

TWO ESSAYS ON THE AMERICAN JOBS CREATION ACT OF 2004

A Dissertation

by

ROY CLEMONS

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2008

Major Subject: Accounting

TWO ESSAYS ON THE AMERICAN JOBS CREATION ACT OF 2004

A Dissertation

by

ROY CLEMONS

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Approved by:

Chair of Committee,  
Committee Members,

Head of Department,

Michael R. Kinney  
Dennis R. Lassila  
Dudley L. Poston  
Robert H. Strawser  
James J. Benjamin

August 2008

Major Subject: Accounting

## ABSTRACT

Two Essays on the American Jobs Creation Act of 2004. (August 2008)

Roy Clemons, B.S., West Virginia University;

M.A.S., West Virginia University;

M.S., West Virginia University

Chair of Advisory Committee: Dr. Michael R. Kinney

This dissertation contains two essays. The American Jobs Creation Act of 2004 was intended to stimulate the economy by expediting the repatriation of foreign earnings and requiring that those repatriations be invested in domestic operations. The first essay investigates (1) who repatriated foreign earnings under the provisions of the Act, (2) why firms repatriated and (3) what the firms did with the repatriated funds. The first essay identifies 364 firms that repatriated approximately \$283 billion under the Act. The only significant increase in expenditures for the repatriating firms was for stock repurchases, an expenditure specifically prohibited under the Act. Firms appear to have repatriated foreign earnings to take advantage of the tax savings without achieving the Act's intended objective of increasing domestic investment.

The second essay builds on recent research that evaluates the lock-out effect of the U.S. international tax system. The second essay studies the factors associated with the lock-out effect of the U.S. international tax system. Recent evidence suggests that firms that have reached their optimal level of investment in foreign operations will accumulate foreign earnings abroad in financial assets to avoid recording the associated U.S. tax liability. However, prior research has not disentangled the difference between

firms that permanently reinvest their foreign earnings for reinvest into operations versus firms that classify their foreign earnings as permanently reinvest to indefinitely defer the recognition of the associated U.S. tax liability. Using a hand-collected sample of firms that repatriated under the one-time tax holiday, I find that the firms were classifying their foreign earnings as permanently reinvested to avoid recognizing the associated U.S. liability before and after the one-time tax holiday. Also, during the tax holiday firms brought back significant amounts of cash previously classified as permanently reinvested foreign earnings suggesting that the earnings were not retained abroad for foreign reinvestment. The results of essay two are consistent with theoretical predictions that firms repatriating under the Act classified their foreign earnings as permanently reinvested to avoid recognizing the associated U.S. tax liability.

## ACKNOWLEDGMENTS

I thank my committee chair, Dr. Kinney, and my committee members, Dr. Lassila, Dr. Poston, and Dr. Strawser, for both their unlimited support and guidance throughout this research. I also thank all of my friends and family who have supported me unconditional.

## TABLE OF CONTENTS

	Page
ABSTRACT .....	iii
ACKNOWLEDGMENTS.....	v
TABLE OF CONTENTS .....	vi
LIST OF TABLES .....	viii
CHAPTER	
I      INTRODUCTION.....	1
II      THE WHO, WHY AND WHAT OF THE ONE-TIME TAX HOLIDAY FOR REPATRIATIONS PROVIDED BY THE AMERICAN JOBS CREATION ACT OF 2004.....	3
Introduction .....	3
Background and Literature Review.....	6
Review of Relevant Academic Literature .....	8
Who Repatriated under AJCA and Why? .....	10
Methodology .....	13
Repatriating and Non-repatriating Firm Characteristics .....	15
Did Repatriations under AJCA Increase with Tax Savings and Firm Growth Opportunities? .....	18
What Expenditures Increased in the Year of Repatriation? .....	23
Summary .....	33
III     THE LOCK-OUT EFFECT OF THE U.S. INTERNATIONAL TAX SYSTEM: AN EVALUATION AROUND THE ONE-YEAR TAX HOLIDAY FOR REPATRIATIONS PROVIDED BY THE AMERICAN JOBS CREATION ACT OF 2004.....	35
Introduction .....	35

CHAPTER	Page
Background and Hypothesis Development .....	43
Sample Selection and Research Design .....	56
Descriptive Statistics and Results .....	64
Summary .....	78
IV CONCLUSION .....	82
REFERENCES .....	84
VITA .....	86

## LIST OF TABLES

TABLE	Page
II-1 Industry Distribution of Firms Repatriating Foreign Earnings under the American Jobs Creation Act of 2004 .....	12
II-2 Descriptive Statistics for Firms Repatriating under AJCA, Non-repatriating Firms with Foreign Operations, and the Compustat Universe of Firms .....	14
II-3 Logistic Regression of Repatriation Choice of Firms with Foreign Operations .....	21
II-4 Changes in Qualified Uses and Nonqualified Uses Pre- and Post- AJCA.	25
II-5 Coefficients from a Regression of Repatriations under AJCA on Motives for Repatriating .....	28
II-6 Coefficients from a Regression of Repatriations on Allowed and Disallowed Uses under the American Jobs Creation Act of 2004 .....	32
III-1 Industry Distribution of Firms Repatriating under the American Jobs Creation Act of 2004 .....	65
III-2 2004 Descriptive Statistics for Firms Repatriating under the American Jobs Creation Act of 2004 .....	68
III-3 OLS Regression of PRE for Firms Repatriations under the Tax Holiday on Motives for PRE .....	71
III-4 OLS Regression of 2004 to 2005 Changes in PRE for Firms Repatriating under the Tax Holiday on Changes in Motives for PRE .....	74
III-5 OLS Regression of 2005 to 2006 Changes in PRE for Firms Repatriating under the Tax Holiday on Changes in Motives for PRE .....	77



## CHAPTER I

### INTRODUCTION

This dissertation contains two essays. The American Jobs Creation Act of 2004 was intended to stimulate the economy by expediting the repatriation of foreign earnings and requiring that those repatriations be invested in domestic operations. The first essay investigates (1) who repatriated foreign earnings under the provisions of the Act, (2) why firms repatriated and (3) what the firms did with the repatriated funds. The first essay identifies 364 firms that repatriated approximately \$283 billion under the Act. The only significant increase in expenditures for the repatriating firms was for stock repurchases, an expenditure specifically prohibited under the Act. Firms appear to have repatriated foreign earnings to take advantage of the tax savings without achieving the Act's intended objective of increasing domestic investment. Firms' failure to use the repatriated cash to increase domestic reinvestment appears to be associated with two circumstances: (1) the firms lacked domestic growth opportunities and (2) they could comply with the domestic investment requirements of AJCA without actually increasing investments in domestic operations.

The second essay builds on recent research that evaluates the lock-out effect of the U.S. international tax system. The second essay studies the factors associated with the lock-out effect of the U.S. international tax system. Recent evidence suggests that firms that have reached their optimal level of investment in foreign operations will accumulate foreign earnings abroad in financial assets to avoid recording the associated

U.S. tax liability. However, prior research has not disentangled the difference between firms that permanently reinvest their foreign earnings for reinvest into operations versus firms that classify their foreign earnings as permanently reinvest to indefinitely defer the recognition of the associated U.S. tax liability. The one-time tax holiday for repatriations provided the American Jobs Creation Act of 2004 provides an interesting opportunity in which to evaluate the lock-out effect of the U.S. international tax system. Using a hand-collected sample of firms that repatriated under the one-time tax holiday, I find that the firms were classifying their foreign earnings as permanently reinvested to avoid recognizing the associated U.S. liability before and after the one-time tax holiday. Also, during the tax holiday firms brought back significant amounts of cash previously classified as permanently reinvested foreign earnings suggesting that the earnings were not retained abroad for foreign reinvestment. The results of essay two are consistent with theoretical predictions that firms repatriating under the Act classified their foreign earnings as permanently reinvested to avoid recognizing the associated U.S. tax liability. Collectively, my results from essay two suggest that firms held significant amounts of foreign earnings abroad in cash due to the lock-out effect of the U.S. international tax system and repeated the behavior immediately following the one-year tax holiday provided by the Act.

## CHAPTER II

### THE WHO, WHY AND WHAT OF THE ONE-TIME TAX HOLIDAY FOR REPATRIATIONS PROVIDED BY THE AMERICAN JOBS CREATION ACT OF 2004

#### **Introduction**

The American Jobs Creation Act (AJCA, the Act) of 2004 provided a one-time tax holiday that reduced the maximum effective U.S. tax rate on repatriated foreign profits from 35 percent to 5.25 percent. Congress' intent in passing the Act was to stimulate the U.S. economy by (1) expediting the repatriation of foreign earnings that may have otherwise remained abroad and (2) requiring that the repatriations be invested in domestic operations.

To induce firms to use the repatriated foreign earnings for domestic investment, firms received the one-time tax benefit only if the repatriated funds were invested in the U.S. pursuant to a domestic reinvestment plan approved by management prior to repatriation (U.S. Treasury Department 2005). Permitted uses included domestic investment in research and development, capital investments, debt repayment and mergers and acquisitions. Uses that were explicitly prohibited under the Act include distributions to shareholders and repurchase of shares. Although the Act explicitly prohibited these uses, the Act lacked regulations to enforce the proscriptions. For example, there was no requirement that firms isolate funds or demonstrate that spending on qualified uses exceeded the amount the firm would normally have spent. Therefore,

the lack of regulatory constraints in implementing the Act likely permitted firms to spend the repatriated funds on disallowed uses.

In this paper I investigate (1) who repatriated foreign earnings under the provisions of the Act, (2) why firms repatriated, and (3) what firms did with the repatriated funds. I identify 364 firms that repatriated approximately \$283 billion of earnings under the Act. Compared to non-repatriating U.S. firms, the repatriating firms, on average, are larger, have more profitable foreign operations, have a higher marginal U.S. tax rate, a lower effective foreign tax rate, and have lower historical growth rates. These attributes suggest that firms repatriating under provisions of AJCA are more mature firms that appear to utilize foreign operations as a method of tax planning.

Among the repatriating firms, the size-scaled amount repatriated is positively associated with the difference between the firms' U.S. marginal tax rate and effective foreign tax rate as well as the profitability of foreign operations. These associations suggest that repatriating firms may have been accumulating their foreign earnings to avoid paying U.S. tax that would be due upon repatriation. No associations were found between various firm growth proxies and the amount repatriated, nor the cash balance and the amount repatriated. The lack of association between these variables suggests that the cash repatriated under the provisions of the Act was not needed to fund domestic growth opportunities nor was it being retained to fund domestic future growth.

Firms were permitted under AJCA to use the repatriated cash to fund domestic operations, but were not permitted to distribute the cash to shareholders. The only statistically significant increase in expenditures for the firms repatriating under the Act

was for stock repurchases, an expenditure prohibited under the Act. The significant increase in stock repurchases suggests that at least some portion of the repatriations were indirectly funneled to prohibited expenditures. On average, firms appear to have responded to the opportunity to reap the tax savings provided by the Act, but did not use the funds to increase domestic investment. Firms' failure to use the repatriated cash to increase domestic reinvestment appears to be associated with two circumstances: (1) the firms lacked domestic growth opportunities and (2) they could comply with the domestic investment requirements of AJCA without actually increasing investments in domestic operations (i.e., follow the letter but not the spirit of the regulations under the Act). Further, I find there is little association between the amount of tax savings firms gained from the Act and the tendency to spend the repatriated funds on allowed activities.

In sum my findings suggest the following: (1) the temporary tax-holiday spurred a large temporary increase in repatriations, (2) AJCA provided a windfall gain to firms with substantial unrepatriated earnings in low-tax countries, (3) firms appear to have used the repatriated funds principally for stock repurchases, which is a use disallowed by the Act, and (4) firms enjoying disproportionately larger gains under the Act were no more likely than other firms to spend repatriated funds on growth-generating activities. The findings of this study will be useful to policy makers and regulators in assessing the effectiveness of the one-time tax holiday provided by AJCA.

The paper proceeds as follows. The second section provides background and quotes from proponents and critics of AJCA as well as a review of relevant literature. Section three provides descriptive characteristics for the sample of firms repatriating

under the Act relative to benchmark firms. Section four provides an analysis of the expenditures of the repatriating firms in the year of repatriation. Section five concludes.

### **Background and Literature Review**

Internal Revenue Code section 965, enacted as part of AJCA, was a temporary provision allowing U.S. firms to repatriate earnings from their foreign subsidiaries at a reduced effective tax rate provided that specified conditions and restrictions were satisfied. Section 965 provides that U.S. companies could elect, for one taxable year, an 85 percent dividends received deduction for eligible dividends received from their foreign subsidiaries, thereby establishing a maximum effective tax rate of 5.25 percent on qualifying dividends (U.S. Treasury Department 2005). Firms could elect the holiday period as the last tax year beginning before the date of the enactment of AJCA (October 22, 2004) or the first taxable year beginning after that date. Therefore, all repatriations under the provisions of the Act were completed by October 2006. Analysts estimate that U.S. firms have repatriated approximately \$300 billion under the provisions of the Act.

In recent years, international profit growth outpaced domestic growth for U.S. multinational firms. The international expansion led to record unrepatriated foreign profits for U.S. firms. The quotes that follow capture the proponents' announced objectives for supporting AJCA.

“Multiple studies show my repatriation provision could bring \$400 billion back into our economy and create upward of 600,000 jobs in America in 2005, while reducing the deficit by \$163 billion,” U.S. Representative Phil English (R-PA), a member of the House Ways and Means Committee, who drafted the bill.  
“Today more than at any time in our history, we operate in a global economy. This vote for AJCA is about fixing our international tax law and providing much

needed tax relief for businesses to help create jobs,” U.S. Representative David Wu (D-OR).

“This bill provides tax relief for American businesses to further fuel economic growth and job creation,” U.S. Representative Jo Bonner (R-AL).

On the other hand, there was concern that the Act would fail to meet the objective of providing a short-term stimulus to the economy through domestic investment. For example, U.S. Representative Peter DeFazio (D-OR) expressed displeasure with AJCA:

Under the guise of helping American firms, Congress has pulled a giant hoax on the American people. Only in the U.S. Congress could a bill with the feel-good title ‘The American Jobs Creation Act’, actually provide billions of dollars to subsidize the export of American jobs. This bill may create jobs, but it won’t be in the U.S., it will be overseas.

I support reducing the tax burden on truly American firms. However, I don't support forcing American taxpayers to subsidize the export of their own jobs as this bill does. Nor do I support requiring struggling American workers and small businesses to subsidize Fortune 500 multinational corporations.

