Trends in the Shifting of Resources by U.S.-Based Multinational Companies

Andrew Brajcich
Gonzaga University

Dan Friesner
North Dakota State University

Matt McPherson
Gonzaga University

The U.S. has one of the highest statutory corporate tax rates among economically developed countries. Corporate officers are under pressure to minimize their company's effective tax rate and tax practitioners have developed sophisticated international structures to facilitate their clients' needs. Common wisdom among multinational corporations (MNCs) is to utilize low-tax jurisdictions to reduce overall tax expense. Concerns of an exodus of U.S. capital to low-tax foreign jurisdictions have led to much debate in the halls of Congress on the U.S. taxation of MNCs. This study analyzes the extent to which MNCs make use of low-tax jurisdictions and considers many non-tax factors that may influence investment abroad, including business climate and economic activity. We find that tax rates do influence where MNCs shift income, but to a limited extent and only after foreign operations are established.

INTRODUCTION

The United States taxes its citizens, businesses and (non-citizen) residents on a worldwide basis. Regardless of whether the income of a U.S. taxpayer is earned inside or outside of the U.S., it will be subject to tax by U.S. authorities. Income earned in a foreign jurisdiction may likewise be subject to tax by a foreign government. In an effort to alleviate the double taxation on foreign income and aid U.S. companies in competition with foreign companies (who may be subject to only a single incidence of income tax), U.S. tax law offers a credit against U.S. tax for foreign taxes paid on the same income, within certain limitations. Generally, a credit is a dollar-for-dollar reduction in tax liability. Any foreign tax paid in excess of U.S. tax liability on foreign income is not creditable against U.S. tax immediately, but may be carried over to preceding or subsequent tax years. Thus, some argue this foreign tax credit represents a shifting of tax revenue from the U.S. Treasury to foreign government coffers.

At one end of the jurisdictional spectrum is the tax on worldwide income, as explained above. At the opposite end is what is known as territorial jurisdiction. In a pure territorial jurisdiction, only income earned within the borders of country is subject to tax by that country. While this approach may seem intuitively fair, the source of income can be easily manipulated by taxpayers in so that income is sourced beyond a territory. This is particularly true with respect to source of income rules found in the U.S. Further, while the U.S. asserts a worldwide tax jurisdiction as a baseline, the Internal Revenue Code

(IRC) offers multiple exceptions that in effect result in a hybrid jurisdiction. Similarly, while other jurisdictions may begin with a territorial basis, they often institute multiple exceptions that expand jurisdiction beyond their territory and the result is likewise a hybrid jurisdiction.

As competition for capital investment tightens in our increasingly globalized economy, politicians have called for tax reform on many levels. Some politicians (typically Democrats) would like to see the elimination of some exceptions found in the IRC resulting in an expanded tax base over foreign-source income. Concomitantly, other politicians (usually Republicans) have called for a move to a territorial tax jurisdiction to allow U.S.-based companies better compete with foreign rivals. Regardless of what compromise (or lack thereof) results in the halls of Congress, global companies based in the U.S. view these variations in tax rates across jurisdictions as an opportunity to reduce their overall tax expense. As additional motivation, some jurisdictions have actively sought foreign investment through reduced tax rates or targeted tax incentives. Others have found a niche as "tax havens" (Blanco & Rogers, 2012).

Given the relatively high statutory tax rates in the U.S. when compared to other countries, one might expect to see U.S.-based multinational companies (MNCs) shifting income from the U.S. to jurisdictions with lower tax rates. Concerns about the exodus of capital from high to low tax jurisdictions follow, albeit some studies have found these concerns to be misplaced (Hong & Smart, 2010). Nonetheless, corporate managers argue that they are forced to consider income-shifting strategies because hefty U.S. tax burdens deplete profits (Klassen & Laplante, 2012a). Previous studies have used information as presented on company financial statements to conduct their analyses, most notably Dyreng and Lindsey (2009), which found U.S.-based MNCs operating in foreign tax havens paid more tax on foreign income in some instances.

Over time, differential tax rates across jurisdictions create an additional policy issue. U.S.-based multinational companies are able to sequester their foreign income through the use of foreign subsidiaries. Generally, having U.S. shareholders is not sufficient contact with the U.S. to subject the foreign corporation to U.S. tax jurisdiction. As a result, U.S.-based MNCs are able to keep foreign income beyond the reach of the U.S. tax collector, and in some circumstances are able to shift income from U.S. taxpayers to foreign corporate subsidiaries. The impacts of such practices were explored in Shackelford (1993) and more recently Klassen and Laplante (2012b). This is particularly true when the primary income-generating assets of a business are intangibles, as is often found in the software and pharmaceutical industries. The transfer of patent to a foreign corporation is much easier than moving a manufacturing facility. Methods for maximizing profits (and in the long run, shareholder wealth) from intellectual property by using tax advantageous jurisdictions have been analyzed in Wiederhold (2011). It is important to note, though, that international tax planning is nothing new and the Internal Revenue Service (IRS) and Congress have instituted many tools to limit the expatriation of income from the U.S., including what is commonly referred to by tax practitioners as "Subpart F," as well as the transfer pricing rules, among others. Nonetheless, there still remains ample opportunity for businesses to limit their tax exposure.

