-repatriating firms represented. This difference is very large for 2006, in the year following repatriation. For repatriaters, repurchases were rising steadily for 2003-2005 at a rate of around $15 billion more each year. From 2005 to 2006, there was an increase of $44 billion.

In Table 3.1, I present the results of preliminary analysis of changes in the dependent variables for each of my models. I perform paired t-tests to determine whether there were significant changes in the levels of these variables from the year previous to the year of repatriation, and from the year of repatriation to the following year. Note that the reinvestment variables are scaled by total assets.

Table 3.1 Descriptive Analysis of 2005 Repatriaters

Variable	2004	2005	2006	n
DTL_i	280.94	331.40	192.87**	211
PRE_i	1,652.02	1,478.86	1,600.80	211
$PENCONT_i$	0.01	0.01	0.01	101
LTD_i	0.21	0.18*	0.17	194
PPE_i	0.26	0.25**	0.64**	191
RD_i	0.04	0.04	0.03	164
INT_i	0.21	0.22	0.52*	188
$REPURCHASES_i$	0.02	0.03***	0.04***	163
$DIVPAYOUT_i$	0.45	0.51***	0.14***	163

DTL_i =average dollar amount, in millions of the deferred tax liability disclosed;

PRE_i =average dollar amount, in millions, of earnings designated by as permanently reinvested;

Table 3.1 continued

$PENCONT_i$	=average dollar amount, in millions, of pension contributions;
LTD_i	=average dollar amount, in millions, of long-term debt;
PPE_i	=average dollar amount, in millions, PP&E;
RD_i	=average dollar amount, in millions, R&D;
INT_i	=average dollar amount, in millions, intangible expense;
$REPURCHASES_i$	=average dollar amount, in millions, of stock repurchases; and
$DIVPAYOUT_i$	=average percentage of dividends per share.

***significant at the .10 level**

****significant at the .05 level**

*****significant at <.001**

Overall, the results summarized in Table 3.1 are consistent with expectations. Between 2004 and 2005, firms had significant decreases in long-term debt and PP&E, as well as significant increases in repurchases and dividend payout. More interesting, though, are the significant differences between 2005 and 2006, after firms repatriated earnings under §965. I find significant decreases in deferred tax liabilities and dividend payout. I also find significant increases in PP&E, intangible assets and the amount of repurchases in 2006.

Hypothesis 1a predicts that levels of permanently reinvested earnings would decline significantly for those firms repatriating earnings under §965. Table 3.1 indicates that reported levels of PRE did in fact decline for 2005 repatriaters in 2005 relative to 2004. However, this decline is not statistically significant. On the other hand, I find that there is a significant decrease in the levels of deferred tax liabilities after the year of repatriation for firms who repatriated earnings under §965, an observation consistent with Hypothesis 1b.

Also noteworthy, a simple comparison of 2006 amounts to those reported in 2005 indicates that investments in the permitted activities of PP&E and intangible assets increased significantly in 2006, consistent with Congressional intentions. In contrast, average stock repurchases increased significantly. The latter result is consistent with

results previously reported by Blouin and Krull (2007) suggesting that firms, contrary to Congressional intent, appear to have used repatriation dividends under §965 to increase payouts to shareholders through stock repurchases.

Amounts Repatriated Model

Table 3.2 reports a more complex model of amounts repatriated. If firms funded repatriation dividends from earnings classified as permanently reinvested in foreign countries, as Congress hoped, then there should be a positive correlation between amounts repatriated and the level of reported permanently reinvested earnings for the prior year.

Table 3.2 Results of Amount Repatriated Model

$$LNrepatriation^*_i = \tau_0 + \tau_1 PRE_{i,t-1} + \tau_2 ETR_{i,t-1} + \tau_3 CASH_{i,t-1} + \tau_4 LNASSETS_{i,t-1} + \varepsilon_i$$

Variable	Parameter Estimate	t-statistic	p-value
$PRE_{i,t-1}$	0.03	3.31	<.001
$ETR_{i,t-1}$	-7.19	-0.71	0.48
$CASH_{i,t-1}$	1.31	3.65	<.001
$LnASSETS_{i,t-1}$	0.35	11.03	<.001
Pseudo R^2 (a)			0.39
AIC Statistic (b)			563

n = 223

$LNRepatriation^*_i$ =logged dollar amount repatriated by firm *i* in response to §965;

$PRE_{i,t-1}$ =dollar amount, in millions, of earnings designated by firm *i* as permanently reinvested in year prior to repatriation, scaled by total assets;

$ETR_{i,t-1}$ =effective tax rate for firm *i* in year prior to repatriation, scaled by total assets;

Table 3.2 continued

$CASH_{i,\,t-1}$ =dollar amount, in millions, of cash, marketable securities, and short term assets for firm *i* in year prior to repatriation, scaled by total assets; and

$LnASSETS_{i,\,t-1}$ =logged dollar amount of assets for firm *i* in year *t-1*.