Also, critics were concerned that repatriated funds would be used for nonqualified purposes such as distributions to shareholders. For example, economists at J.P. Morgan Chase surveyed 28 large firms accounting for approximately 25% of all unrepatriated foreign profits. They concluded that much of the funds returned to the U.S. would be used for nonqualified purposes. Firms surveyed indicated that they would use the repatriated funds to repurchase stock or pay dividends, and these uses were not permitted under the Act.

To assure that repatriations were used for domestic investment, firms repatriating under the Act were required to establish a domestic reinvestment plan stating that the funds would be used for qualified purposes. A concern of the critics with regard to the domestic reinvestment plan was that firms were not required to either isolate the funds or

demonstrate that expenditures exceeded normal levels for qualified expenses. Due to the fungibility of cash, it is possible that the funds were used for nonqualified uses (e.g., stock repurchases and dividend payments). Overall, the loose requirements for the dividend reinvestment plan and the information regarding intended uses of repatriating firms led critics to argue that the Act would fail to stimulate domestic investment by firms repatriating under the Act.

### **Review of Relevant Academic Literature**

Gravelle (2005) evaluates the major provisions of the AJCA and classifies them as good, bad or ugly based on their projected revenue gains or losses. She concludes that the most significant temporary revenue loser is the one-year tax holiday for earnings repatriated from firms' foreign subsidiaries. She gives the provision "bad marks" because it is unlikely to meet its objective of providing a short-run stimulus to the U.S. economy via domestic investment by repatriating firms. She argues that the one-year tax holiday for repatriations will not meet its objective for two primary reasons: the economy was already in recovery, and given the fungibility of cash coupled with the loosely crafted AJCA regulations, there is no reason to believe the repatriation would have a significant effect on U.S. domestic investment. She also argues that the one-year tax holiday will encourage firms to retain funds abroad in anticipation that the tax holiday will be repeated in the future.

Clausing (2005) also evaluates the international tax incentives created by the AJCA, and offers three main conclusions. First, since the provision is a one-time event it is likely to encourage a large temporary surge in repatriations. Second, due to the



fungibility of funds across uses, it is unlikely that the earmarking required by the Act will lead to new investments in the U.S. relative to what would have otherwise occurred.

Third, the net result of the provision will be to make investments in low-tax countries more attractive. Overall she concludes that the Act sends a confused message about the intention of the U.S. tax system and provides an unjustified tax gain to firms with profits in low tax countries.

Blouin and Krull (2006) conduct an exploratory study to determine if firms that may repatriate their foreign earnings under the provisions of AJCA are likely to use the funds for distributions to shareholders (i.e., a usage of the funds prohibited under the Act). Their sample includes over 240 firms that mention in their financial statements that they have repatriated, or plan to repatriate, under the provisions of the Act. For their sample of potential repatriating firms, they suggest that firms may be likely to use the funds for a prohibited use, stock repurchases.

The tax savings enjoyed by firms under AJCA is positively associated with the difference between the U.S. marginal tax rate and the tax rates prevailing in the foreign jurisdictions in which the firms operate. Albring, Dzurainin and Mills (2005) estimate the tax savings (tax loss) of corporations (U.S. Treasury) under AJCA using disclosures in public financial statements. The authors identify 282 firms that have 1) sufficient disclosures to estimate tax savings under the Act and 2) foreign earnings not fully protected by foreign tax credits. For these firms, the authors estimate the incremental tax savings would be about \$39 billion. Accordingly, the tax savings available under AJCA appear to provide significant motivation to repatriate.

My study extends the existing literature in several respects. First, I examine actual repatriations of firms rather than intended repatriations of firms. The efficacy of a tax policy is best evaluated based on actual firm responses rather than intended or expressed responses. Further, I can observe the spending of repatriated funds only in the case of firms that have actually repatriated. Second, I examine the power of tax savings relative to capital constraints on domestic growth as repatriation incentives. Third, to evaluate the effectiveness of AJCA as a domestic growth incentive, I examine whether the firm-level tax savings (tax loss to the U.S. Treasury) are (is) positively associated with the amount repatriated and whether the repatriation amounts are associated with changes in spending for allowed and disallowed uses under AJCA.

In my following analyses, I examine the conditions necessary for the Act to achieve its policy objectives. The necessary conditions are that, repatriating firms must have (1) repatriated a significant sum during the holiday period, (2) significant growth opportunities and (3) expended the repatriated cash pursuing those growth opportunities. I assume that firms had at least two motivations to repatriate under AJCA: harvest one-time U.S. tax savings and/or alleviate a capital constraint on domestic investment opportunities. In the next section I report descriptive characteristics of repatriating firms versus benchmark firms to infer the motives of repatriating firms.

### **Who Repatriated under AJCA and Why?**

In the initial analysis, I compare characteristics of a large sample of repatriating firms to two large, overlapping samples of publicly-traded U.S. corporations. I gather financial data for my samples from the annual Compustat database. My tests utilize data

from fiscal years 2004 and 2005, respectively, the year prior to and following the passage of the Act. Since the passage of AJCA, firms have disclosed the amounts repatriated (or intended to be repatriated) under the Act. The primary sample used in this study consists of firms that have repatriated earnings under AJCA.

I initially identified 418 firms that intended to repatriate foreign earnings under AJCA. I identified these firms through two primary sources. First, I identified 156 firms that disclosed plans to repatriate earnings in their financial statements by searching the EDGAR database utilizing the following search string [(10Q or 10K) and (foreign earnings repatriation) w/25 (American Jobs Creation Act of 2004)]. Second, I identified an additional 262 firms intending to repatriate under AJCA using Lexis-Nexis Business Wire and News Wire and Google searches using the following key words “foreign earnings repatriation” and “American Jobs Creation Act of 2004”. Lastly, I searched the subsequent year’s financial statements of the 418 firms to determine which firms actually repatriated under the AJCA. The search confirmed that 379 firms repatriated under AJCA; for the 379 firms identified, I obtained the required financial data to conduct my analysis for 364 firms. The 364 firms examined in this study repatriated approximately \$283 billion under the Act.

In Table II-1, I summarize the industry composition of the repatriating sample. A majority of firms repatriating under AJCA are in manufacturing industries and represent 68 percent of the repatriating firms. Service companies comprise the second largest group of repatriating firms (12 percent of the sample), and retail companies comprise the third largest group of repatriating firms (6 percent of the sample).

**Table II-1. Industry Distribution of Firms Repatriating Foreign Earnings under the American Jobs Creation Act of 2004**

---

Industry Distribution of firms repatriating foreign earnings under AJCA		
<hr/>		
SIC Code		# of Firms:
<hr/>		
1000-1999	Mining and Construction	11
2000-2999	Manufacturing	88
3000-3999	Manufacturing	159
4000-4999	Transportation, Communication, Electric, Gas	14
5000-5999	Wholesale, Retail	23
6000-6999	Financial, Insurance, Real Estate	24
7000-7999	Hotel, Services	34
8000-8999	Services	10
9000-9999	Public Administration	1

---

I compare firms repatriating under the Act (repatriating firms) to 1) all non-repatriating multinational U.S. firms and 2) the Compustat universe of publicly-traded U.S. non-repatriating corporations. I exclude firms with negative book value of equity and firms with missing net income data. My final sample consists of 364 repatriating firms and 5,571 non-repatriating firms with the required financial data.

### **Methodology**

To determine whether the repatriating firms differ from the non-repatriating firms, I compare the attributes of the three samples statistically using a parametric t-test and Wilcoxon rank-sum test. Table II-2 presents data for the repatriating, non-repatriating multinational, and Compustat universe of U.S. firm samples. Statistics reported in all tables are based only on those firms that have sufficient data available to calculate each specific metric. The number of observations for each statistic is included in the tables. Because I complement the means test with a nonparametric test, I do not winsorize or otherwise transform the raw data reported in Table II-2; hence, some means are heavily influenced by outliers. I provide minimum and maximum values as well as the standard error for each variable for the repatriating firms so that the influence of outliers can be inferred. To control for the effect of outliers in my regression models I winsorize continuous variables at the 1% and 99% levels of the distributions for each variable.

**Table II-2. Descriptive Statistics for Firms Repatriating under AJCA, Non-repatriating Firms with Foreign Operations, and the Compustat Universe of Firms**

TABLE 2																
2004 Descriptive statistics for firms repatriating under AJCA, non-repatriating firms with foreign operations, and the Compustat universe																
Repatriating firms							Non-repatriating firms <sup>1</sup>					Compustat Universe				
Variable	N	Mean	Std. Dev.	Min.	Median	Max.	N	Mean	Median			N	Mean	Median		
<i>Repatriations</i>																
Repatriations	364	776	2,628	0.60	131	37,000		N/A	N/A				N/A	N/A		
Repatriations / total assets	364	0.09	0.10	0.00	0.06	0.59		N/A	N/A				N/A	N/A		
<i>Operating characteristics</i>																
Size	364	21,089	112,670	5.37	2,546	1,484,101	1,454	10,263	**	474	**	5,571	8,053	**	374	**
Foreign ROA	287	0.047	0.039	(0.052)	0.039	0.172	1,454	0.015	**	0.010	**	1,454	0.015	**	0.010	**
<i>Tax characteristics</i>																
Foreign tax rate (FTR)	155	0.271	0.105	0.062	0.274	0.609	309	0.330	**	0.324	**	309	0.330	**	0.324	**
Marginal tax rate (MTR)	260	0.332	0.064	0.004	0.350	0.382	738	0.283	**	0.350	**	2,372	0.269	**	0.350	**
Tax difference (MTR - FTR)	119	0.072	0.108	-0.44	0.073	0.288	209	0.005	**	0.013	**	209	0.005	**	0.013	**
<i>Growth characteristics</i>																
CAPEX / total assets	364	0.038	0.032	0.00	0.020	0.244	1,454	0.040	**	0.027	**	4,870	0.045	**	0.031	**
Growth	323	0.946	4.18	-0.59	0.326	68.59	1,072	1.233	**	0.344		3,692	2.881	**	0.391	**
R&D / total assets	263	0.045	0.042	0.00	0.033	0.206	1,004	0.079	**	0.050	**	2,808	0.092	**	0.039	**
(\$ amounts in millions)																
** indicates significantly different from the repatriating sample at the 5% level.																
<sup>1</sup> non-repatriating firms are multinational firms that did not repatriate under AJCA.																
Variable definitions: Size equals total assets, Foreign ROA equals foreign pre-tax income divided by total assets, FTR is the sum of foreign current tax expense from year t-4 to t divided by the sum of foreign pretax income form year t-4 to t, MTR is obtained from John Graham's website, <a href="http://faculty.fuqua.duke.edu/~jgraham/taxform.html">faculty.fuqua.duke.edu/~jgraham/taxform.html</a> , CAPEX is capital expenditures, Growth equals 5-year sales growth.																

### **Repatriating and Non-repatriating Firm Characteristics**

For the 364 firms comprising the repatriating sample, the per-firm average amount repatriated under the Act was \$776 million, and the average repatriation equaled 9 percent of total assets. The median repatriation amount was \$131 million and equaled 6 percent of total assets.

Based on the parametric t-test and a nonparametric medians test I find the repatriating sample differs from the non-repatriating samples in terms of size and profitability of foreign operations. Repatriating firms are larger than non-repatriating multinational firms and the Compustat universe of U.S. firms based on total assets; for 2004, mean total assets were \$21 billion, \$10 billion and \$8 billion, respectively. Foreign operations of repatriating firms are also significantly more profitable than multinational non-repatriating firms. Mean *foreign ROA* (foreign pretax income scaled by total assets) is 0.047 and 0.015 for repatriating and non-repatriating firms, respectively.

The repatriation stimulus under the Act was the reduction in taxes due upon repatriation of foreign earnings during the holiday period. The magnitude of this stimulus is a function of the difference between each firm's domestic marginal tax rate and the tax rates prevailing in the foreign jurisdictions in which the firm operates. The next section compares the marginal tax rate and foreign tax rate of repatriating and non-repatriating firms.

The data in Table II-2 suggest (based on both parametric and nonparametric tests) that the mean *foreign tax rate* of repatriating firms is significantly lower than the

mean *foreign tax rate* of non-repatriating multinational firms. This result supports the assertion that firms operating in tax havens were more likely to repatriate under the provisions of AJCA because the magnitude of tax savings was larger for such firms. The average *foreign tax rate* is 27 percent and 33 percent respectively for repatriating and non-repatriating multinational firms. Also, the *marginal U.S. tax rate* for repatriating firms is significantly higher than that of both non-repatriating multinational firms and the Compustat universe of U.S. firms. The average *U.S. marginal tax rate* is 33.2 percent 28.3 percent, and 26.9 percent for repatriating, non-repatriating multinational firms, and the Compustat universe of U.S. firms, respectively. The results are consistent with the logic that firms with a greater positive difference between their marginal and foreign tax rates were more likely to repatriate under the Act because of the larger tax benefits such firms could realize during the holiday period.

The intent of AJCA was to not only encourage firms to repatriate their foreign earnings but also to cause those firms to invest the foreign earnings in domestic operations. For the Act to accomplish the objectives voiced by its proponents, repatriating firms must have (1) repatriated a significant sum during the holiday period, (2) significant growth opportunities and (3) expended the repatriated cash pursuing those growth opportunities. In the next section I examine the repatriating and non-repatriating firms' historical growth characteristics to provide initial evidence on the likelihood that repatriations were or will be used for domestic investment.

The regulations under AJCA require firms to invest repatriations under the Act in domestic operations. *Ceteris paribus*, firms with greater growth opportunities would be



better able and more likely to utilize their repatriations for domestic investment.

Therefore, I compare the repatriating and non-repatriating firms based on growth metrics to help assess repatriating firms' growth-driven capital needs, and hence, whether repatriating firms were likely compliant with the domestic reinvestment requirement of the Act.

The growth proxies used include asset-scaled capital expenditures (*Capex*), five-year average sales growth (*Growth*), and research and development spending scaled by total assets (*R&D*). Results are reported in the bottom panel of Table II-2. *Capex* is greater for non-repatriating multinational firms and the Compustat universe of U.S. firms than for the repatriating firms (based on both parametric and nonparametric tests) in 2004 suggesting that, proportionally, non-repatriating firms enjoyed greater growth opportunities than repatriating firms. The mean (median) size-scaled capital expenditures were 0.038 (0.020), 0.040 (0.027), and .045 (.031) for the repatriating, non-repatriating multinational firms, and Compustat universe of U.S. firms, respectively. Of further note, the data suggest U.S. firms with only domestic operations have higher growth rates than U.S. multinationals. One implication of this finding is that the most effective growth-inducing tax policy might have targeted this set of firms.