This paper attempts to explore where U.S.-based MNCs retain foreign income, and whether the tax rates are a driving force in the location of foreign income holdings. Unlike the previous literature, which primarily uses firm-level financial statements and (short-run) measures of profit, this paper adopts a country-level perspective and uses more comprehensive (long-run) financial measures. More specifically, a gravity model framework is used to empirically identify the determinants of multinational income flows, including many non-tax factors that may influence investment abroad such as business climate and economic activity. The use of this framework provides an important contribution to the international finance literature for two reasons. First, firm-level data is useful in analyzing the decisions of particular groups of firms or in specific industries. However, the global effectiveness of IRC policies cannot be evaluated empirically unless one examines resource flows across all US based firms to their foreign subsidiaries. In other words, effective tax policies account for net inflows or outflows of income from the U.S. to different countries, not the actions of specific firms in specific foreign locations. Second, while some foreign subsidiaries may simply be "shell corporations" designed solely to take advantage of existing tax regulations, many firms initiate and operate legitimate productive activities within a MNC

context. For these firms, a short run measure of profitability may not appropriately capture all of the long-run and institution-specific factors that lead the U.S. firm to establish a subsidiary in that location. Therefore, an appropriate evaluation of U.S. tax policies must account for a much broader set of incentives than earning profit in a single year.

The remainder of the paper process as follows. First, we posit an empirical methodology, including model specification and our global measures of income shifting, which can be used to evaluate our research hypothesis. Next, the sources of data are described and basic descriptive statistics are provided. After a discussion of results, major implications and limitation of the study are presented in the conclusion.

EMPIRICAL METHODOLOGY

Assumptions and Measures of Resource Shifting

This paper analyzes the ability of the typical U.S. corporation to accrue gains from the establishment of a subsidiary (a U.S. controlled foreign corporation, or CFC), and to determine whether those flows are caused by differences in tax rates across political jurisdictions. Because these corporations face the same tax schedule in the U.S., the primary explanatory variable of interest is the tax rate in the foreign country. We operate under the premise that most, if not all, countries have different combinations of tax rates and (non-tax-related) institutional structures. Additionally, we assume that U.S. corporations, whose productive activities span an array of different industries, have different motivations (and different degrees to which those motivations influence corporate decisions) to establish subsidiaries in different countries. Third, we assume that evaluations of country-level policies (which apply to all firms) should be evaluated at the level of the country, not at the level of the firm. This requires aggregating firm-level data within a country. Taken cumulatively, the mix of tax and non-tax-related institutional structures, combined with the diverse set of incentives inherent across firms, makes it difficult to develop any reasonable conjectures about the direction and magnitude of the relationship between tax rates and resource shifting, even when accounting for other important covariates. Hence, this analysis operates under the (conservative) null hypothesis of no mean causal relationship between a foreign country's tax rates and the typical (or mean) U.S. corporation's decision to locate a subsidiary (and divert additional resources to the subsidiary) in that foreign country. For simplicity, we apply an analogous null hypothesis to evaluate the effects of other covariates on the decision to divert resources to CFCs.

A crucial issue is how to quantify the gains from establishing U.S. CFCs. As noted earlier, previous studies examine firm level accounting statements in an effort to directly quantify corporate income that was "shifted" from the parent company to the CFC. This is problematic for several reasons, most notably that the gains from a single income statement (whether tax expenses or net income accrues in a given year) only partially characterize the gains from the establishment of a CFC. Location decisions designed to access to specific factor markets, to reduce transportation/shipping costs or access to different (less stringent) regulatory structures all provide gains to the parent company which are realized in different amounts at different periods of time. Moreover, different firms accrue these gains at different rates over time. None of these gains are captured appropriately using a single net income and/or tax expense line item drawn from a single financial statement.

To appropriately capture these gains, it is necessary to identify a more global metric; namely, the opportunity cost of productive resources. Every dollar invested in a CFC in one country implies a flow of income to the parent company in each year that the CFC remains in that country. In any given time frame, this choice also precludes the parent company from investing those same resources in another country and capturing a different flow of income back to the parent company. Hence, a U.S. corporation that increases the size and/or number of CFCs in a specific foreign country must be recognizing some positive gain (whether in the short run or the long run) from these decisions. Aggregating to the level of the country, the larger the number and/or size of CFCs in a given country indicates that some income shifting potential must be occurring for the parent company to allow productive resources to accumulate in the foreign country. A count variable indicating the number of CFCs in a foreign country is, therefore, a

straightforward measure of the extent to which the *potential* for resource shifting occurs. We measure the size of CFCs, and by extension the monetary value of the magnitude of the *potential* for resource shifting, as the natural logarithm of real average assets per CFC in any time period. The use of the natural logarithm not only reduces the potential for heteroskedasticity in our empirical estimates, but also allows us to interpret the dependent variable in percentage change format. A rate of change in the real average assets of a typical CFC would most usually be accomplished by retaining any earnings (net of taxes) produced by the CFC, which accumulate over time as assets. In essence, these are resources that have been "shifted" out of the U.S. and accumulated in a foreign country, thereby precluding the levy of U.S. taxes on the earnings from those resources until such time as they are repatriated to the parent corporation.