(a) This is a goodness of fit statistic that represents the percentage reduction in variance of the TOBIT latent variable underlying the responses.
(b) The AIC statistic is a penalized log-likelihood statistic that can be used to compare model fit, with a lower AIC indicating a better fit (Dayton 2003).

Overall, results of the first model indicate that the higher the level of permanently reinvested earnings prior to the passage of §965, the more a firm repatriated. This supports the finding in Table 3.1 that PRE declined between the years 2004 and 2005. This could suggest that firms did repatriate some amounts previously classified as permanently reinvested, but it could also indicate that PRE is simply a proxy for foreign earnings available for repatriation. The latter explanation is especially plausible given that the maximum amount that could be repatriated under §965 was limited to the amount previously designated as PRE. To further explore this question, I turn to an analysis of deferred tax liabilities.

Deferred Tax Liability Model

If firms funded their repatriation dividends with foreign-source earnings *not* classified as permanently reinvested abroad, then there should be a negative correlation between deferred tax liability and amounts repatriated. I tested this relation using a pooled model of the changes in deferred tax liability for the years 2004-2006.[44] As predicted, I find a negative and significant relation between changes in deferred tax liabilities and changes in amounts repatriated.

[44] I estimate this model in three other ways. First, I estimate the change in DTL model with a reduced sample of repatriaters only. Next, I estimate a pooled levels model for the years to 2003-2006 to predict changes in the level of deferred tax liability, using the independent variables from the change model measured as levels. Finally, I estimate the levels model with a reduced sample of repatriaters only. In all three models, results are quantitatively similar to the model presented in Table 3.3. Results available from the author upon request.

Table 3.3 Results of Change in DTL Model

$$\Delta DTL_{it} = \beta_0 + \beta_1 965REP_{it} + \beta_2 \Delta PRE_{it} + \beta_3 NETINCOME_{it} + \beta_4 ETR_{it-1} + \beta_5 DEPEXP_{it} + \beta_6 COGS_{it} + \beta_7 INTINC_{it} + \beta_8 AMORT_{it} + \beta_9 SALE_{it} + \beta_{10} \Delta STDR_{it} + \beta_{11} \Delta LTDR_{it} + \varepsilon_{it}$$

Variable	Parameter Estimate	t-statistic	p-value
$965REP_{it}$	-0.96	13.84	<.001
ΔPRE_{it}	-0.03	-3.39	<.001
$NETINCOME_{it}$	-0.01	-0.43	0.66
ETR_{it-1}	-4.18	-2.73	0.01
$DEPEXP_{it}$	0.47	1.34	0.18
$COGS_{it}$	-0.01	-0.62	0.53
$INTINC_{it}$	0.24	0.15	0.88
$AMORT_{it}$	1.18	1.06	0.29
$SALE_{it}$	0.49	0.70	0.48
$\Delta STDR_{it}$	-0.50	-1.08	0.28
$\Delta LTDR_{it}$	0.24	0.39	0.69
Pseudo R^2			0.04

n = 2,793

ΔDTL_{it} =change in dollar amount, in millions in deferred tax liability for firm *i* from year *t-1*, scaled by total assets*;*

$965REP_{it}$ =dollar amount, in millions, repatriated by firm *i* at time *t*, scaled by total assets*;*

ΔPRE_{it} =change in dollar amount, in millions, of PRE disclosed by firm *i* from time *t-1*, scaled by total assets*;*

$NETINCOME_{it}$ =dollar amount, in millions, of net income before extraordinary items for firm *i* at time *t*, scaled by total assets*;*

Table 3.3 continued

ETR_{it-1} =calculated effective tax rate for firm *i* at time *t-1*, scaled by total assets*;*

$DEPEXP_{it}$ =dollar amount, in millions, of depreciation expense for firm *i* at time *t*, scaled by total assets*;*

$COGS_{it}$ =dollar amount, in millions, of cost of goods sold for firm *i* at time *t*, scaled by total assets*;*