Repatriating firms also have lower growth opportunities based on firms' historical mean sales growth (*Growth*). Mean *Growth* was higher for non-repatriating multinational firms and the Compustat universe of U.S. firms than repatriating firms. The mean (median) growth rate was 0.946 (.326), 1.233 (.344), and 2.881 (.391) for repatriating, non-repatriating multinational firms, and the Compustat universe of U.S.

firms, respectively. The lower growth rate for repatriating firms suggests that, all else equal, these firms would be less likely to utilize the repatriated funds for domestic investment than other U.S. firms.

Innovation drives growth opportunities and research and development (*R&D*) is a common proxy for innovation. For 2004, I find *R&D* expense scaled by total assets was significantly greater (based on both parametric and nonparametric tests) for non-repatriating multinational firms and the Compustat universe of U.S. firms than for repatriating firms, suggesting that, proportionally, repatriating firms have lower growth-generating expenditures. Mean (median) *R&D* expenses in 2004 scaled by total assets were 0.045 (0.033), 0.079 (0.05), .092 (.039) for the repatriating, non-repatriating multinational firms, and Compustat universe of U.S. firms, respectively.

The preceding analysis demonstrates, consistent with Clausing's (2005) prediction, that AJCA was successful in encouraging firms to repatriate a large amount of foreign earnings (\$283 billion), but it also suggests that repatriating firms have relatively lower growth opportunities. Accordingly, skepticism is warranted regarding repatriating firms' use of the repatriated funds for disallowed activities. In the following section, I explore the firms' motivations for repatriating under the Act.

### **Did Repatriations under AJCA Increase with Tax Savings and Firm Growth Opportunities?**

In the preceding section the evidence suggests that firms repatriated a large sum, \$283 billion, of foreign earnings under AJCA. This finding satisfies one of the conditions (firms must repatriate a large sum during the holiday period) for AJCA to be

a successful tax policy. The other conditions are that (1) the repatriating firms have significant growth opportunities and (2) that the repatriated funds be expended in pursuit of those opportunities.

My findings, based on a portfolio of growth indicators reported in Table II-2, suggest firms repatriating under the AJCA have growth opportunities that are inferior to the average publicly-traded U.S. firm. These findings increase the skepticism that firms expended repatriated funds on qualified expenses and increase the tension between the alternative motivations for firms to repatriate under the Act (reap the tax savings and/or gather cash to fund capital-constrained growth opportunities).

I develop a logit model to assess the association of tax and growth characteristics with the decision to repatriate. Specifically, I estimate the following logit model:

$$(II.1) \quad \text{Repatriate}_i = \beta_1 \text{Size}_i + \beta_2 \text{Foreign ROA}_i + \beta_3 \text{Tax difference}_i + \beta_4 \text{Capex}_i + \beta_5 \text{Growth}_i + \beta_6 \text{Research \& Development}_i + \varepsilon_i$$

where:

<i>Repatriate</i>	=	1 for firms repatriating under the provisions of AJCA; 0 otherwise
<i>Size</i>	=	log of total assets
<i>Foreign ROA</i>	=	foreign pretax income scaled by total assets
<i>Tax difference</i>	=	marginal U.S. tax rate – effective foreign tax rate
<i>Capex</i>	=	capital expenditures scaled by total assets
<i>Growth</i>	=	five-year average sales growth rate (1999-2004)

*Research & Development* = research & development expense scaled by total assets.

I include *Size* and *Foreign ROA* to control for unspecified size effects and effects of foreign profitability on repatriations. *Tax difference* is included to capture the tax savings available for repatriations under AJCA. *Capex* and *Growth* are included in the model to capture historical indicators of growth and *Research & Development* is included as a forward-looking indicator of growth.

I estimate model II.1 on the observations comprising the repatriating and non-repatriating multinational samples reported in Table II-2. The overall sample includes 303 firms with data sufficient to estimate the model; of these 303 firms, 111 repatriated. The results of estimating model II.1 appear in Table II-3.

**Table II-3. Logistic Regression of Repatriation Choice of Firms with Foreign Operations**

TABLE 3					
Logistic regression <sup>a</sup> of repatriation choice of firms with foreign operations					
		Coefficient		(Chi-Squared)	
Variables					
<u>OPERATING CHARACTERISTICS</u>					
Size		0.37	***	(20.32)	
Foreign ROA		12.04	***	(9.49)	
<u>TAX CHARACTERISTIC</u>					
Tax Difference		2.80	***	(5.53)	
<u>GROWTH CHARACTERISTICS</u>					
Capital Expenditures		-4.52		(-1.1681)	
Growth		-0.41	**	(-4.2382)	
Research and Development		5.78		(2.33)	
Pseudo R <sup>2</sup>		17%			
Correct Prediction		75%			
***, ** Indicates significance at the 1 percent, and 5 percent levels, respectively.					

<sup>a</sup> To control for the effect of outliers, variables used in the logistic regression are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentile.

Size and Foreign ROA are both positively associated with the likelihood of repatriating. The tax difference variable is significantly positive suggesting that those firms characterized as having the largest gaps between their marginal U.S. tax rates and their effective foreign tax rates were more likely to repatriate. Surprisingly, of the three growth proxies, only the historical sales growth rate (Growth) is statistically significant and it is negatively associated with the likelihood of repatriating. Thus, there is no evidence based on the estimation of model (II.1) that firms with higher growth prospects were more likely to repatriate under AJCA. Accordingly, the model (II.1) results tend to support the supposition that firms were more motivated to repatriate under AJCA to reap tax savings rather than to fund domestic growth opportunities.

The most convincing evidence that AJCA was successful as a growth-inducing policy would demonstrate positive relationships among amounts repatriated, tax savings enjoyed under the Act, opportunity for growth, and growth-generating spending during the holiday period. Overall, the results presented in Table II-3, suggest an overall positive relationship between likelihood of repatriating and tax savings under the Act. However, the results also suggest that growth opportunities are not positively associated with the decision to repatriate. This result creates doubt as to whether repatriated funds were used to fund growth. Next, I examine whether foreign earnings repatriated under AJCA were, on average, used for qualified expenses (i.e., investment in domestic growth activities).

### **What Expenditures Increased in the Year of Repatriation?**

The results of the preceding analysis suggest that firms repatriated large sums of foreign earnings under AJCA to exploit the temporary tax holiday. Under the Act, firms are not permitted to use repatriations for distributions to shareholders, and are required to invest the funds in domestic operations or retire debt. To investigate whether firms repatriating under AJCA used the repatriated funds for growing domestic operations or for distributions to shareholders, I compare expenditures for qualified and nonqualified uses for the fiscal year before and during the AJCA holiday period. These results are reported in Table II-4.

Table II-4 presents six lines of data for repatriating firms only. The first four lines represent allowed uses of funds repatriated under AJCA and the last two lines represent disallowed uses. Each “use” variable is scaled by total assets. Each line shows expenditures in the year prior to and the year of the AJCA holiday period as well as mean and median differences between the prior period and holiday period expenditures. The results in Table II-4 suggest there were insignificant changes between the year prior to and the year of repatriation in debt level, research & development spending, capital expenditures, and acquisitions for repatriating firms. These results indicate that firms repatriating under the Act did not use the repatriated funds to significantly increase their spending for these permitted uses in the year of repatriation. For nonqualified uses there was an insignificant increase in the mean level of dividends, but the increase in the mean level of stock repurchases was highly significant. In sum, the results suggest that the

only significant increase in the year of repatriation was for a nonqualified use, stock repurchases.

Next, I develop a regression model which I estimate on the cross-section of repatriating firms to determine if the relative amounts repatriated are associated with firm growth opportunities, tax savings under the act, and other firm-specific variables:

$$(II.2) \text{ Repatriations}_i = B_0 + B_1 \text{ Growth}_i + B_2 \text{ Capex}_i + B_3 \text{ Research \& Development}_i + B_4 \text{ Debt ratio}_i + B_5 \text{ Tax difference}_i + B_6 \text{ Foreign ROA}_i + B_7 \text{ Cash}_i + B_8 \text{ Size}_i + \epsilon_i$$

Where:

*Repatriations* = Amount repatriated under AJCA scaled by total assets

*Growth* = five-year average sales growth rate (1999-2004)

*Capex* = capital expenditures scaled by total assets

*Research & Development* = research & development expense scaled by total assets

*Debt ratio* = total debt scaled by total assets

*Tax difference* = U.S. marginal tax rate minus effective foreign tax rate

*Foreign ROA* = foreign pretax income scaled by total assets

*Cash* = cash balance scaled by total assets

*Size* = log of total assets



**Table II-4. Changes in Qualified Uses and Nonqualified Uses Pre- and Post- AJCA**

<b>TABLE 4</b>									
<b>Changes in qualified uses and nonqualified uses</b>									
<b>pre- and post- American Jobs Creation Act of 2004 (AJCA)</b>									
<b>Change in uses for sample of 364 firms repatriating under AJCA:</b>									
Variable	2005		2004		Difference (2005-2004)				
	Mean	Median	Mean	Median	Mean		Median		
Debt	17.83%	16.57%	17.70%	16.78%	0.13%		-0.21%		
Research & Development	3.26%	1.36%	3.28%	1.63%	-0.03%		-0.26%		
Capital Expenditures	4.19%	3.32%	3.87%	3.07%	0.31%		0.26%		
Acquisitions	3.62%	0.13%	3.28%	0.20%	0.35%		-0.08%		
Dividends	1.55%	0.60%	1.31%	0.53%	0.24%		0.07%		
Stock Repurchases	4.61%	1.03%	3.31%	0.36%	1.30%	***	0.67%	***	
*** indicates significance at the 1% level.									

Variable definitions:

Debt	=	debt level scaled by total assets
Research & Development	=	R&D expense scaled by total assets
Capital Expenditures	=	capital expenditures scaled by total assets
Acquisitions	=	corporate acquisitions scaled by total assets
Dividends	=	dividends paid scaled by total assets
Stock Repurchases	=	stock repurchases scaled by total assets

In this regression, I test for associations between the amount of earnings repatriated, proxies for allowed uses under the Act, tax savings under the Act, cash availability, and controls. *Growth*, *Capex*, and *Research & development* are included to capture associations between repatriations and historical and future firm growth proxies. *Debt ratio* is included to capture repatriation incentives associated with debt reduction. *Tax difference* is included to proxy for the tax savings captured by repatriating under the Act. *Foreign ROA* is included as a control for profitability of foreign operations, *Cash* is included to capture cash constraints motivating repatriations; and *Size* is included to control for unspecified firm size effects.

I report results of estimating model II.2 in Table II-5. Similar to the results of estimating model II.1, the growth proxies are not significantly associated with the amount of foreign earnings repatriated. Thus, a firm's growth opportunity set appears to be unrelated to both the decision to repatriate (Table II-3) and the amount to repatriate

under AJCA. Leverage, as proxied by *Debt ratio*, also is not significantly associated with the amount of earnings repatriated under AJCA. The proxy for tax savings, *Tax difference*, is significantly, and positively, associated with the relative amount of earnings repatriated. Thus, the tax savings appear to be an influential variable in both the decision to repatriate and the amount to repatriate. Not surprisingly, the profitability of foreign operations, as measured by Foreign ROA, is positively associated with the relative amounts repatriated. This result indicates that firms generating higher foreign profits have greater capacity to repatriate foreign earnings. The cash balance is not associated with the relative amount of funds repatriated, nor is size associated with the relative amount repatriated.

**Table II-5. Coefficients from a Regression of Repatriations under AJCA on Motives for Repatriating**

<b>TABLE 5</b>						
<b>Coefficients and (t-statistics) from a regression<sup>a</sup> of repatriations</b>						
<b>under AJCA on motives for repatriating</b>						
<b>Variable</b>				<b>Coefficients</b>		<b>t-statistics</b>
Intercept				0.079		1.361
Growth				0.002		0.119
Capex				-0.271		-0.814
Research & Development				0.342		1.138
Debt ratio				-0.048		-0.486
Tax difference				0.208	**	2.243
Foreign ROA				0.794	***	3.144
Cash				0.062		0.909
Size				-0.005		-0.724
Number of observations				111		
Adjusted R <sup>2</sup>				22%		
***, ** indicates significance at the 1 percent and 5 percent, respectively.						

<sup>a</sup> To control for the effect of outliers, variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentile.

The results of estimating model II.2 suggest that saving taxes rather than addressing capital constraints was the key motive influencing the amount of earnings to repatriate under AJCA. This finding raises further suspicions about the ultimate disposition of amounts repatriated under AJCA. Some firms repatriating under the Act denied there was intent to use the repatriated funds for nonqualified uses; “Of course (repatriations) are not being used for (stock repurchases), because that’s not something they can be used for” said Jacqueline Berry, a spokesperson for 3M, a firm that repatriated \$1.7 billion under the Act. Although the 3M spokesperson made this assertion, 3M increased its level of stock repurchases to about \$2.4 billion in the 12 months ending June 2005, compared with approximately \$1.5 billion in the comparable period a year earlier. Also, HCA Inc. recently announced it would repatriate about \$190 million under the Act and spent \$2.5 billion repurchasing stock in the 12-month period through June 2005, over twice the amount spent in the same period a year earlier.

Other firms stated their intent to comply with the letter of the regulations but not the spirit of the regulations. For example, Starwood Hotels & Resorts Worldwide Inc. claims that it was a coincidence it approved a \$1 billion stock repurchase plan on the same day it announced it was repatriating \$550 million from a foreign subsidiary. Alisa Rosenberg, a spokeswoman for Starwood Hotels & Resorts Worldwide Inc., of White Plains, N.Y., stated that Starwood would use the repatriated funds for uses qualified under the Act, such as training and capital expenditures. “But what (the Act) does,” Rosenberg said, “is it brings money over to be used for those types of things, which frees up money that would have been used for hiring and training.” The argument that the

repatriations would be used for qualified purposes under the Act and “freed up” funds used for nonqualified uses explicitly demonstrates the concern of AJCA critics.

To assess whether there is an association between repatriations and changes in spending during the holiday period, I estimate model (II.3) using only the sample of repatriating firms:

$$(II.3) \text{ Repatriations}_i = B_0 + B_1 \text{ Change in Debt}_i + B_2 \text{ Change in R\&D}_i + B_3 \text{ Change in Capex}_i + B_4 \text{ Change in acquisitions}_i + B_5 \text{ Change in dividends}_i + B_6 \text{ Change in repurchases}_i + B_7 \text{ Change in cash}_i + B_8 \text{ Size}_i + \varepsilon_i$$

Where:

Repatriations	=	Amount repatriated under AJCA scaled by total assets
Change in debt	=	2004 to 2005 change in debt level scaled by total assets
Change in R & D	=	2004 to 2005 change in research & development expense scaled by total assets
Change in Capex	=	2004 to 2005 change in capital expenditures scaled by total assets
Change in acquisitions	=	2004 to 2005 change in corporate acquisitions scaled by total assets
Change in dividends	=	2004 to 2005 change in dividends paid scaled by total assets
Change in repurchases	=	2004 to 2005 change in stock repurchases scaled by total assets
Change in cash	=	2004 to 2005 change in cash balance scaled by total assets
Size	=	log of total assets.