Econometric Framework

When measuring flows of resources across political jurisdictions, a common empirical framework used by international financial economists is the gravity model (Tinbergen, 1962; Poyhonen, 1963; Krugman and Obstfeld, 2006; pp. 10-17). In its simplest framework, the model can be expressed as:

FIGURE 1
BASIC GRAVITY MODEL EQUATION

$$S_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 D_{it} + u_{it}$$

where S is a measure of resource shifting potential from a single country (in our case, the U.S.) to foreign country i; i =1,…,n indicates the number of foreign countries in which resource shifting to (or from) the U.S. might occur; t = 1,…,T indicates time; GDP represents country i's (real) gross domestic product; D is a measure of "distance" between the U.S. and country i; u is a white noise error term; and the βs are parameters to be estimated.

This general form of the gravity model has a straightforward interpretation. Countries with higher levels of overall economic activity are more likely to participate in trade activities, which presumably lead to greater resource flows between countries. Thus, the expected sign of β_1 is non-negative. Firms that are closer in "distance", whether geographically, culturally, politically or economically, are also more likely to trade, which further increases resource flows across the two countries (Boisso and Ferrantino, 1997). The primary difficulty in specifying a gravity model lies in appropriately defining the term "distance". This paper adopts an empirical specification of "distance" that is sufficiently general to include a wide array of distance variables (Bandyopadhyay, Coughlin and Wall, 2008):

FIGURE 2
DISTANCE EQUATION

$$D_{it} = \gamma + \sum_{t=1}^{T-1} \tau_t \delta_t + \sum_{j=1}^{J} \varphi_j C_i + \sum_{h=1}^{H} \mu_h Z_{it}^h + \nu_{it}$$

where δ is a series of T-1 dummy variables (with one variable omitted to prevent perfect multicollinearity) to proxy for all time-specific changes in distance; C is a series of j = 1,…,J cross-sectional variables to capture the time invariant determinants of distance between the U.S. and country i, including but not limited to tax rates in the foreign country as well as any (fixed effect) measures of geography; Z^h is a collection of h = 1,…,H variables that capture all other important causal determinants of resource flows; ν is a white noise error term and the remaining symbols are parameters to be estimated or are as defined previously. An estimable version of the gravity model is obtained by substituting Figure 2 equation into the Figure 1 equation to achieve a reduced form equation:

FIGURE 3
ESTIMABLE GRAVITY MODEL EQUATION

$$S_{it} = \alpha + \beta_1 GDP_{it} + \sum_{t=1}^{T-1} \psi_t \delta_t + \sum_{j=1}^{J} \phi_j C_i + \sum_{h=1}^{H} \lambda_h Z_{it}^h + \epsilon_{it}$$

where α, ψ, ϕ and λ are parameters to be estimated; ϵ is a white noise error term; and all other variables and symbols are as defined previously.

The empirical technique used for the estimation of the Figure 3 equation is a final methodological consideration. To identify an empirical technique, one must first identify the dependent variable which is used to characterize international resource flows. Our first dependent variable, number of US CFC, is a count variable (or integer). This variable was chosen because it represents the pervasiveness of U.S. MNC activity, regardless of the magnitude of assets included in that activity. A common econometric approach used to estimate equations with an integer dependent variable is negative binomial regression (Greene 2000, pp. 884-893). Under the framework imposed by the negative binomial model, the conditional mean for the dependent variable is expressed as:

FIGURE 4
DEPENDENT VARIABLE CONDITIONAL MEAN

$$E[S|GDP, Z, \delta, C] = X_{it} = \alpha + \beta_1 GDP_{it} + \sum_{t=1}^{T-1} \psi_t \delta_t + \sum_{j=1}^{J} \phi_j C_i + \sum_{h=1}^{H} \lambda_h Z_{it}^h$$

It then follows that the probability of S_{it} given the regressors is:

FIGURE 5
PROBABILITY OF ESTIMABLE GRAVITY MODEL

$$f[S|GDP, Z, \delta, C] = \frac{\Gamma(\omega + S_{it})}{\Gamma(S_{it} + 1)\Gamma(\omega)} p_{it}^{S_{it}} (1 - p_{it})^{\omega}$$

where $\Gamma(\cdot)$ represents a gamma function, ω is a parameter governing distributional dispersion and $p_{it} = \frac{X_{it}}{X_{it}+\omega}$. Figure 5 equation facilitates the construction of a likelihood function, which can be used to estimate the model's parameters.