$INTINC_{it}$ =dollar amount, in millions, of interest income for firm *i* at time *t*, scaled by total assets*;*

$AMORT_{it}$ =dollar amount, in millions, of amortization expense for firm *i* at time *t*, scaled by total assets*;*

$SALE_{it}$ =dollar amount, in millions, of fixed asset sales by firm *i* at time *t*, scaled by total assets*;*

$\Delta STDR_{it}$ =change in dollar amount, in millions, of short-term deferred revenue for firm *i* from time *t-1*, scaled by total assets*;* and

$\Delta LTDR_{it}$ =change in dollar amount, in millions, of long-term deferred revenue for firm *i* from time *t-1*, scaled by total assets.

Not surprisingly, I also find that the change in amount of earnings designated as permanently reinvested was significantly and negatively related to the change in deferred tax liability. This is logical, as firms who designate earnings as permanently reinvested are not required to establish a deferred tax liability for those earnings. I also find that the lagged effective tax rate was negatively and significantly related to change in deferred tax liability. No other items in the model were significant.

Permitted Investments

The results reported in Tables 3.1 – 3.3 suggest that amounts repatriated under §965 were not entirely funded with permanently reinvested earnings, but were instead largely paid using funds temporarily being held overseas. These results can perhaps be viewed with mixed sentiments. On the one hand, it does not appear that the chief objective of Congress in drafting §965 was satisfied; the chief result seems to be that firms merely

accelerated planned repatriation of foreign-source income in order to maximize tax advantages. On the other hand, policy makers at the FASB will likely be comforted that earnings designated by U.S. multinationals as permanently reinvested in other countries are, for the most part, permanently reinvested there. Even in the face of significant tax incentives to return those funds to the U.S., firms appear to have only returned a very small portion of those funds.

Of course, it is possible that acceleration of planned repatriation could still provide some economic benefit in the U.S. if firms used the repatriation dividends to make the types of domestic investments envisioned by Congress in passing §965. The final portion of my analysis addresses how firms reinvested repatriated funds. Recall that members of the HIC promised to invest in items that would stimulate the economy, specifically those that were permitted in Notice 2005-10. If firms kept their promise, then I should see a significant relationship between amounts repatriated under §965 and permitted investments.

The results for the permitted investment model are presented in Table 3.4 For this cross-sectional model, only firms who repatriated in 2005 and firms that did not repatriate in either year are included in the analysis. In other words, the sample excludes firms that repatriated in 2004.

Table 3.4 Results for Permitted Investments Model

$$PERMITTED_i = \beta_0 + \beta_1 LAGPERMITTED_{it-1} + \beta_2 965REP_i + \beta_3 NETINCOME_i + \beta_4 CASH_i + \varepsilon_i$$

Variable	Parameter Estimate	t-statistic	p-value
$LAGPERMITTED_{i,t-1}$	-0.01	-0.95	0.34
$965REP_i$	5.83	4.39	<.001
$NETINCOME_i$	-24.35	-6.70	<.001
$CASH_i$	6.53	1.84	0.07
Adjusted R-squared			0.07

n = 939

Table 3.4 continued

$PERMITTED_i$	=dollar amount, in millions, of permitted investments by firm *i* in 2006, scaled by total assets;
$LAGPERMITTED_{i,t-1}$	=dollar amount, in millions, of permitted investments by firm *i* in 2005, scaled by total assets;
$965REP_i$	=dollar amount, in millions, repatriated by firm *i* in 2005, scaled by total assets;
$NETINCOME_i$	=dollar amount, in millions, of net income for firm *i* in 2006, scaled by total assets; and
$CASH_i$	=dollar amount, in millions, of cash, marketable securities, short term assets for firm *i* for 2006, scaled by total assets.

As predicted, I find that firms who repatriated dividends in 2005 under §965 increased spending on permitted investments when compared to those who did not repatriate dividends. Not surprisingly, cash was a significant and positive predictor of the level of permitted investments in 2006. Contrary to prediction, net income appears to be a negative predictor of permitted investments in 2006.

As a sensitivity analysis, I also estimated individual models for each of the five investments. In each model the dependent variable was the change in permitted investment from 2005 to 2006. I then include a variable representing spending/changes on the other four permitted investments in 2006, along with the independent variables from the permitted model. In these individual models I find no significant effect of §965 dividends on any individual category of permitted investment. Results are untabulated but available from the author upon request.