The intent of this regression is to find associations between amounts repatriated and changes in corporate spending. The first four independent variables represent allowed uses under AJCA. If repatriated funds were used to reduce debt, I should find a negative association between *Repatriations* and *Change in debt level*. If repatriated funds were expended on research and development, capital improvements, and acquisitions, I expect to find a positive association between *Change in R & D*, *Change in Capex*, and *Change in acquisitions*. If the repatriated funds were used for the disallowed purposes of paying dividends and repurchasing stock, I expect a positive association between *Repatriations* and *Change in dividends* and *Change in repurchases*. Finally, if the repatriations were used to increase available cash, I expect a positive association between *Repatriations* and *Change in cash*. I include *Size* as a control for unspecified size effects.

Results of estimating equation II.3 appear in Table II-6. Changes in the allowed uses of funds repatriated under AJCA are not significantly, positively associated with the amount repatriated. Among the allowed uses, only the coefficient for *Change in Capex* is statistically significant and the association is unexpectedly negative. Likewise there is no association between the change in dividends and the amount repatriated. However, there is a statistically significant positive association between the change in stock repurchases and the amount repatriated. Although the change in cash is positively associated with the amount repatriated, the association is statistically insignificant.

**Table II-6. Coefficients from a Regression of Repatriations on Allowed and Disallowed Uses under the American Jobs Creation Act of 2004**

<b>TABLE 6</b>							
<b>Coefficients and (t-statistics) from a regression<sup>a</sup> of repatriations</b>							
<b>on allowed and disallowed uses under AJCA</b>							
<b>Variable</b>				<b>Coefficients</b>			<b>t-statistics</b>
Intercept				0.100	***		3.273
Change in debt				-0.004			-0.075
Change in R&D				-0.314			-0.598
Change in Capex				-0.750	*		-1.844
Change in acquisitions				0.060			0.765
Change in dividends				0.898			1.340
Change in repurchases				0.245	***		3.010
Change in cash				0.130			1.376
Size				-0.002			-0.475
Number of observations				272			
Adjusted R <sup>2</sup>				3%			
***, * indicates significance at 1 percent and 10 percent, respectively.							

<sup>a</sup> To control for the effect of outliers, variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentile.



Putting the results reported in Table II-6 in the context of my prior results, the evidence suggests firms repatriated significant sums under the tax holiday provided by AJCA, but the evidence also suggests, the funds were largely spent on a disallowed use, stock repurchases. I conclude my study in the following section.

### **Summary**

From statements offered by proponents of AJCA, I infer that three conditions must be met for AJCA to be considered successful: (1) a substantial amount of funds were repatriated during the holiday period, (2) there must be significant growth opportunities for repatriating firms, and (3) repatriating firms must have spent repatriated funds on uses permitted under the Act.

My results suggest that firms did repatriate substantial sums during AJCA's holiday period. The results of this study show that 364 firms repatriated \$283 billion under the Act. However, compared to two large samples of non-repatriating firms, I find that repatriating firms have relatively constrained growth opportunities, and this is a logical explanation for why firms failed to use their repatriations for domestic investment. There is also anecdotal evidence that suggests firms did not need the repatriated cash to increase domestic investment. For example, Stephen Levy, director of the Center of Continuing Study of the California Economy, stated that modest job growth in high tech firms in California during 2006 is attributable to demand rather than capital constraints:

These firms don't have any trouble raising capital. So getting more dollars from overseas wouldn't cause them to create jobs in the United States. Some firms taking advantage of AJCA have actually cut jobs. For example, Hewlett-Packard announced a massive layoff of 14,500 employees in 2005.

The results of my study are consistent with the observation of Mr. Levy. A final point is that there appears to be little relationship between the amount of tax savings (or amount of tax loss to the U.S. Treasury) a firm enjoyed upon repatriation and the growth opportunity set available to the firm. Further, there appears to be no systematic relationship between the growth opportunity sets of repatriating firms and the tendency to use repatriated cash to fund growth.

In summary, I find that the act was successful in inducing firms to repatriate a significant amount of cash held in foreign jurisdictions. However, the Act appears to have been targeted at firms with growth opportunity sets that were inferior to other U.S. firms and to have ineffectively influenced firms to spend the repatriated funds on growth opportunities.

CHAPTER III

THE LOCK-OUT EFFECT OF THE U.S. INTERNATIONAL TAX SYSTEM: AN  
EVALUATION AROUND THE ONE-YEAR TAX HOLIDAY FOR  
REPATRIATIONS PROVIDED BY THE AMERICAN JOBS CREATION ACT OF  
2004

**Introduction**

The American Jobs Creation Act of 2004 (the AJCA, the Act) became law on October 22, 2004. The impetus for passing the Act was the need to repeal the extraterritorial income exclusion (ETI) that had been ruled an illegal export subsidy by the World Trade Organization. Prior to the passage of the Act, U.S. export subsidies had repeatedly been ruled illegal by the World Trade Organization. Since the U.S. had not adequately remedied the export subsidy issues in the past, the European Union levied retaliatory tariffs on over 1,600 U.S. products beginning in March 2004 until the ETI export subsidy was repealed by the United States government (Clausing 2005). The tariffs began at five percent in March of 2004, and increased by one percent per month thereafter and stood at 12 percent when the Act was passed removing the ETI export subsidy. In creating legislation that purports to be revenue neutral, the U.S. government offset the revenue generated through the repeal of the ETI export subsidy with provisions under the Act that offered several tax breaks. For example, the tax breaks under the Act include a deduction for U.S. domestic production income and a one-year tax holiday for repatriations. This study evaluates the one-year tax holiday for

repatriations provided under the Act and its influence on the “lock-out effect”, defined below, of the U.S. international tax system.

Under the U.S. international tax system, U.S. multinational firms are generally required to record U.S. income taxes on foreign earnings in excess of foreign taxes paid in the current period. The amount of U.S. tax liability recorded on the foreign earnings equals the difference between the U.S. and foreign tax rates. For example, assume a U.S. tax rate of 35 percent, and two firms operating in two foreign countries. Firm A operates in county L that has an income tax rate of 5 percent, and firm B operates in a country that has an income tax rate of 30 percent. The U.S. tax liability recorded for company A and company B will be equal to the difference between their domestic and foreign tax rates. Therefore, firm A and firm B will record a U.S. tax liability of 30 percent ( $.35 - .05$ ) and 5 percent ( $.35 - .30$ ), respectively. This example demonstrates that the U.S. tax liability correspondingly increases to offset any tax savings received for U.S. multinational firms operating in low-tax foreign jurisdictions.

If U.S. multinational firms were permitted to defer the recognition of the U.S. tax liability on the foreign earnings, they would receive increased financial reporting and tax costs savings as the tax rate charged in the foreign country decreased. Accounting Principles Board Opinion No. 23 (APB 23) provides such an opportunity to defer the recognition of the U.S. tax liability under the U.S. international tax system. Specifically, if the foreign earnings will be reinvested in the foreign subsidiary for an indefinite period of time, the earnings may be designated as permanently reinvested (PRE). Under the PRE designation a firm is not required to accrue a deferred tax liability for those

earnings. The PRE designation for foreign earnings creates an incentive for U.S. multinational firms to defer the repatriation of their foreign earnings from low-tax countries, and the incentive to defer repatriations to the United States to avoid the U.S. tax costs is commonly referred to as the “lock-out effect” of the U.S. international tax system.

To examine the lock-out effect, this study will investigate the determinants of PRE and the changes in PRE for firms that repatriated under the American Jobs Creation Act of 2004. Firms PRE can change for a wide variety of reasons, and changes in PRE can significantly affect earnings and the amount of taxes paid to the IRS. For example, in 2001, Pfizer generated \$6 billion in foreign pretax income and incurred a foreign income tax expense of \$900 million. By classifying \$4 billion of the foreign earnings as permanently reinvested in 2001, Pfizer reduced its income tax expense for financial and tax reporting purposes by \$1 billion (De Waegenaere and Sansing 2006). The Pfizer example suggests that firms in low-tax foreign jurisdictions may be motivated to retain earnings abroad specifically to avoid paying and/or recognizing the U.S. tax costs associated with the foreign earnings (i.e., the lock-out effect of the U.S. international tax system).

Prior research suggests that firms use the PRE designation for purposes other than to allocate foreign earnings for reinvestment into their foreign operations. Krull (2004) conducts a study to examine whether firms use the PRE designation to manage reported earnings and finds that firms use the PRE designation to opportunistically manage earnings. Specifically, Krull (2004) finds that year-to-year changes in the

amount reported as PRE is positively associated to the difference between analysts' forecasts and pre-managed earnings. De Waegenaere and Sansing (2006) demonstrate that firms that have reached their optimal level of investment in foreign operations accumulate financial assets under the PRE designation to avoid recording taxes that would be due on the foreign earnings. Foley et al. (2007) conduct a study to investigate why firms hold excessive amount of cash. Consistent with the predictions from De Waegenaere and Sansing's (2006) model, the authors find that repatriation tax costs are positively associated with the firms' cash holdings in their low-tax foreign subsidiaries. The extant research suggests that the lock-out effect of the U.S. repatriation tax is the primary motive for some firms deferring the repatriation of their foreign earnings. Motivated by this stream of research, my paper will evaluate the lock-out effect of firms that repatriated under the Act around the one-time tax holiday for repatriations.

The one-time tax holiday provides an interesting setting to test the lock-out effect of the U.S. international tax system. The one-time tax holiday for repatriations provided under the Act permits firms to elect for one taxable year an 85 percent dividend received deduction for dividends received from their foreign subsidiaries (U.S. Treasury Department 2005). The one eligible year to repatriate under the Act is either the year of the American Jobs Creation Act of 2004 or the year following the Act (e.g., for calendar year taxpayers the eligible year is either 2004 or 2005). The one-time tax holiday provides a unique opportunity to evaluate how the firms repatriating under the Act change their lock-out behavior around a temporary and dramatic change in the repatriation tax rate. Therefore, I will conduct an event study to examine the lock-out

effect for firms repatriating under the Act. My study will evaluate the lock-out effect for firms repatriating under the Act before, during and after the one-time tax holiday.

Consistent with theory, I expect that firms will have accumulated financial assets prior to the one-time tax holiday and will significantly reduce (increase) their level of PRE during (after) the one-time tax holiday (Clausing 2005, Gravelle 20005, De Waegenaere and Sansing 2006).

I investigate three sets of hypotheses around the one-time tax holiday for firms repatriating under the Act to examine the lock-out effect of the U.S. international tax system. The three sets of hypotheses I examine will evaluate the firms' lock-out behavior in the year before, during and after the one-time tax holiday. The tax-holiday provides an opportunity to investigate the extent to which U.S. multinational firms' accumulated foreign earnings in an effort to avoid recognizing the U.S. tax cost. In their model De Waegenaere and Sansing (2006) demonstrate that firms repatriating under the Act had reached their optimal level of investment in operating assets and to avoid recognizing U.S. tax costs accumulated foreign earnings abroad in cash. This study will provide evidence to suggest that the U.S. international tax system encouraged firms to not only accumulate their foreign earnings as PRE but also to accumulate those earnings in cash prior to and after the one-time tax holiday. Consistent with prior research, I expect that the cash holdings and repatriation tax costs will be positively associated with the firms' level of PRE in the year prior to the one-time tax holiday. For the sample of firms repatriating under the Act, I also expect that the change in PRE will be positively associated with both the change in cash holdings and the change in the repatriation tax

costs in the year of repatriation and in the year following repatriation. My predictions are consistent with prior literature that suggests that the one-time tax holiday will cause a temporary surge in repatriations and effectively make the lock-out behavior more desirable in the future (Clausing 2005, Gravelle 2005, De Waegenaere and Sansing 2006).

I hand-collect annual financial statement data for firms that repatriated under the one-time tax holiday for the year prior to, during and after the tax holiday. I focus on annual financial statement data since my event is the one-year tax holiday. For my sample firms I collect the amount repatriated under the tax holiday, the tax expense related to these repatriations, and the level of PRE. My final sample contains 195 firms with the required data to conduct my analysis.

I estimate an ordinary least squares regression model to test my three sets of hypotheses. My first set of hypotheses is tested in the year prior to repatriation under the one-time tax holiday. I expect a positive association between PRE and the explanatory variables, repatriation tax costs and cash holdings. First, as expected, I find that the level of PRE is positively associated with the tax costs of repatriation. Second, as expected, I also find that the cash holdings are positively associated with the level of PRE prior to repatriation under the tax holiday. Consistent with the predictions of prior research (e.g., De Waegenaere and Sansing 2006, Foley et al. 2006), I find that prior to the one-time tax holiday some firms appear to have accumulated financial assets in their foreign subsidiaries to avoid recording the U.S. tax liability on foreign earnings. For my sample



of firms, the U.S. international tax system may have trapped approximately \$339 billion of foreign earnings abroad prior to the one-time tax holiday provided under the Act.

My second set of hypotheses is tested in the year in which firms repatriated under the one-time tax holiday. Firms that appear to be experiencing the lock-out effect of the U.S. international tax system repatriated approximately \$200 billion and paid repatriation taxes of approximately \$10 billion under the one-time tax holiday provided by the American Jobs Creation Act of 2004. As expected, I find that the change in PRE is positively associated with the change in the repatriation tax costs for these firms. This result is consistent with the lock-out effect of the U.S. international tax system. More specifically, the level of PRE decreases with the reduction in the repatriation tax costs suggesting that the earnings were trapped abroad due to the lock-out effect of the U.S. international tax system. Also, as expected, I find that the change in PRE is positively associated with the change in cash holdings. This result is consistent with De Waegenare and Sansing's (2006) theoretical prediction that firms that have reached their optimal level of investment in foreign operations begin to accumulate foreign earnings as financial assets until they can be repatriated at a more advantageous repatriation tax costs (e.g., during a tax holiday).

My third set of hypotheses is tested in the year following the one-year tax holiday. As expected, I find that the change in PRE is positively associated with the change in the repatriation tax costs. In other words, firms increase their level of PRE as the repatriation tax increases back to its pre-holiday rate. The firms increased their level of PRE by approximately \$78 billion in the year following the one-time tax holiday.