Our second dependent variable is the natural logarithm of the real value of average assets per US CFC. The value of examining a variables based on real, average assets per US CFC is that it gives a sense of the magnitude of resources that invested in a given country by U.S. MNCs, rather than simply the number of foreign subsidiaries in a given country. Because this dependent variable, especially where MNC activity is aggregated across countries, is effectively unbounded, we do not expect issues of truncation or censoring of the dependent variable to be of significant concern. Hence, the Figure 3 equation can be estimated directly with ordinary least squares.

The framework utilized in Figure 3, combined with the inclusion of variables which appropriately characterize GDP and distance provide for a direct examination of US CFC creation and the rate of CFC asset accumulation in foreign countries. As noted earlier, for each covariate, taken collectively or individually, we operate under the null hypothesis that there is no marginal impact of that covariate on the dependent variable. In the instance the null hypothesis is rejected, we may evaluate the sign and magnitude of the impact. More specifically, our primary null hypothesis is that there is no relationship between a foreign country's tax structure and the use of CFCs to shift income out of the U.S. Similarly,

the significance of the GDP coefficient can be used to test whether income shifting is occurring in more or less developed nations. The statistical significance, sign and magnitude of the time dummy variables can be used to assess whether there were any differences in the dependent variable over time. The statistical significance, signs and magnitudes of the geographic dummy variables can be used to evaluate which geographic areas were able to attract US CFCs.

In both specifications, the potential for heteroskedasticity is reduced by transforming all quantitative variables using the natural logarithm or, in a few instances, expressed as proportions. Thus, many of the parameter estimates can be interpreted as, or similar to, elasticities. All statistical analyses were conducted using SAS Version 9.3. All hypothesis tests use standard (5 percent) significance levels, although results using 10% significance levels are also reported for the sake of generality.

DATA

This manuscript examines income shifting to CFCs using data culled from IRS Form 5471, *Information Return of U.S. Persons With Respect To Certain Foreign Corporations*, which is used by U.S. corporations to report the activities of foreign corporate subsidiaries controlled by the U.S. parent.[1] The U.S. taxpayer is required to report information with respect to the results of operations, location and any transactions between related parties. We collected information from these forms over the years 2004, 2006 and 2008. The time frame for the analysis was chosen because it overlaps with the American Jobs Creation Act of 2004, which provided a one-time incentive for MNCs to repatriate earnings back to the U.S. without incurring a substantial tax penalty on those earnings. This implies that our study periods denotes a time where resource shifting is *least likely to occur*. Any empirical evidence of resource shifting potential, therefore, is likely to be conservative in nature. Monetary values compiled by the IRS are in U.S. dollars and the authors use the U.S. Bureau of Labor Statistics' producer price index for all urban consumers to convert monetary values to real dollars for the year 2004. The IRS data allows us to generate both of our dependent variables: the number of CFCs in a given country and the natural logarithm of the average assets held by U.S.-controlled subsidiaries in real U.S. dollars for the year 2004.

The IRS data also includes data on taxes paid for CFCs in each foreign country. Data on corporate tax rates in a given jurisdiction was collected from the international accounting firms Deloitte (2012) and KPMG (2011). The rates can be included in the gravity model directly as a proportion, and can also be disaggregated into a series of binary variables: no tax, greater than 0% to 10%, greater than 10% to 20%, greater than 20% to 30%, and greater than 30%. The highest U.S. statutory corporate rate is 35%; hence, taxpayers operating in jurisdictions included in the first four categories may have an incentive to shift resources to those jurisdictions. It is also possible that the magnitude of this incentive decreases as the differential between the foreign and U.S. tax rate decreases.

Data are also collected from the World Bank, which permit us to account for economic activity, as measured by GDP in a given jurisdiction. As noted earlier, we transform this value by converting nominal GDP into real 2004 dollars, and subsequently applying the natural logarithm transformation to minimize the likelihood of multicollinearity. To measure economic distance, we use macroeconomic indicators of business climate published by the World Bank; namely imports and exports as a fraction of GDP, which can be used to characterize a foreign country's reliance on international trade. Additionally, to capture a country's reliance on specific types of trade, we capture the proportion of international trade in services.

In order to provide a reference level of MNC activity in a foreign jurisdiction, we use data on the number of foreign corporate subsidiaries not controlled by a U.S. parent. Likewise, we use the natural logarithm of the real 2004 U.S. dollar value of profit after taxes to arrive at subsidiary earnings. Foreign subsidiary liquidity is derived from the ratio of cash held to total average assets in the foreign jurisdiction.