Thus, it appears that repatriation firms did increase their investments in "permitted" investments in the aggregate relative to non-repatriaters, though it is not clear that such investments were focused in any particular category. I next turn to the question whether firms used repatriation dividends to make nonpermitted payouts to shareholders. Blouin and Krull (2006) examined aggregate data and concluded that firms increased repurchases following the dividend tax holiday, and surmised that they used funds repatriated under §965 to facilitate these repurchases. The Treasury Department appears

to have also been concerned that firms might use these funds to increase dividend payouts.

Dividend Payout

First I model dividend payout as a function of amounts repatriated and other factors. The results are summarized in Table 3.5. As expected, I find no evidence that firms who repatriated dividends under §965 used the repatriation amounts to increase dividend payouts. In fact, the results indicate that dividend payouts for these firms actually *decreased* in 2006. The lagged dividend amount is negative and significant, while the income variables are insignificant[45]. Similar results are also found for 2005.

Table 3.5 Results for Change in Dividend Payout Model

$$\Delta DIVPAYOUT_i = \beta_0 + \beta_1 LAGDIVPAYOUT_{it-1} + \beta_2 965REP_i + \beta_3 NETINCOME_i + \beta_4 LAGNETINCOME_{i,t-1} + \varepsilon_t \quad (8)$$

Variable	Parameter Estimate	t-statistic	p-value
$LAGDIV_{i,t-1}$	-1.01	-3.65	<.001
$965REP_i$	-1.44	-3.03	<.001
$NETINCOME_i$	-0.46	-1.37	0.17
$LAGNETINCOME_{i,t-1}$	0.02	0.08	0.94
Adjusted R^2			0.03

n = 963

$\Delta DIVPAYOUT_i$ =change in percent dollar amount of dividends issued to total shares outstanding of firm *i* from 2005*;*

$LAGDIVPAYOUT_{i,t-1}$ =percent dollar amount of dividends issued to total income of firm *i* in 2005*;*

$965REP_i$ =dollar amount, in millions, repatriated by firm *i* in 2005, scaled by total assets*;*

[45] Note that this time period coincides with the period following the decrease in the dividend tax rate put into place by JGTRRA 2003. Although outliers, such as Microsoft, were removed from the analysis, it is possible that firms temporarily increased dividend payouts in 2004-2005 and then decreased them again in 2006.

Table 3.5 continued

$NETINCOME_i$ =dollar amount, in millions, of net income for firm *i* in 2006, scaled by total assets; and

$LAGNETINCOME_{i,\,t-1}$ =dollar amount, in millions, of net income for firm *i* in 2005.

Stock Repurchases

I next examine whether firms who repatriated funds under §965 increased the level of stock repurchases in 2006. In general, my results, presented in Table 3.6, support the findings reported by Blouin and Krull (2006). I find that firms who repatriated dividends under §965 increased stock repurchases when compared to firms who did not repatriate. As predicted, the lagged repurchases variable, cash and net income are all significant and positive.

Table 3.6 Results for Repurchases Model

$$REPURCHASES_i = \beta_0 + \beta_1 LAGREP_{i,t-1_i} + \beta_2 965REP_i + \beta_3 CASH_i + \beta_4 NETINCOME_i + \beta_5 NONOP_i + \beta_6 AVGLEVIND_i + \beta_7 INDAMKBK_i + \varepsilon_t$$

Variable	Parameter Estimate	t-statistic	p-value
$LAGREP_{i,t-1}$	0.15	10.61	<.001
$965REP_i$	0.05	2.61	0.01
$CASH_i$	0.04	4.53	<.001
$NETINCOME_i$	0.05	5.11	<.001
$NONOP_i$	-0.08	-0.48	0.63
$AVGLEVIND_i$	0.01	1.14	0.25
$INDAMKBK_i$	0.01	1.32	0.19
Adjusted R^2			0.22

n = 778

$REPURCHASES_i$ =dollar amount of repurchases by firm *i* in 2006, scaled by total assets;

$LAGREP_{i,\,t-1}$ =sum of the dollar amount, in millions, of repurchases for firm *i* for the years 2002-2005, scaled by total assets;

Table 3.6 continued

$965REP_i$	=dollar amount, in millions, repatriated by firm *i* in 2005, scaled by total assets;
$CASH_i$	=dollar amount, in millions, of cash, marketable securities, short term assets for firm *i* before repurchases in 2006, scaled by total assets;
$NETINCOME_i$	=dollar amount, in millions, of net income for firm *i* in 2006, scaled by total assets;
$NONOP_i$	=dollar amount, in millions, of nonoperating income for firm *i*, in 2006, scaled by total assets;
$AVGLEVIND_i$	=average level of repurchases for the industry of firm *i* for 2006; and
$INDAMKBK_i$	=the ratio of the average total market value of equity to total book value of equity for firm *i*'s industry, subtracted from the total market value of equity to total book value of equity for firm *i*, in 2005.