This finding suggests that the lock-out effect of the U.S. international tax system is immediately reestablished in the year following the one-year tax holiday. However, contrary to expectations, the change in PRE is not associated with the change in cash holdings in the year following the tax holiday. There are at least two possible explanations for not obtaining support for the cash holdings hypothesis in the year following the tax holiday. One, I do not have complete financial statement data for all firms in the year following the tax holiday; therefore, statistical power may be an issue. Second, firms dramatically changed their cash holdings between the U.S. parent and foreign subsidiary during the tax holiday. Therefore, a one year period may not have provided adequate time for firms to reestablish their normal pre-holiday cash holdings behavior. For example, firms dramatically increased their share repurchases after the tax holiday (Blouin and Krull 2006, Clemons and Kinney 2006) hence the increase in cash holdings in foreign subsidiaries may have been partially offset by decreases in the cash holdings of the U.S. parent. Overall, I obtain results for five of the six hypotheses providing strong evidence that the U.S. international tax system causes a lock-out effect for foreign earnings from low-tax countries.

The findings of this study will provide useful information to many parties including academic researchers, regulators, and policy makers. First, the findings of this study support the predictions of economist as to the impact of the one-time tax holiday (Clausing 2005, Gravelle 2005). That is, the study suggest that the one-time tax holiday will cause firms to repeat their lock-out behavior since an expectation now exist for the tax holiday to be repeated in the future. This study also provides support for the De

Waegenaere and Sansing's (2006) theoretical prediction that U.S. multinational firms that have reached their optimal level of investment in foreign operations will accumulate their foreign earnings in financial assets in order to avoid the U.S. tax costs. Second, the findings of this study will provide useful information to regulators in assessing the effectiveness of the regulations in assuring that the repatriations were utilized as intended by the U.S. government. Third, the results of this study will provide useful information to policy makers. More specifically, the results of this study suggest that the U.S. international tax system does cause a lock-out effect for foreign earnings from low-tax countries. The information provided by this study will be useful in debates regarding the most appropriate method in which to tax U.S. multinational firms' foreign earnings (e.g., evaluating the residential versus territorial tax systems).

The next section discusses background research and motivates my hypotheses. Section three explains my sample selection and research design. Section four discusses descriptive statistics and results while section five concludes.

### **Background and Hypothesis Development**

Internal Revenue Code section 965, enacted as part of American Jobs Creation Act of 2004, was a temporary provision allowing U.S. multinational firms to repatriate earnings from their foreign subsidiaries at a reduced effective tax rate. Section 965 provides that U.S. firms could elect, for one taxable year, an 85 percent dividends received deduction for eligible dividends received from their foreign subsidiaries, thereby establishing a maximum effective tax rate of 5.25 percent (i.e., 15 percent of 35 percent) on qualifying dividends (U.S. Treasury Department 2005). Firms could elect

the one-year holiday period as the last tax year beginning before the date of the enactment of AJCA (October 22, 2004) or the first taxable year beginning after that date. Therefore, all repatriated foreign earnings under the tax holiday were completed by October 2006. The tax holiday provides a substantial benefit to multinational firms operating in low-tax countries. The following sections will demonstrate the incentives created by the Act in greater detail.

Under the U.S. international tax system, U.S. multinational corporations are generally required to record all incremental U.S. income taxes on foreign earnings in the current period. Included in that amount are U.S. deferred taxes that will not be payable until the foreign earnings are repatriated as a dividend to the U.S. parent. However, Accounting Principles Board Opinion No. 23 (APB 23) provides an exception to this rule. Under APB 23, U.S. multinational corporations are not required to record deferred taxes on the foreign earnings if they are classified as permanently reinvested (PRE). The PRE classification may be used by U.S. multinational corporations if the foreign earnings will be reinvested in the foreign subsidiary for an indefinite period of time.

If the PRE classification is used for foreign earnings then the firm's foreign earnings are taxed in the foreign country when earned, and the firm is taxed on the foreign earnings by the U.S. government only upon repatriation. To avoid double taxation on repatriated foreign earnings the U.S. tax laws permit a tax credit for foreign income taxes paid, but the foreign tax credit is limited to the U.S. tax liability. Since the firm does not record U.S. taxes on the foreign earnings under the PRE classification, an incentive exists for firms to incur income in low-tax jurisdictions and classify them as

PRE in order to indefinitely avoid recording and paying the U.S. tax liability on those earnings. Likewise under the PRE classification, the U.S. tax laws create a disincentive for firms to incur income in high-tax countries since the tax credits are capped at the U.S. tax liability.

For example, assume that a U.S. multinational firm operates a subsidiary in a low-tax country. Assume that the firm has a U.S. corporate income tax rate of 35 percent and a foreign tax rate of 10 percent in the low-tax country. The foreign subsidiary earns \$200 of income and decides to repatriate half of the earnings to the United States. In the foreign country the subsidiary pays \$20 to the foreign government on the \$200 of foreign earnings. The firm repatriates \$100 to the United States and reinvests the remaining \$100 in its foreign subsidiary. The firm will pay \$35 in U.S. taxes on the \$100 repatriations, but it is eligible for a \$10 tax credit for the foreign taxes paid. In the following section I will demonstrate the lock-out effect created by the U.S. international tax system and suggests that the U.S. international tax system provides an incentive for firms operating in low-tax countries to defer recognition of U.S. taxes via the PRE designation.

Due to the fact that U.S. multinational firms, all else equal, recognize a U.S. tax liability that increases as the firm's foreign tax liability decreases, it is logical to assume that U.S. multinational firms will be more likely to designate their foreign earnings as permanently reinvested (PRE) as their foreign tax liability decreases. By classifying their foreign earnings as PRE firms are able to indefinitely defer the recognition of the U.S. tax liability for earnings held in low-tax countries. The deferral of the recognition

of the U.S. tax liability from low-tax countries via the PRE designation has been termed the “lock-out effect” of the U.S. international tax system. It is argued that the lock-out effect is the direct result of the benefits generated from indefinitely deferring the repatriation of foreign earnings; because, absent such benefits, firms would have no incentive to postpone the repatriation of their foreign income since it would be taxed currently in the United States as earned (Clausing 2005).

Counter to the lock-out effect described above, Hartman (1985) assumes in developing his theoretical model that the U.S. taxation of income from low-tax countries is inevitable and that repatriation taxes will not influence the decision of when to repatriate the foreign earnings. Hartman demonstrates that a dollar in repatriated earnings generates  $(1 \text{ minus the U.S. tax rate}) / (1 \text{ minus the foreign tax rate})$  in cash flows for the parent firm. For example, in the case of the \$100 repatriated in the preceding example, the firm would have  $\$100 * (.65/.90)$ , or \$72, in cash after U.S. taxation.

In deciding between reinvesting foreign earnings abroad and repatriating, the firm will compare the after-tax return associated with each option. If a firm reinvests its foreign earnings, it will eventually earn  $[(1 + r^* (1 - \text{foreign tax rate})) * ((1 - \text{U.S. tax rate}) / (1 \text{ minus the foreign tax rate}))]$  where  $r^*$  is the return in the foreign country and is taxed by the foreign government each period. Eventually, the funds will be repatriated to the United States and incur an associated one time reduction in value.

Alternatively, if the foreign earnings are repatriated immediately instead the firm will earn  $[(1 + r) * ((1 - \text{U.S. tax rate}) / (1 \text{ minus the foreign tax rate}))]$  where  $r$  is the net

return in the United States. Comparing the two equations reveals that the level of U.S. taxation of foreign earnings will not affect the decision between foreign reinvestment and repatriation. The U.S. tax costs associated with repatriations in the first equation is incurred regardless of whether one reinvests the earnings abroad or repatriates them.

Hartman's (1985) theoretical model suggest that a permanent reduction in the tax costs of repatriation would provided a windfall gain to investors, but it would not change the time path of repatriation flows from abroad, assuming of course that the economic actors in question view the change as completely permanent (Clausing 2005).

Prior literature suggests that the lock-out effect of the U.S. international tax system does exist, and this stream of literature suggest that repatriations are very sensitive to the taxes that are due when foreign earnings are brought back to the United States. Altshuler and Newlon (1993) evaluate tax return data and suggest that a 1 percent higher repatriation tax burden is associated with a 1.5 percent reduction in repatriations. Desai et al. (2001), using Bureau of Economic Analysis data from 1982 to 1997, examine both affiliates that face U.S. repatriation taxes and branches that do not face U.S. repatriation taxes to help isolate the effect of taxes on repatriations. They find that when branches face a 1 percent increase in repatriation taxes they decrease dividend repatriations by 1 percent, while branches do not exhibit this pattern. Desai et al. (2001) conclude that repatriation taxes reduce dividend repatriations by approximately 13 percent noting that "these effects would disappear if the U.S. were to exempt foreign income from taxation." Based on the preceding studies, I expect firms that repatriated under the tax holiday deferred repatriations and classified them as permanently

reinvested (PRE) prior to the passage of the Act to avoid recording the associated U.S. tax liability. My first hypothesis stated in the alternative is:

**Hypothesis 1a:** The level of foreign earnings designated as permanently reinvested (PRE) is positively associated with the repatriation tax cost prior to the tax holiday for firms repatriating under the provisions of the American Jobs Creation Act of 2004.

Hartman's (1985) theoretical model, which was presented above, models the effect of the U.S. repatriation tax system on the decision to permanently reinvest foreign earnings abroad. The alternative to reinvesting abroad is to pay the additional U.S. income tax due on the repatriation, and reinvest the after-U.S.-tax foreign earnings in the United States. Hartman's solution is somewhat counterintuitive since it suggests that the length of the deferral of U.S. tax has no effect on the reinvestment decision. Hartman's model shows that earnings should be reinvested in the location that provides the greatest expected after-local-tax rate of return, irrespective of the taxes owed upon repatriation to the United States.

Hartman's findings hold if foreign earnings are reinvested into operating assets, but Scholes et al. (2005) suggest that if the foreign income generated from operating assets is reinvested in financial assets, then the length of deferral of U.S. repatriation taxes does matter. Therefore, foreign subsidiaries that have reached their optimal level of investment in operating assets may have an incentive to indefinitely defer repatriation to the U.S. in an effort to avoid recording a U.S. tax liability. These firms will be likely to accumulate excessive amounts of financial assets, such as cash and marketable securities, in their foreign subsidiaries. For example, a current working paper by Foley et al. (2007) suggest that firms' cash holdings are related to having foreign tax rates less



than U.S. tax rates. The authors' findings suggest that a positive relationship exists between the amount of cash holdings in their foreign subsidiaries and the U.S. tax liability associated with the foreign earnings. The authors' findings suggest that subsidiaries that trigger higher U.S. tax liabilities upon the recognition of their foreign earnings hold higher levels of cash than other subsidiaries of the same firm.

My next hypothesis is loosely motivated by the theoretical model developed in De Waegenaere and Sansing (2006) which portrays a firm's optimal repatriation and investment decisions under the U.S. international tax system. The authors' model suggests that firms operating in low-tax countries and that have reached their optimal level of investment in foreign operating assets are more likely to designate their foreign earnings as PRE and hold these earnings in the foreign subsidiary as financial assets. To motivate my hypothesis, I will provide a simple numerical example based on De Waegenaere and Sansing's (2006) model. Although the following example is simplified, it may be generalized and provides a good intuitive explanation for my hypothesis.

The following numerical example is borrowed from Bryant-Kutchner et al. (2007) and demonstrates why firms operating in low-tax countries are more likely to hold foreign assets in financial assets prior to repatriating under a tax holiday. Assume that a foreign subsidiary of a U.S. multinational invests an amount,  $K$ , in foreign operating assets generating pre-tax cash flows (and earnings) according to the function  $f(K) = 0.20(K) - 0.001(K^2)$ , so that increased investment results in increased earnings, but at a decreasing rate. Assume that the firm has an after-tax discount rate equal to 4 percent, that the U.S. corporate tax rate is 35 percent, and that the after-U.S.- tax risk-

free rate is 3.25 percent, which implies a pretax risk-free rate of 5 percent. The firm faces a foreign tax rate,  $\tau_F$ , that is less than the 35 percent U.S. tax rate.

In the preceding example the firm should continue to reinvest in foreign operating assets until the optimal investment level,  $K^*$ , is reached, where  $(1 - \tau_F)f'(K^*) = 4$  percent. That is, the firm should keep investing in foreign operating assets until the marginal after-foreign-tax return on additional investment is equal to the firm's discount rate.

Further for this example, assume two firms, H and L, are operating in two foreign countries with different tax rates. Country H has a tax rate of 25 percent and country L has a tax rate of 15 percent. Based on the preceding foreign tax rates and the fact that  $f'(K) = 0.20 - 2(0.001)K$ , firm H will continue to reinvest in foreign operating assets until  $K=73$ , since  $(1 - 25\%)f'(73) = 4\%$ , firm H's discount rate. Operating assets equal to 73 will generate a before-tax return each year of  $f(73) = 0.20(73) - 0.001(73^2) = 9.27$ . On the other hand, firm L will continue to reinvest in foreign operating assets until  $K = 76$ , since  $(1 - 15\%)f'(76) = 4\%$ , firm L's discount rate. Operating assets equal to 76 will generate a before-tax return each year of  $f(76) = 0.20(76) - 0.001(76^2) = 9.42$ .

De Waegenare and Sansing (2006) study the optimal repatriation strategy for a firm that has reached investment level  $K^*$  and will therefore stop investing future foreign earnings in foreign operating assets. I assume firms that repatriated under the American Jobs Creation Act of 2004 are firms that have reached investment level  $K^*$ ; otherwise, they would have continued to reinvest their foreign earnings into foreign operating assets. Firms that have reached  $K^*$  face two choices: the firm could either begin to

repatriate all future earnings as a taxable dividend to the U.S. parent incurring the 35 percent U.S. tax rate, or it can reinvest the after-foreign-tax earnings in foreign financial assets that earn the risk free rate until it repatriates all of its foreign earnings as a taxable dividend to the U.S. parent.