Another revenue management tool used by MNCs to reduce their overall effective tax rate is transfer pricing. While most taxing authorities worldwide impose limitations on a MNC's ability to manipulate transfers between commonly controlled companies, MNCs remain in a position to set prices to their advantage and shift income to some degree. To account for this we construct two variables. First, we take the natural logarithm of the ratio of a foreign subsidiary's receipts to payments with respect to foreign

companies. This variable aims to quantify the use of transfer pricing between the foreign subsidiary and other non-U.S. jurisdictions. Second, we use the natural logarithm of the ratio of receipts to payments to U.S. companies controlled by the U.S. parent to measure transfer pricing between the foreign subsidiary and the U.S.[2]

Heritage Foundation (http://www.heritage.org/index/) data are used to evaluate business climate, and by extension many of the economic and institutional characteristics of foreign markets. Specifically, the trade freedom, government freedom, investment freedom, financial freedom, and property rights freedom indices are utilized to measure political and economic freedom in each of the three years of the study.

Geographic distance and time are the two remaining measures of distance seen in the literature (Bandyopadhyay, Coughlin and Wall, 2008; McPherson, Trumbull and Friesner, 2010). Distance is accounted for through the use of dummy variables based on the geographic region in which a specific country is located. Time is accounted for through the use of dummy variables for each year included in the study. To reduce any potential multicollinearity, we omit one geographic variable and one time variable, which together serve as our baseline to evaluate other dummy variables.

We use 216 observations from three years: 2004, 2006 and 2008. As each year contains information on 70 to 74 countries, the panel is unbalanced. The sample is summarized in Table 1, which provides the names, brief descriptions and descriptive statistics for each of the variables included in our estimated gravity models. With respect to tax rates, roughly five percent of the countries in our population had no tax, less than two percent had a tax rate greater than 0% and less than or equal to 10%, less than seventeen percent had a tax rate greater than 10% and less than or equal to 20%, approximately forty-seven percent had a tax rate greater than 20% and less than 30%, and twenty-nine percent had a tax rate greater than 30%. Looking at geography, 7% percent of the countries in our population were located in Africa, 20% percent are located in Asia, 6% percent in the category "Other Western Hemisphere", 3% percent in Oceania and the largest sample was from Europe at 42%.

Over the time period of our study (2004, 2006 and 2008) we see stable growth in the mean values for real GDP, real firm profits and real firm average assets, with the largest increase occurring between 2006 and 2008. The mean number of foreign subsidiaries also increased over this time frame, regardless of whether the subsidiaries were owned by a U.S parent or otherwise. While the ratio of receipts to payments to foreign companies remained stable over the three years, payments to U.S. companies declined. This could be explained by the 2004 cash repatriation holiday in the U.S., as examined in Brajcich, McPherson and Friesner (2013). Trade activity and the business freedom index remained relatively stable over the period.

EMPIRICAL RESULTS

Table 2 contains the results for our negative binomial to predict the determinants of total U.S. CFCs in a country. Consistent with our previous discussion, the negative binomial model is estimated twice: once where the foreign tax rate is included as a single variable (proportion), and once where the tax rate is disaggregated into a series of binary variables based on the magnitude of the tax rate. As noted by the overall chi-square tests of model fit, both regressions explain a significant proportion of variation U.S. CFCs in a country. Additionally, the omitted geographic variable is Europe while the omitted time variable is 2004. As a result, CFCs located in Europe during 2004 function as the baseline for our results comparison.

First, examining the time variables indicates that time has does not play a role in the shifting of income at a statistically significant level in either model. However, in both models GDP plays a positive and significant role in determining the number of U.S. CFCs. Moreover, the magnitude of the coefficient estimate (0.1765 in Model 1; 0.1605 in Model 2) is relatively similar across specifications. This indicates that as a foreign country's GDP increases and , the country attracts more U.S.-based subsidiaries (when holding certain covariates constant), which may represent a shifting of resources (and by extension productive income and assets) by the U.S.-based MNC through its incorporation of foreign operations.

Our examination of the impact of differential tax rates across countries on investment and income-shifting yields interesting results. In both models, foreign tax rates significantly impact the number of U.S. CFCs in a foreign country. In Model 2, the tax rate is included as a single (proportional) variable. Its coefficient estimate is positive (0.6261) and significant at the 5 percent level. This implies that as tax rates in the foreign country increase, so, too, does the number of CFCs. However, a different relationship appears when disaggregating tax rates into binary variables. In Model 1, only one tax rate variable (indicating foreign countries that do not tax CFCs) is statistically significant, and its coefficient estimate is now negative (-0.4494), implying that jurisdictions with zero tax rates had fewer total U.S. CFCs than the omitted tax bracket (between 20 and 30%). On the surface, one might expect that there would be a positive effect. However, considering zero tax jurisdictions, *a priori*, yielded the most tax sheltering benefit, the benefits may already have been exploited. In other words, foreign operations may already be established. Once the lowest tax areas have been utilized, other tax jurisdictions, which higher tax rates may now appear more attractive, and US CFCs may locate in these positive tax jurisdictions as well.