These results provide cause for concern that firms used monies repatriated under §965 to make nonpermitted payments to their shareholders. This is perhaps not surprising given that the Treasury Department explicitly indicated that no penalty would accrue to such behavior.

Conclusion

This chapter of the dissertation examines the sources and uses of funds repatriated by MNCs under §965 of the Homeland Investment Act. Using a hand-collected sample of tax footnotes, cash flow statements and other corporate data, I attempt to determine the actions of firms during the dividend tax holiday.

My results suggest that the Congressional objectives of this legislation were not completely satisfied. Rather than solely repatriating funds designated as permanently reinvested, which was the intention of the federal government, it appears that firms simply accelerated the return of funds already slated to be paid out as a dividend to the

U.S. parent corporation, while only repatriating a small portion of funds designated as PRE.

Moreover, preliminary results regarding the reinvestment of these funds suggest that while firms appear to have used the repatriated monies to increase permitted investments in the aggregate, they also used these funds to increase payouts to shareholders, an activity that was expressly not permitted by the legislation. My findings have implications for future policy making.

I find compelling evidence that many firms simply accelerated funds already in the pipeline to return home, which was certainly not the objective of the legislation. Given that the legislation provided no penalties for failure to comply with Congressional goals, perhaps these results are not surprising. At a minimum, Congress should consider providing penalties for such noncompliance should it consider similar legislation again in the future. However, given the apparent lack of success of this legislation in encouraging U.S. MNCs to reinvest foreign earnings in prescribed domestic activities, it may be that future policy makers will choose other incentives altogether to accomplish these objectives.

CHAPTER IV
CONCLUSION

This dissertation is an in-depth examination of the reaction of states and multinational corporations to §965 of the Homeland Investment Act of 2004. The Act created a temporary tax holiday for dividends returned to the U.S. parent corporations from CFCs. This was a one-time reduction in the tax rate on these dividends which yielded a window in which to observe reactions to tax incentives by two parties.

Policy-making at the state level is a nebulous concept but is an important consideration for a firm choosing a location for its headquarters. I attempt to demystify that decision process by examining what factors influence states in choosing to conform to or decouple from federal tax legislation. Using a logistic regression model, I examine decisions made by states for nine previous federal tax reductions. Not surprisingly, I find that the only significant predictor of a state's decision to conform to federal legislation is the amount of any spending overruns at the time of the decision.

I then investigate the effects of a state's decision to conform to §965 on the repatriation behavior of firms headquartered in that state. My results show that any tax burden at the state level is overwhelmed by the magnitude of the federal tax break, thus rendering the decision of the state inconsequential. These results should have implications for state policy makers. Namely, firms are perhaps not as concerned with state taxes when the reduction in federal burden is large.

I then examine the outcome of this legislation when compared with Congressional intent. In passing this legislation, Congress intended for firms to repatriate earnings classified as permanently reinvested – those that were unlikely to be returned to U.S. any time in the near future, if at all. My results indicate that firms only returned a small portion of funds classified as permanently reinvested in foreign subsidiaries, while the remainder of funds repatriated was simply an acceleration of monies already slated to return back to the U.S. This was inconsistent with Congressional intent and perhaps reduced the overall federal tax that could have been collected on those funds.

The guidance for the usage of repatriated funds was also very specific. Notice 2005-10 set out specific activities that were permitted and those that were not permitted. These

funds were intended to stimulate the domestic economy and create jobs in the U.S. rather than move them overseas.

I find some evidence that firms used the monies to increase congressionally permitted investments, but I am unable to pinpoint specific activities. I also find that, consistent with prior research, firms who repatriated monies under §965 increased share repurchases, even though this activity was specifically prohibited.

Future research in this area could examine the activities of firms in the future with regard to earnings designated as permanently reinvested. For example, are firms now consistently designating more monies as permanently reinvested in order to qualify for future tax holidays? Also, it would be interesting to investigate whether there was a decline in permitted activities as well as repurchases in the years after my sample period.

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