De Waegenaere and Sansing (2006) suggest that the optimal repatriation strategy depends on the relative size of (1) the after-foreign-tax risk-free rate, and (2) the firm's discount rate. Let  $R$  equal the risk-free-rate and  $r$  equal the firm's discount rate. The repatriation decision depends on the relative size of  $r$  and  $R(1 - \tau_F)$ . If the discount rate is greater than the after-foreign-tax risk free rate, so that  $r > R(1 - \tau_F)$ , the optimal decision is to repatriate all future earnings as a taxable dividend to the parent and to incur the 35 percent U.S. tax rate. Using the sample firms, assume that firm H, with a foreign tax rate of 25 percent, generates \$20 of pretax foreign earnings, resulting in \$15 of after-tax earnings. Repatriations yield \$13 after U.S. tax to the U.S. parent. Since the firm has reached its optimal level of investment in operating assets, if it retains the \$15 abroad, it can only reinvest at the 3.25 percent after-U.S.-tax risk-free rate. This investment yields a perpetuity of 0.49 with a present value of  $0.49/0.04 = \$12.19$ , which is less than \$13. Thus the optimal policy for firm H is to repatriate all future earnings from foreign operating assets as a taxable dividend to the U.S. parent.

If the discount rate is less than the after-foreign-tax risk free rate, so that  $r < R(1 - \tau_F)$ , firm value is maximized if the foreign earnings are not repatriated and are instead held abroad in foreign financial assets. This is the optimal decision despite the fact that the future earnings from the foreign financial assets will be subject to tax at the 35

percent U.S. tax rate. Using my example firms, assume that firm L, with a foreign tax rate of 15 percent, generates \$20 of pretax foreign earnings, resulting in \$17 of after-tax earnings. Repatriation yields \$13 after U.S. tax to the U.S. parent. Retaining the \$17 abroad and reinvesting at the 3.25 percent after-U.S. tax risk-free rate yields a perpetuity of 0.55 with a present value of  $0.55/0.04 = \$13.81$ , which is more than \$13. Therefore, the optimal policy for firm L is to reinvest all future earnings from foreign operating assets in foreign financial assets, and to not repatriate the foreign operating earnings until a tax holiday is granted for repatriations by the United States.

Based on the preceding examples, firms will reinvest foreign earnings into foreign operations until they reach their optimal level of investment in foreign operations,  $K^*$ . All else equal, only after reaching  $K^*$  will firms begin to accumulate foreign earnings in financial assets as a result of the taxes due upon repatriation to the United States. Therefore, as implied by the theoretical model from De Waegenaere and Sansing (2006) and the empirical findings of Foley et al. (2006), I predict that the following hypothesis stated in the alternative form will hold:

**Hypothesis 1b:** The level of foreign earnings designated as permanently reinvested is positively associated with the level of cash holdings prior to the tax holiday for firms repatriating under the provisions of the American Jobs Creation Act of 2004.

Hartman's (1985) theoretical model assumes that the tax costs of repatriations do not change over time, but his model does not consider a temporary change in the tax costs of repatriations. Therefore, the temporary change in the tax costs of repatriations under the provisions of the AJCA (i.e., the tax costs of repatriations is reduced for one-year by 85%) removes Hartman's assumption that the tax costs of repatriations do not

change over time. Under the tax holiday provided by the Act equations (2) and (3) in Hartman's model, presented above, will no longer drop out (Clausing 2005). Therefore, the tax holiday provides a unique opportunity to investigate the lock-out effect of the U.S. international tax system.

As demonstrated by Hartman (1985), if the dividend tax holiday under the Act was unexpected then it would not have affected firms' repatriations decision prior to the tax holiday. Interestingly, even if the tax holiday provided by the Act was anticipated, as some have argued, this would have generated a reduced incentive to repatriate foreign earnings in years prior to the tax holiday as well (Clausing 2005). Therefore, regardless if the tax holiday was anticipated or not, firms experiencing the lock-out effect of the U.S. international tax system have an incentive to repatriate more funds during the tax holiday than they would prior to or after the one-time tax holiday. Therefore, I expect the following hypothesis stated in the alternative form to hold:

**Hypothesis 2a:** The change in foreign earnings designated as permanently reinvested is positively associated with the change in repatriation tax cost in the year of the tax holiday for firms repatriating under the provisions of the American Jobs Creation Act of 2004.

Under Hartman's (1985) assumptions in his theoretical model no lock-out effect would exist. But, the theoretical model of De Waegenaere and Sansing (2006), presented above, demonstrates that firms that have reached their optimal level of investment in foreign operating assets,  $K^*$ , may accumulate foreign financial assets in their subsidiaries to avoid recording U.S. repatriation taxes.

De Waegenare and Sansing (2006) also model firms' behavior around tax holidays that occur in a stochastic fashion. The authors argue that because operating assets are costly to liquidate, all repatriations under a tax holiday must be in the form of financial assets. The authors' argument is consistent with Slemrod's (1992) tax planning hierarchy in which most tax planning activities involve accounting and financial transactions instead of transactions involving real investment decisions.

De Waegenare and Sansing (2006) demonstrate that firms experiencing the lock-out effect will accumulate financial assets in their low-tax foreign subsidiaries to avoid paying U.S. repatriation taxes. Furthermore, the authors argue that only firms that have accumulated financial assets will have the cash required to repatriate significant amounts of foreign earnings that have accumulated abroad due to the lock-effect of the U.S. international tax system. In summary, only firms that have accumulated financial assets due to the lock-out effect of the U.S. international tax system will have the ability to repatriate significant amounts of foreign earnings under the one-time tax holiday. Based on De Waegenare and Sansing's (2006) predictions, I expect the following hypothesis stated in the alternative form to hold:

**Hypothesis 2b:** The change in foreign earnings designated as permanently reinvested is positively associated with the change in cash holdings in the year of the tax holiday for firms repatriating under the provisions of the American Jobs Creation Act of 2004.

In the year following the tax holiday, I expect that the lock-out effect will be reestablished primarily due to the fact that the tax costs for repatriations increases back to the price paid prior to the holiday. Furthermore, similar to tax amnesties, firms are now likely to have increased expectations of future tax holidays. As stated in Clausing

(2005), this expectation will exist because to the extent that firms come to anticipate future tax holidays, they will no longer view the regular tax rate as the permanent one, and firms may thus defer future repatriations in the hope of similar tax holidays in the future. In fact, some have suggested that the tax holiday represents an initial step toward the exemption of foreign income. If firms anticipate such a transition, they may be particularly reluctant to incur the normal tax costs of repatriations (Clausing 2005).

Therefore, I expect the following hypothesis stated in the alternative form to hold:

**Hypothesis 3a:** The change in foreign earnings designated as permanently reinvested is positively associated with the change in repatriation tax cost in the year following the tax holiday for firms repatriating under the provisions of the American Jobs Creation Act of 2004.

De Waegenare and Sansing (2006) demonstrate that firms that repatriated under the tax holiday provided by the Act accumulated financial assets in their low-tax foreign subsidiaries prior to repatriation. The authors then suggest that, “because at a tax holiday accumulated financial assets can be repatriated at the lower repatriation tax rate, the expectation of a future tax holiday may affect the firms’ decision whether to reinvest its foreign earnings from operating assets in financial assets or to repatriate them as a dividend.” Consistent with the authors’ prediction, I expect that firms experiencing the lock-effect of the U.S. international tax system will now have an increased incentive to defer the repatriation of financial assets due to the fact that the one-time tax holiday will have likely increased expectations of tax holidays reoccurring in the future. Therefore, I expect that the following hypothesis stated in the alternative form will hold:

**Hypothesis 3b:** The change in foreign earnings designated as permanently reinvested is positively associated with the change in cash holdings in the year following the tax holiday for firms repatriating under the provisions of the American Jobs Creation Act of 2004.

### **Sample Selection and Research Design**

I hand collect annual financial statement data for a sample of U.S. multinational firms that repatriated under the provisions of the American Jobs Creation Act of 2004. I identified these firms through two primary sources. First, I identified firms that disclosed they repatriated under the Act in their financial statements by searching the EDGAR database utilizing the following search string [(10Q or 10K) and (foreign earnings repatriation) w/25 (American Jobs Creation Act of 2004)]. Second, I identified firms that repatriated under the Act using the Lexis-Nexis Business Wire and News Wire and Google searches using the following key words “foreign earnings repatriation” and “American Jobs Creation Act of 2004”. The combined results of these searches confirmed 364 firms that repatriated under the provisions of the American Jobs Creation Act of 2004.

For the sample of firms repatriating under the provisions of the Act, I also collect permanently reinvested data (PRE) from fiscal years 2004 through 2006. PRE is my proxy for the lock-out effect of the U.S. international tax system. Specifically, firms repatriating under the one-time tax holiday designated foreign earnings as PRE to avoid recording the associated U.S. tax liability for these earnings. My study focuses on fiscal years 2004 through 2006 because they are the years surrounding the year in which the firms repatriated permanently reinvested earnings under the provisions of the one-time tax holiday. Thus, fiscal years 2004 through 2006 provide a representative window to



evaluate how firms changed their lock-out behavior (i.e., level of PRE) around the one-time tax holiday provided by the American Jobs Creation Act of 2004.

I impose several restrictions on my sample before conducting my empirical tests. For each observation, I search the income tax footnote for disclosures of PRE. I exclude observations that do not disclose an amount for PRE and observations that do not include prior year PRE needed to compute my  $\Delta$ PRE variable. To help assure that the PRE designation captures the lock-out effect, I also delete firms that recorded a tax benefit for the earnings repatriated under the one-time tax holiday. These firms are deleted because the recording of a tax benefit upon repatriation under the tax holiday indicates that a tax liability had previously been recorded for at least some of the foreign earnings repatriated under the provisions of the Act. Finally, firm-year observations must have sufficient data for hypothesis testing.

Based on the data requirements, I identify 188 firms that have the required data to conduct my test of H1a and H1b in fiscal year 2004, 184 firms to conduct my test H2a and H2b in fiscal year 2005, and 132 firms to conduct my test of H3a and H3b in fiscal year 2006.

I test H1a and H1b using the following ordinary least squares regression model to measure PRE and its determinants in the year prior to the one-year tax holiday:

$$\begin{aligned}
 \text{(III.1) } PRE &= \beta_1 \text{ Size} + \beta_2 \text{ Foreign Income} + \beta_3 \text{ U.S. Income} + \beta_4 \text{ Capex} \\
 &+ \beta_5 \text{ Research \& Development} + \beta_6 \text{ Book-to-market} + \beta_7 \text{ Cash holdings} \\
 &+ \beta_8 \text{ Repatriation tax} + \beta_9 \text{ Share Repurchases} + \varepsilon
 \end{aligned}$$

where *PRE* equals the level of permanently reinvested earnings scaled by total assets in the year prior to repatriation under the one-time tax holiday. The value of *PRE* is hand-collected from the firms' financial statement footnotes, and total assets are obtained from the Compustat annual database (Data 6). The dependent variable in equation (III.1) is my proxy for the level of foreign earnings held abroad due to the lock-out effect of the U.S. international tax system.

To investigate whether the magnitude of *PRE* prior to repatriation under the one-time tax holiday is associated with the unrecognized U.S. tax liability, I calculate the *Repatriation tax* variable which proxies for the U.S. tax liability associated with the earnings classified as *PRE*. I obtain footnote disclosures that provide both the U.S. tax liability recorded under the tax holiday and the corresponding amount of foreign earnings repatriated under the tax holiday. Under the tax holiday firms receive an 85% reduction in the U.S. tax liability associated with the repatriations brought back. Therefore, the U.S. tax rate associated with the repatriations under the tax holiday is equal to the recognized (discounted) U.S. tax liability divided by the foreign earnings repatriated under the provisions of the Act. For example if a firm recorded a U.S. tax liability of \$5.25 associated with the repatriation of \$100 under the Act, the firms *Repatriation tax* rate under the tax holiday would equal 5.25 percent (i.e., 15 percent of the non-holiday U.S. tax liability); so, in years other than the tax holiday the firm would have recognized a *Repatriation tax* rate on the foreign earnings equal to 35 percent (i.e., 5.25 percent divided by 15 percent). H1a predicts that the level of foreign earnings

designated as *PRE* is positively associated with the *Repatriation tax* rate prior to the tax holiday. Thus, I expect a positive and significant coefficient on *Repatriation tax* rate.

H1b predicts that the magnitude of foreign earnings designated as permanently reinvested is positively associated with the level of cash holdings prior to the tax holiday. To identify whether the magnitude of *PRE* is positively associated with cash holdings, I calculate the *cash holdings* ratio following Foley et al. (2006). The *cash holdings* ratio is the natural logarithm of the ratio of cash to net assets (defined as total assets minus cash). Using Compustat annual data the *cash holdings* ratio,  $\ln(\text{Cash}/\text{Net Assets})$ , is calculated as the natural log of (data item 1 / (data item 6 – data item 1)). H1b predicts the magnitude of foreign earnings designated as *PRE* is positively associated with the *cash holdings* ratio prior to the tax holiday. Thus, I expect a positive and significant coefficient on the *cash holdings* ratio.

In addition to my variables of interest model one includes the following control variables. *Size* which is equal to the log of total assets (data item 6) controls for unspecified size effects in the model. *Foreign Income* which is equal to pretax foreign income scaled by total assets (data item 273 / data item 6) and, *U.S. Income* which is equal to U.S. pretax income scaled by total assets (data item 272 / data item 6) are included to control for the effects of foreign and domestic profitability on *PRE*. *Capex* is equal to capital expenditures scaled by total assets (data item 128 / data item 6) and is included in the model to as a proxy to control for historical growth. *Research & Development* is equal to R&D expense scaled by total assets (data item 46 / data item 6) and is included as a control variable that proxies for future growth. *Book-to-market* is

equal to book value scaled by market value of equity (data item 60 / (data199\*data25) and is also included in the model to control for a firm's growth opportunities. Finally, *share repurchases*, ((data item 115 – (data item 130 – data item 175)) / data item 6), is included based on prior research (Blouin and Krull 2006, Clemons and Kinney 2006) to evaluate how a firm's payout behavior changes around the one-time tax holiday.

I test H2a and H2b using the following ordinary least squares regression model to measure the change in PRE and the change in the determinants of PRE in *the year of the* one-year tax holiday:

$$(III.2) \Delta PRE = \beta_1 \text{Size} + \beta_2 \Delta \text{Foreign income} + \beta_3 \Delta \text{U.S. income} + \beta_4 \Delta \text{Capex} + \beta_5 \Delta \text{Research \& Development} + \beta_6 \text{Book-to-market} + \beta_7 \Delta \text{Cash holdings} + \beta_8 \Delta \text{Repatriation tax} + \beta_9 \Delta \text{Share Repurchases} + \varepsilon_i$$

where the  $\Delta PRE$  equals the change in permanently reinvested earnings from the year prior to the tax holiday ( $t - 1$ ) to the year of the tax holiday year ( $t$ ) scaled by total assets. The values of *PRE* are hand-collected from the firms' financial statement footnotes, and total assets are obtained from the Compustat annual database (Data 6). The dependent variable in equation (III.2) measures the *change in PRE* in the year of the tax holiday associated with a reduction in the lock-out effect of the U.S. international tax system.