Like tax rates, geography plays an important role in CFC location decisions. Consider first the estimates contained in Model 1. Compared to Europe, the geographic regions of Latin America (coefficient estimate: 0.2466), Africa (coefficient estimate: 0.1856), Asia (coefficient estimate: 0.3000) and Other Western Hemisphere (coefficient estimate: 0.4004) experience significantly greater U.S. CFC formation (significant at the 5 level or better). Oceania is the only geographic region which is not statically different than Europe. This is consistent with the use in practice of certain tax-friendly jurisdictions, e.g. Singapore, as a place to establish holding companies for regional operations. (Keong, 2009). In Model 2, the estimated coefficients for Latin America (coefficient estimate: 0.2272), Asia (coefficient estimate: 0.2696) and Other Western Hemisphere (coefficient estimate: 0.2831) remain positive and significant at the 5 percent level; however, the coefficient for Africa is no longer statistically significant at conventional levels. Since the only difference between Model 1 and Model 2 is the treatment of foreign tax rates, this implies that the positive and significant estimate for the tax rate variable in Model 2 might be driven largely by African nations.

Among firm-related distance variables, the LPAYFOR variable's estimate is statistically insignificant from zero in both models. However, the estimates for the LPAYDOM variable are positive, statistically significant and highly consistent across model specifications (Model 1 coefficient estimate: 0.0411, Model 2 coefficient estimate: 0.0481; prob. < 0.05 for both estimates). This implies that the ability to transfer price increases the likelihood that a U.S. corporations will establish a larger number of subsidiaries in a foreign country.

Focusing on the effect of business climate on US CFCs, two variables positively affect the number of U.S. CFCs: investment freedom (Model 1 coefficient estimate: 0.0068, Model 2 coefficient estimate: 0.0053; prob. < 0.05 for both estimates) and the natural logarithm of number of non-US CFCs in a country (Model 1 coefficient estimate: 0.5356, Model 2 coefficient estimate: 0.5436; prob. < 0.05 for both estimates). The magnitudes of the estimates across specifications are very similar, and the impact of these variables is as expected. US companies are attracted to foreign countries which exhibit more investment freedom, holding the other specified regressors constant. Further, a favorable business climate would attract U.S. companies to locate CFCs in that foreign nation.

Table 3 contains our results using real assets per US CFC in a country as the dependent variable. As before, we estimate two models: Model 1 disaggregates the foreign corporate tax rate into discrete brackets, while Model 2 includes the tax rate as a single proportional variable. In both models, the F-statistic for the regression is significant at the 1 percent level, the R-square values exceed 70 percent (Model 1: 74.24 percent, Model 2: 72.97 percent), and the Adjusted R-square values are close to the corresponding R-square value (Model 1: 70.86 percent, Model 2: 69.89 percent). All of these values indicate good model fit.

The results in Table 3 deviate substantially from those contained in Table 2. One notable difference is that economic activity variables play a more prominent role in shaping the size of CFCs as measured by the natural logarithm of real average assets per CFC. More specifically, the coefficient estimates for the natural logarithm of real GDP (Model 1 coefficient estimate: 0.3460, Model 2 coefficient estimate:

0.3548), the natural logarithm of the foreign population (Model 1 coefficient estimate: -0.21389, Model 2 coefficient estimate: -0.2402), the proportion of trade in services (Model 1 coefficient estimate: 4.1276, Model 2 coefficient estimate: 3.7389), and the log of the real value of the average foreign exchange rates (Model 1 coefficient estimate: 0.0538, Model 2 coefficient estimate: 0.0521) are all statistically significant at the five percent level.

Foreign tax rates have a slightly different impact on the size of CFCs (as measured by assets accumulation) than the number of CFCs in a foreign country. In Table 3, Model 1, there is one significant tax-related coefficient estimate, which is for countries whose corporate tax rates are zero. However, and unlike the results from the analogous model (Model 1) in Table 2, the coefficient estimate for the TAXR0 variable in Table 3, Model 1 is now significant and *positive*, rather than negative. Thus, while foreign countries with no corporate income taxes attract a smaller number of firms (Model 1, Table 2), those MNCs that do establish subsidiaries there tend to accumulate a larger number of real average assets per CFC (Model 1, Table 3). In Model 2 of Table 3, we find that the coefficient estimate for the overall tax rate (when measured as a proportion) is not significantly different from zero. Hence, marginal changes in tax rates above 0 do not appear to cause asset accumulation in CFCs.

The results in Table 3 also suggest that geography plays a reduced role in a company's decision to invest in a foreign jurisdiction, as compared to the results in Table 2. The African region has a statically significant, positive effect in both models (Model 1 coefficient estimate: 0.6029, Model 2 coefficient estimate: 0.6145; prob. < 0.05), as compared to the rest of the world. No other geographic areas are significant from zero at the five percent level. This comes as a surprise to the authors given the well-known abundance of tax-friendly jurisdictions in the Caribbean such as the Cayman Islands (Government Accounting Office, 2008). However, increased enforcement efforts by the IRS may be a possible explanation for the lack of statistical significance in the Other Western Hemisphere variable (Foley, 2009).