I investigate whether the *change in PRE* is associated with the 85% reduction in the U.S. tax liability on such earnings in the year of the tax holiday. I calculate the  $\Delta \text{Repatriation tax}$  variable from the year prior to the tax holiday ( $t - 1$ ) to the year of the tax holiday year ( $t$ ) scaled by total assets to proxy for the reduction in the U.S. tax liability due to the tax holiday. Based on financial statement footnote disclosures, I

obtain both the U.S. tax liability recognized under the tax holiday and the corresponding amount of foreign earnings repatriated under the tax holiday. The U.S. tax liability recognized by firms repatriating under the tax holiday is 15% (i.e., an 85% reduction under the Act) of the U.S. tax liability that would have been recorded by the firms absent the tax holiday. Since the U.S. tax liability recognized under the holiday represents 15 percent of the U.S. tax liability, I proxy for the U.S. tax liability years other than the tax holiday by dividing the recognized U.S. tax liability under the tax holiday by 15 percent. Therefore, the  $\Delta Repatriation\ tax$  represents the tax savings in the year of repatriation under the tax holiday. H2a predicts that the *change in PRE* is positively associated with the *change in repatriation tax* in the year of the tax holiday for firms repatriating under the Act. Therefore, I expect a positive and significant coefficient on the  $\Delta Repatriation\ tax$  variable in the year of repatriation.

I also investigate whether the *change in PRE* is associated with the  $\Delta Cash\ holdings$  in the year of the tax holiday. I calculate the  $\Delta Cash\ holdings$  variable from the year prior to the tax holiday ( $t - 1$ ) to the year of the tax holiday year ( $t$ ) scaled by total assets to proxy for the reduction in the cash holdings associated with the one-time tax holiday. H2b predicts that the  $\Delta PRE$  is positively associated with the  $\Delta Cash\ holdings$  in the year in which permanently reinvested earnings are repatriated under the tax holiday. Thus, I expect a positive and significant coefficient on the  $\Delta Cash\ holdings$ . Finally, I expect that the  $\Delta PRE$  is negatively associated with the  $\Delta Share\ Repurchases$ . This result would be consistent with prior research (Blouin and Krull 2006, Clemons and Kinney

2006) that suggest that firms repatriating under the tax holiday used the funds to increase distributions to share holders in the year of the tax holiday.

In addition to my variables of interest model 2 includes the following control variables. *Size* which controls for unspecified size effects.  $\Delta Foreign\ Income$  and  $\Delta U.S. Income$  are included to control for the effects of the changes in foreign and domestic profitability.  $\Delta Capex$ ,  $\Delta Research \& Development$ , and *Book-to-market* are included in the model to control for a firm's growth opportunities.

I test H3a and H3b using the following ordinary least squares regression model to measure the change in PRE and the change in the determinants of PRE in *the year following* the one-year tax holiday:

$$(III.3) \Delta PRE = \beta_1 Size + \beta_2 \Delta Foreign\ income + \beta_3 \Delta U.S.income + \beta_4 \Delta Capex \\ + \beta_5 \Delta Research \& Development + \beta_6 Book-to-market + \beta_7 \Delta Cash\ holdings \\ + \beta_8 \Delta Repatriation\ tax + \beta_9 \Delta Share\ Repurchases + \varepsilon$$

where the  $\Delta PRE$  equals the change in permanently reinvested earnings from the year of the tax holiday ( $t$ ) to the year following the tax holiday ( $t + 1$ ) scaled by total assets. The dependent variable in equation (3) measures the  $\Delta PRE$  in the year following the tax holiday to examine if it is associated with an increase in the lock-out effect of the U.S. international tax system. Specifically, the U.S. tax liability on foreign earnings returns to its original costs for firms repatriating under the one-time tax holiday, and I expect firms to once again repeat their lock-out behavior.

I investigate whether the *change in PRE* is associated with the 85% increase in the U.S. tax liability on such earnings in the year following the tax holiday. I calculate the  $\Delta Repatriation\ tax$  variable from the year of the tax holiday ( $t$ ) to the year following the one-time tax holiday ( $t + 1$ ) scaled by total assets to proxy for the increase in the U.S. tax liability after the tax holiday. The U.S. tax liability recognized by firms repatriating under the tax holiday is 15% (i.e., an 85% reduction under the Act) of the U.S. tax liability that would have been recorded by the firms absent the tax holiday. Since the U.S. tax liability recognized under the holiday represents 15 percent of the U.S. tax liability, I proxy for the U.S. tax liability years other than the tax holiday by dividing the recognized U.S. tax liability under the tax holiday by 15 percent. Therefore, the  $\Delta Repatriation\ tax$  represents the U.S. tax liability increase in the year following repatriation under the tax holiday. H3a predicts that the *change in PRE* is positively associated with the *change in repatriation tax* in the year following the tax holiday for firms repatriating under the Act. Therefore, I expect a positive and significant coefficient on the  $\Delta Repatriation\ tax$  variable in the year following repatriation under the one-time tax holiday.

I also investigate whether the *change in PRE* is associated with the  $\Delta Cash\ holdings$  in the year following the tax holiday. I calculate the  $\Delta Cash\ holdings$  variable from the year of the tax holiday ( $t$ ) to the year following the tax holiday ( $t + 1$ ) scaled by total assets to proxy for the increase in the cash holdings associated with the expiration of the one-time tax holiday. H3b predicts that the  $\Delta PRE$  is positively associated with the  $\Delta Cash\ holdings$  in the year following the year in which permanently reinvested earnings

were repatriated under the tax holiday. Thus, I expect a positive and significant coefficient on the  $\Delta Cash\ holdings$ . Finally, I expect that the  $\Delta PRE$  is negatively associated with the  $\Delta Share\ Repurchases$ . This result would add support to prior research (Blouin and Krull 2006, Clemons and Kinney 2006) that suggest that firms repatriating under the tax holiday used the funds to increase distributions to share holders following the one-year tax holiday. In addition to my variables of interest, model (III.3) includes the same control variables as model (III.2) to control for size effects, and growth factors.

### **Descriptive Statistics and Results**

I identified 188 firms that deferred the repatriation of their foreign earnings due to the lock-out effect of the U.S. international tax system. Table III-1 summarizes the industry composition of my sample firms that repatriated under the one-time tax holiday provided by the Act. Approximately half of the sample firms are in manufacturing industries and represent 49 percent of the repatriating firms. Service companies comprise the second largest group of repatriating firms (8 percent of the sample), and retail companies and financial service companies are the third largest group of repatriating firms (each represent 5 percent of the sample).



**Table III-1. Industry Distribution of Firms Repatriating under the American Jobs Creation Act of 2004**

---

Industry distribution of firms repatriating under the American Jobs Creation Act of 2004

---

SIC Code		# of Firms:
1000-1999	Mining and Construction	4
2000-2999	Manufacturing	46
3000-3999	Manufacturing	94
4000-4999	Transportation, Communication, Electric, Gas	5
5000-5999	Wholesale, Retail	10
6000-6999	Financial, Insurance, Real Estate	10
7000-7999	Hotel, Services	15
8000-8999	Services	3
9000-9999	Public Administration	1

---

Table III-2 presents data for the sample of firms that deferred repatriation due to the lock-out effect of the U.S. international tax system. Statistics reported in Table III-2 are based only on those firms that have sufficient data available to calculate each specific metric. I do not winsorize or otherwise transform the raw data reported in Table III-2; hence, some means are heavily influenced by outliers. I provide minimum and maximum values as well as the standard error for each variable for the repatriating firms so that the influence of outliers can be inferred.

For the 188 firms, the per-firm average amount repatriated under the Act was approximately \$1 billion, and the average repatriation equaled 9 percent of total assets. The median repatriation amount was \$130 million and equaled 6 percent of total assets. The sample firms were large and had substantial foreign operations. Average total assets were \$15.7 billion, and foreign income accounted for 5 percent of the firm's total assets.

The data in Table III-2 demonstrates that the average tax savings for firms repatriating under the Act was significant. On average, the sample firms had a U.S.

effective tax rate of 32 percent and a foreign tax rate for repatriated earnings of 6 percent. Absent the one-time tax holiday, firms would have recognized a U.S. tax liability of approximately \$266 million on the foreign earnings (i.e.,  $(.32 - .06) * 1,022$ ), but under the one-time tax holiday the liability represented 15 percent of this amount (\$40 million) representing a U.S. tax savings of \$226 million for firms repatriating under the provisions of the Act. Consistent with prior research (De Waegenaere and Sansing 2006; Foley et al. 2006), the data in Table III-2 suggests that firms were retaining their foreign earnings abroad in cash due to the lock-out effect of the U.S. international tax system. Based on the median value, cash holdings for the sample firms equaled 13 percent of net assets (net assets = total assets – cash). Finally, on average research and development expense represented 4 percent of total assets, and the average book-to-market ratio was .40. The evidence presented in Table III-2 provides preliminary data to support my expectations. Next, I will present the results of my empirical analysis.

**Table III-2. 2004 Descriptive Statistics for Firms Repatriating under the American Jobs Creation Act of 2004**

TABLE 2					
2004 Descriptive statistics					
Firms repatriating under the American Jobs Creation Act of 2004					
Variable	Mean	Std. Dev.	Min.	Median	Max.
<i>Repatriations</i>					
Repatriations	1,022	3,385	1	130	37,000
Repatriations / total assets	0.09	0.10	0.00	0.06	0.55
<i>Permanently reinvested earnings (PRE)</i>					
PRE	1,746	4,870	4	337	51,600
PRE / total assets	0.17	0.14	0.00	0.13	0.73
<i>Tax attributes</i>					
Effective tax rate (ETR)	0.32	0.81	-1.92	0.30	10.50
Foreign tax rate (FTR)	0.06	0.08	0.00	0.02	0.35
<i>Firm characteristics</i>					
Size (total assets)	15,656	58,451	84	3,016	648,059
Foreign income / total assets	0.05	0.04	0.00	0.04	0.17
Research and Development / total assets	0.04	0.04	0.00	0.02	0.15
Book-to-market ratio	0.40	0.22	0.01	0.37	1.16
Cash holdings (cash / net assets)	0.28	0.49	0.00	0.13	3.32
(\$ amounts in millions)					

Table III-3 presents the results from model III.1 which tests the association between the level of *PRE* and its explanatory variables in the year prior to repatriation.

Consistent with H1a, I find a positive and significant association between the level of *PRE* and the *repatriation tax* liability that would have been recorded if the foreign earnings were not classified as *PRE* (*p-value 0.00*, one-tailed test). This result suggests that as a firm's U.S. tax liability recognizable for foreign earnings increases so does the likelihood that the firm will classify the foreign earnings as permanently reinvested to avoid recording the U.S. tax liability. The evidence obtained in H1a suggests that the lock-effect of the U.S. international tax system motivated firms to delay the repatriation of their foreign earnings prior to the one-time tax holiday.

Consistent with H1b, I find a positive and significant association between the level of *PRE* and the level of *cash holdings* in the year prior to repatriation under the tax holiday (*p-value 0.00*, one-tailed test). This result provides additional evidence to suggest that firms were experiencing the lock-out effect of the U.S. international tax system prior to the one-year tax holiday. Specifically, this result suggest that firms were

not only deferring the repatriation to avoid the recognizing the U.S. tax liability but they were also holding these earnings in cash rather than reinvesting them in foreign operations. This finding is consistent with the predictions of De Waegenaere and Sansing (2006). The authors predict that firms repatriating under the one-year tax holiday would have accumulated excess cash in their foreign subsidiaries due to the U.S. tax liability that would be required upon repatriation.

Not surprisingly, I also find that the level of *Foreign Income* is significantly and positively associated with the level of *PRE* (*p-value* 0.00, two-tailed test), and the level of *U.S. Income* is significantly and negatively associated with the level of *PRE* (*p-value* 0.01, 2-tailed test). These results indicate that firms generating relatively higher levels of foreign income have a greater capacity to permanently reinvest their foreign earnings abroad.



Table III-4 presents the results from model III.2 which tests the association between the *change in PRE* and the change in the explanatory variables in the year of repatriation.

Consistent with H2a, I find a positive and significant association between the *change in PRE* and the *change in repatriation tax liability* due to the one-time tax holiday (*p-value 0.00*, one-tailed test). This result suggests that firm's repatriated under the Act to reap the tax savings for repatriations provided by the one-year tax holiday. The evidence obtained in H2a provides a natural setting to demonstrate that, all else equal, firms experiencing the lock-out effect of the U.S. international tax system will repatriate their earnings when the tax burden for repatriations is significantly reduced.

Consistent with H2b, I find a positive and significant association between the change in *PRE* and the *change in cash holdings* in the year of repatriation under the one-year tax holiday (*p-value 0.02*, one-tailed test). Consistent with the predictions of De Waegenaere and Sansing (2006), this finding suggests that firms released the excess cash from their foreign subsidiaries under the one-year tax holiday that was previously accumulated to avoid the U.S. tax liability associated with the foreign earnings.



Combined H2a and H2b suggest that firms repatriating under the Act had accumulated permanently reinvested foreign earnings to avoid recognizing the U.S. tax liability that would have been required (i.e., the lock-out effect of the U.S. international tax system). Also, prior research (Blouin and Krull 2006; Clemons and Kinney 2006) suggests that firms that repatriated funds under the one-time tax holiday utilized the cash to increase share repurchases; therefore, I expect that the *change in PRE* will be negatively associated with the *change in share repurchases* in the year of repatriation under the one-year tax holiday. Consistent with my prediction, I find a negative and significant association between the *change in PRE* and the *change in share repurchases* in the year of repatriation (*p-value 0.01*, one-tailed test).

In addition to my variables of interest, additional independent variables are significantly associated with the *change in PRE* in the year of the one-time tax holiday. First, the *change in research and development* is positively and significantly associated with the *change in PRE* in the year of the tax holiday. One possible explanation for this result is that firms curtailed their R&D to help generate the cash required to fund the repatriations. The *book-to-market ratio* was also positively and significantly associated with the *change in PRE* in the year of the tax holiday.

**Table III-4. OLS Regression of 2004 to 2005 Changes in PRE for Firms Repatriating under the Tax Holiday on Changes in Motives for PRE**

TABLE 4					
OLS regression of 2004 to 2005 changes in permanently reinvested earnings (PRE) for firms repatriating under the tax holiday on changes in the motives for PRE					
	Predicted				
Variables	Sign	Coefficient		t-statistic	p-value
Intercept	?	-0.094	***	-2.49	0.01
Size	?	0.004		0.96	0.34
Book-to-market ratio	?	0.063	***	2.23	0.03
Change in foreign Income	?	0.291		0.97	0.33
Change in U.S. Income	?	0.327		1.78	0.08
Change in capex	?	0.271		0.66	0.51
Change in reasearch & development	?	1.169	***	2.46	0.01
Change in cash holdings	+	0.017	***	2.11	0.02
Change in repatriation tax	+	0.189	***	6.11	0.00
Change in share repurchases	-	-0.197	***	-2.53	0.01
Adjusted R-square =	24%				
*** indicates significance at the 5 percent level or better for a one-tail test when a prediction is made and a two-tailed test when no prediction is made.					

Table III-5 presents the results from model III.3 which tests the association between the *change in PRE* and the change in the explanatory variables in the year following repatriation under the one-time tax holiday.

Consistent with H3a, I find a positive and significant association between the *change in PRE* and the *change in repatriation tax liability* due to the one-time tax holiday (*p-value 0.01*, one-tailed test). Consistent with the predictions of prior research (Clausing 2005, Gravelle 2005, De Waegenaere and Sansing 2006) this result suggests that the one-time tax holiday would encourage firms to once again retain foreign earnings abroad due to the lock-out effect of the U.S. international tax system. Specifically, not only do these firms once again benefit from not recognizing a U.S. tax liability on the foreign earnings, but the firms also have an added incentive (i.e., they now have reason to expect additional tax holidays in the future).

Contrary to H3b, the coefficient on the *change in cash holdings* in the year following repatriation is not significantly different from zero (*p-value 0.08*, one-tailed test). This result suggests that the firms who increased their level of *PRE* in the year following the Act did not retain the foreign earnings as cash. Although unexpected, this

result may be due to the fact that my proxy for cash holdings includes both foreign and U.S. cash holdings; therefore, even if firms increased foreign cash holdings as expected in their foreign subsidiaries, offsetting outflows from the U.S. parent would have countered the increase. For example, to reduce agency costs resulting from the large amounts of cash repatriated under the tax holiday, firms may have continued distributing cash to shareholders via the firms' more ambitious share repurchase plans that were established in the year of repatriation. Since *cash holdings* equals total cash holdings (both U.S. and foreign) increases in foreign cash holdings may have been at least partially offset by decreases in U.S. cash holdings to continue to fund share repurchases. In support of this argument, I find a negative and significant coefficient on *change in share repurchases* (*p-value 0.03*, one-tailed test). This result suggest that firms that continued to significantly increase their distributions to shareholders via share repurchases were less likely to significantly increase their level of PRE in the year following the one-time tax holiday. In future years, it is my expectation that this sub-sample of firms will also significantly increase their levels of PRE in a manner consistent with the lock-out effect of the U.S. international tax system.

**Table III-5. OLS Regression of 2005 to 2006 Changes in PRE for Firms Repatriating under the Tax Holiday on Changes in the Motives for PRE**

TABLE 5					
OLS regression of 2005 to 2006 changes in permanently reinvested earnings (PRE) for firms repatriating under the tax holiday on changes in the motives for PRE					
Variables	Predicted Sign	Coefficient		t-statistic	p-value
Intercept	?	0.042	***	2.13	0.03
Size	?	-0.003		-1.43	0.16
Book-to-market ratio	?	-0.013		-1.64	0.10
Change in foreign Income	?	0.453	***	2.77	0.00
Change in U.S. Income	?	-0.005		-0.05	0.96
Change in capex	?	0.343		1.83	0.07
Change in reasearch & development	?	-0.017		-0.07	0.94
Change in cash holdings	+	-0.007		-1.38	0.08
Change in repatriation tax	+	0.083	***	2.60	0.01
Change in share repurchases	-	-0.082	***	-1.96	0.03
Adjusted R-square =	15%				
*** indicates significance at the 5 percent level or better for a one-tail test when a prediction is made and a two-tailed test when no prediction is made.					

## Summary

This study addresses the following research question: do U.S. multinational firms classify foreign earnings as permanently reinvested (PRE) to avoid recognizing the associated U.S. tax liability? If firms classify earning as permanently reinvested with the objective of reinvesting them in foreign operations then the firms would have utilized the classification for its intended purposes. On the other hand, firms may also have no intentions of reinvesting the foreign earnings classified as PRE. These firms classify the earnings as such specifically to receive the financial and tax benefits resulting from the PRE classification. For example, by classifying the foreign earnings as PRE firms reduce their tax expense owed to the IRS and also increase their financial statement income by the unrecognized U.S. tax liability. Classifying foreign earnings as PRE to avoid recording the U.S. tax liability has been termed the “lock-out” effect of the U.S. international tax system.

Prior research suggests that some firms classified their foreign earnings as PRE due to the lock-out effect of the U.S. international tax system. Krull (2004) finds that firms use the PRE designation to opportunistically manage their earnings. De Waegenaere and Sansing (2006) demonstrate in their theoretical model that some firms accumulate foreign earnings stored as cash to avoid recognizing the U.S. tax liability on the foreign earnings. In studying why firms hold excess cash, Foley et al. (2007) find that firms accumulate excess cash in their foreign subsidiaries as the recognizable U.S. tax liability increases. Motivated by this stream of research, I evaluate the lock-out effect of the U.S. international tax system by examining firms that repatriated under the

one-year tax holiday for repatriations provided by the American Jobs Creation Act of 2004. The Act provides a unique opportunity to isolate the effects of a dramatic and temporary change in the U.S. tax liability associated with foreign earnings. Therefore, in an event study I evaluate firms' lock-out behavior around the dramatic and temporary change in the lock-out effect of the U.S. international tax system (i.e., for one year the U.S. tax liability on foreign earnings is reduced by 85 percent).

Using a sample of hand-collected financial statement data, I find that firms that repatriated under the one-time tax holiday behaved in a manner consistent with the lock-out effect of the U.S. international tax system. Based on the expectations from De Waegenare and Sansing's (2006) theoretical model, I predict that firms will change their lock-out behavior around the one-time tax holiday for repatriations provided by the American Jobs Creation Act of 2004. To my knowledge this study is the first to evaluate the lock-out effect of the U.S. international tax system around a dramatic and temporary change in the U.S. tax liability associated with foreign earnings. Because theory predicts that the U.S. international tax system causes a lock-out effect for foreign earnings, I predict firms will have retained foreign earnings and accumulated those earnings as cash prior to the one-time tax holiday. Likewise, I also predict that during the tax holiday firms will return the stored cash to the U.S. specifically to take advantage of the tax savings. Furthermore, I expect that in the year following the Act firms will immediately begin repeating their lock-out behavior.

As predicted, I find that firms repatriating under the Act accumulated foreign earnings and held these earnings as cash prior to the one-time tax holiday. This evidence

is consistent with De Waegenare and Sansing's (2006) theoretical model which predicted that firms repatriating under the one-time tax holiday will have accumulated foreign earnings abroad as cash as a result of the lock-out effect of the U.S. international tax system. Also, consistent with predictions, I find that the changes in the firms' U.S. repatriation tax rates and cash holdings are positively associated with the change in the level of foreign earnings retained abroad due to the lock-out effect of the U.S. international tax system in the year of the one-time tax holiday. Furthermore, consistent with prior research (Blouin and Krull 2006, Clemons and Kinney 2007), I find that firms repatriating under the tax holiday significantly increased their share repurchases. Finally, consistent with expectations I find that the change in the U.S. repatriation tax rates were positively associated with the change in permanently reinvested earnings in the year following the tax holiday suggesting that firms immediately began deferring the repatriation of their foreign earnings due to the lock-out effect of the U.S. international tax system. Contrary to expectations, I find no significant association between the change in permanently reinvested foreign earnings and the change in cash holdings. A potential explanation for this result is that cash holdings are measured as total cash holdings. Total cash holdings include both foreign and domestic cash holdings of the U.S. parent corporation. I expect that even if cash holdings increase in the foreign subsidiary, the increases in cash holding abroad would have at least been partially offset by decreases in domestic cash holdings to fund share holder distributions. Although not obtained in the year following the tax holiday, I expect that firms may have still



increased their cash holdings in foreign jurisdictions. I plan to investigate this expectation in future research.

This study makes several contributions. First, it provides empirical support for De Waegenaere and Sansing's (2006) theoretical model which predicts that firms will have accumulated foreign earnings abroad in cash before and after the one-time tax holiday due to the lock-out effect of the international tax system. Second, it supplements the findings of prior research (Blouin and Krull 2006, Clemons and Kinney 2006) by suggesting that firms not only increased their share repurchases in the year of the tax holiday but also in the year following the one-time tax holiday provided by the American Jobs Creation Act of 2004. Third, the findings of this study will be useful to regulators and policy makers in assessing the effectiveness of the one-time tax holiday for repatriations provided under the American Jobs Creations Act of 2004.

## CHAPTER IV

### CONCLUSION

This dissertation is composed of two essays evaluating the American Jobs Creation Act of 2004. The American Jobs Creation Act of 2004 was intended to stimulate the economy by expediting the repatriation of foreign earnings and requiring that those repatriations be invested in domestic operations. The first essay investigates (1) who repatriated foreign earnings under the provisions of the Act, (2) why firms repatriated and (3) what the firms did with the repatriated funds. The first essay identifies 364 firms that repatriated approximately \$283 billion under the Act. The only significant increase in expenditures for the repatriating firms was for stock repurchases, an expenditure specifically prohibited under the Act. Firms appear to have repatriated foreign earnings to take advantage of the tax savings without achieving the Act's intended objective of increasing domestic investment. Firms' failure to use the repatriated cash to increase domestic reinvestment appears to be associated with two circumstances: (1) the firms lacked domestic growth opportunities and (2) they could comply with the domestic investment requirements of AJCA without actually increasing investments in domestic operations.

The second essay builds on recent research that evaluates the lock-out effect of the U.S. international tax system. The second essay studies the factors associated with the lock-out effect of the U.S. international tax system. Recent evidence suggests that firms that have reached their optimal level of investment in foreign operations will accumulate foreign earnings abroad in financial assets to avoid recording the associated

U.S. tax liability. However, prior research has not disentangled the difference between firms that permanently reinvest their foreign earnings for reinvest into operations versus firms that classify their foreign earnings as permanently reinvest to indefinitely defer the recognition of the associated U.S. tax liability. The one-time tax holiday for repatriations provided the American Jobs Creation Act of 2004 provides an interesting opportunity in which to evaluate the lock-out effect of the U.S. international tax system. Using a hand-collected sample of firms that repatriated under the one-time tax holiday, I find that the firms were classifying their foreign earnings as permanently reinvested to avoid recognizing the associated U.S. liability before and after the one-time tax holiday. Also, during the tax holiday firms brought back significant amounts of cash previously classified as permanently reinvested foreign earnings suggesting that the earnings were not retained abroad for foreign reinvestment. The results of essay two are consistent with theoretical predictions that firms repatriating under the Act classified their foreign earnings as permanently reinvested to avoid recognizing the associated U.S. tax liability. Collectively, my results from essay two suggest that firms held significant amounts of foreign earnings abroad in cash due to the lock-out effect of the U.S. international tax system and repeated the behavior immediately following the one-year tax holiday provided by the Act.

## REFERENCES

- Altshuler, R. and T. Newlon. 1993. The Effects of U.S. Tax Policy on the Income Repatriation Patterns of U.S. Multinational Corporations. *Studies of International Taxation*: 77-115.
- Albring, S. M., A. C. Dzurainin, L. Mills. 2005. Tax Savings on Repatriations of Foreign Earnings Under the American Jobs Creation Act of 2004, *Tax Notes*, 108(7), August 8: 665-69.
- Blouin, J. L. and L. K. Krull. 2006. Bringing it Home: A Study of the Incentives Surrounding the Repatriation of Foreign Earnings Under the American Jobs Creation Act of 2004. Working paper, University of Texas.
- Bryant-Kutcher L., D. Guenther, and L. Hersrud. 2007. "Taxes and Investment Opportunities: Valuing Permanently Reinvested Foreign Earnings." Working paper, University of Oregon.
- Clausing, K. A. 2005. Tax Holidays (and Other Escapes) in the American Jobs Creation Act. *National Tax Journal* 58(3): 331.
- Clemons, R. and Kinney M. 2006. The Who, Why and What of the One-time Tax Holiday for Repatriations provided by the American Jobs Creation Act of 2004. Working paper, Texas A&M University.
- De Waegenaere, A. M. and R. C. Sansing. 2006. Taxation of International Investment and Accounting Valuation. Working paper, Dartmouth University.
- Desai, M. A., C. F. Foley, et al. 2001. Repatriation Taxes and Dividend Distortions. *National Tax Journal* 54(4): 829.

- Foley, C., J. Hartzell, S. Titman, and G. Twite. 2007. Why do Firms Hold so much Cash? A Tax-Based Explanation. *Journal of Financial Economics* 86(3): 579.
- Gravelle, J. G. 2005. The 2004 Corporate Tax Revisions as a Spaghetti Western: Good, Bad, and Ugly. *National Tax Journal* 58(3): 347.
- Hartman, D. G. 1985. Tax Policy and Foreign Direct Investment. *Journal of Public Economics* 26: 107-121.
- Krull, L. K. 2004. Permanently Reinvested Foreign Earnings, Taxes, and Earnings Management. *The Accounting Review* 79(3): 745.
- Scholes, M., M. Wolfson, M. Erickson, E. Maydew and T. Shevlin. 2005. *Taxes and Business Strategy: A Planning Approach*. 3<sup>rd</sup> edition. Upper Saddle River, NJ: Prentice Hall.
- Simpson, G. R. and R. Wells. 2003. Dueling Tax Cuts: Firms Accused of Using Shelters Lobby U.S. to Repatriate Funds. *Wall Street Journal* (May 19): A-2.
- Slemrod, J. 1992. Do taxes matter? Lessons from the 1980s. *American Economic Review Papers and Proceedings* (May): 250-56.
- Sullivan, M. 2004. Data Show Dramatic Shift of Profits to Tax Havens. *Tax Notes* 104 (September 13): 1190-200.
- U.S. Department of the Treasury. 2005. Treasury and IRS Announce Guidance on Repatriation of Foreign Earnings under the American Jobs Creation Act. Notice 2005-38, 2005-6 IRB 1.

## VITA

Name: Roy Clemons

Address: Department of Accounting  
Mays Business School  
460 Wehner Building  
Texas A&M University  
College Station, Texas 77843-4353

Email Address: rclem467@hotmail.com

Education: B.S., Economics, West Virginia University, 1991  
M.S., Resource Economics, West Virginia University, 1995  
M.A.S., Accounting, West Virginia University, 2000  
Ph.D., Texas A&M University, 2008