In both sets of equations contained in Table 3, the LPAYFOR estimates are statistically insignificant from zero in both models. In both Model 1 and Model 2, the estimates for the LPAYDOM variable are statistically significant and highly consistent across model specifications (Model 1 coefficient estimate: -0.0818, Model 2 coefficient estimate: -0.0827; prob. < 0.05 for both estimates). Thus, the ability to transfer price impacts the decision to accumulate resources in foreign countries. However, and unlike the results in Table 2, the estimates for LPAYDOM in Table 3 are negative, rather than positive. This implies that the ability to transfer price decreases the incentive to accumulate productive resources in a CFC. This result makes sense, because if the firm can practice transfer pricing, the MNC has a means to bring financial resources back to the parent company without having to pay extremely high taxes. Hence, there is no reason to store these resources abroad unless they are actually required for productive activities within the CFC.

Tables 2 and 3 show similar results regarding the impact of the number of non-US based CFCs in a country (Model 1 coefficient estimate: 0.4186, Model 2 coefficient estimate: 0.4135; prob. < 0.05 for both estimates). Again, US companies are attracted to foreign countries which exhibit a favorable business climate would attract both US and non-US companies. One interesting difference between the results in Tables 2 and 3 was that in Table 2, greater investment freedom was associated with a larger number of CFCs in a foreign country. In Table 3, the coefficient estimate for investment freedom is statistically insignificant in both models. However, the coefficient estimates for financial freedom are positive and significant in both models in Table 3 (Model 1 coefficient estimate: 0.01444, Model 2 coefficient estimate: 0.0137; prob. < 0.05 for both estimates). Again, these results make sense. The decision to locate a CFC in a foreign country is an investment decision. But once a CFC is established, the decision to accumulate assets in that CFC is governed not so much by investment freedom, but by conditions inherent in that country's financial markets which are proxied in our data by the financial freedom index.

CONCLUSIONS

The U.S. has one of the highest statutory corporate tax rates among economically developed countries. Corporate officers are under pressure to minimize their company's effective tax rate and tax practitioners have developed sophisticated international structures to facilitate their clients' needs. Common wisdom among multinational corporations (MNCs) is to utilize low-tax jurisdictions to reduce tax expense. Concerns of an exodus of U.S. capital to low-tax foreign jurisdictions have led to much debate in the halls of Congress on the U.S. taxation of MNCs. This study analyzes the extent to which MNCs make use of low-tax jurisdictions and considers many non-tax factors that may influence investment abroad, including business climate and economic activity.

Our primary findings are twofold. First, we find that taxes do, indeed, play a role in MNC decisions to establish subsidiary corporations in foreign countries. However, tax rates only appear to be an incentive when corporate tax rates are zero. In those cases, MNCs tend to establish fewer CFCs, but accumulate greater real average assets in those CFCs. Second, in countries with positive corporate income tax rates, investment decisions and resource accumulation in those countries is driven by other, non-tax factors such as the level of economic development, reliance on international trade, market freedom, the ability to transfer price, and geographic locale.

Two policy recommendations can also be drawn from our work. First, there has been a push in political arenas to change tax laws and regulations in a manner that prevents MNCs from accumulating resources in foreign countries solely as a means to avoid paying corporate income taxes in the U.S. At the same time, policy makers recognize that regulations should not be so strict as to stifle trade and the economic gains that accrue from responsible overseas investment. Our results suggest that this can be done by focusing policy change on i) countries with no corporate income tax, and ii) MNCs who create a small number of CFCs with high asset accumulations. Second, we find evidence suggesting that most international investment is not done with the intent to accumulate assets beyond the reach of the IRS, but rather is done with a legitimate intent to expand production and capitalize on the unique social, economic, geographic and political features of that country. Hence, if there is a need to pursue tax policy reform, it is to deter the deleterious behavior of a few MNCs, and not the average or typical MNC. In fact, our results provide limited evidence suggesting that the typical MNC does not accumulate assets overseas because they can move the assets back to the U.S.-based parent company via transfer pricing. Focusing on other policy reforms rather than jurisdictional corporate income taxation appears to be a more effective approach to ensure that the U.S. collects its intended amount of corporate income taxes.

While our results provide some interesting inferences, they should be viewed with caution. We have examined MNC activities during a time when (due to the "repatriation holiday" created by the 2004 American Jobs Creation Act) firms have a significant incentive cease asset hoarding and return those resources back to the U.S. Further research that replicates our methodology using different time periods may generate different empirical results. Additionally, the use of different measures of resource accumulation may provide additional insights into the means by which MNCs shelter income and other productive resources from the IRS. Similarly, the use of more complex econometric methods, especially when applied to longer panels with a wider array of covariates may yield insights not contained in this manuscript.

1. While the focus of this paper is unique, the data used in this study are similar in nature to that collected by Brajcich, Friesner and McPherson (2013). As such, the variables described in this study, and the composition of Table 1, will generally mimic what is presented in the aforementioned study. Permission has been granted to reproduce this information.
2. Because our measures of income shifting are long run in nature, it is possible to include transfer pricing and short run profitability measures as covariates in the model without fear of creating endogeneity bias.

REFERENCES

Bandyopadhyay, S., Coughlin, C., & Wall, H. (2008). Ethnic networks and U.S. exports. *Review of International Economics,* 16, (1), 199-213.

Blanco, L., & Rogers, C. (2012). Competition between Tax Havens: Does Proximity Matter? *International Trade Journal*, 26, (4), 291-308.

Boisso, D., & Ferrantino, M. (1997). Economic distance, cultural distance, and openness in international trade: Empirical puzzles. *Journal of Economic Integration*. 12, (4), 456-484.

Brajcich, A. M., McPherson, M., & Friesner, D. (2013). Key Determinants of Repatriated Earnings by U.S. Multinational Enterprises. *Multinational Business Review*, 21, (3).

Deloitte (2012). *Deloitte Corporate Tax Rates 2008-2012***.** Retrieved from http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Tax/Taxation%20and%20Investment%20Guides/matrices/dttl_corporate_tax_rates_2008_2012.pdf

Dyreng, S. D., & Lindsey, B. P. (2009). Using Financial Accounting Data to Examine the Effect of Foreign Operations Located in Tax Havens and Other Countries on U.S. Multinational Firms' Tax Rates. *Journal Of Accounting Research*, 47, (5), 1283-1316.

Foley, S., & McGrew, L. (2009). IRS to enhance international tax enforcement efforts. *International Tax Review*, 20, (6), 107.

Government Accounting Office. (2008). Cayman Islands: Business and Tax Advantages Attract U.S. Persons and Enforcement Challenges Exist. *GAO Reports*, 1-57.

Greene, W. (2000). *Econometric Analysis, 4th Ed.* Upper Saddle River, NJ: Prentice Hall.

Hong, Q., & Smart, M. (2010). In praise of tax havens: International tax planning and foreign direct investment. *European Economic Review*, 54, (1), 82-95.

Keong, L. (2009). Go east to Singapore. *International Financial Law Review*, 27, (8), 92-95.

Klassen, K. J., & Laplante, S. (2012a). The Effect of Foreign Reinvestment and Financial Reporting Incentives on Cross-Jurisdictional Income Shifting. *Contemporary Accounting Research*, 29, (3), 928-955.

Klassen, K. J., & Laplante, S. K. (2012b). Are U.S. Multinational Corporations Becoming More Aggressive Income Shifters? *Journal of Accounting Research*, 50, (5), 1245-1285.

KPMG (2011) *Corporate and Indirect Tax Survey 2011*. Retrieved from http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/corporate-and-indirect-tax-rate-survey-2011.pdf

Krugman, P., & Obstfeld, M. (2006). *International Economics: Theory and Policy*, *7th Ed*. Boston, MA: Pearson.

McPherson, M., Trumbull, W., & Friesner, D. (2010). Can foreign-born populations reduce informal trade barriers? An examination of U.S. state level exports to Latin America. *Global Business and Finance Review,* 15, (1), 1-12.

Poyhonen, J. (1963). A tentative model for volume in trade between countries. *Weltwirtschaftliches Archiv,* 90, 91-113.

Shackelford, D. A. (1993). Discussion of The Impact of U.S. Tax Law Revision on Multinational Corporations' Capital Location and Income-Shifting Decisions and Geographic Income Shifting by Multinational Corporations in Response to Tax Rate Changes. *Journal of Accounting Research*, 31, (3), 174-182.

Tinbergen, J. (1962). *Shaping the World Economy: Suggestions for an International Economic Policy.* New York, NY: Twentieth Century Fund.

Wiederhold, G. (2011). Follow the Intellectual Property. *Communications Of The ACM*, 54, (1), 66-74.

APPENDIX

Table 1: Descriptive Statistics

		All Years		2008		2006		2004	
Variable	**Label**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
Income Shifting Variables									
NUSCR	Number of U.S.-Controlled Foreign Corporations (CFCs)	543.2870	730.9519	551.7027	738.7607	545.1667	745.0968	532.4571	718.2987
LNUSCR	ln(Number of U.S. CFCs)	5.5885	1.2234	5.5939	1.2329	5.6113	1.1945	5.5592	1.2593
RASSNO	Real Avg. Assets per US-CFC in 2004 U.S. Dollars	124,139,596.0000	249,795,323.0000	135,393,643.0000	268,892,621.0000	118,759,654.0000	232,616,401.0000	117,776,116.0000	249,092,295.0000
LRASSNO	Ln (RASSNO)	17.8252	1.1503	17.8955	1.1557	17.7942	1.1525	17.7829	1.1555
Economic Activity and Flow Variables									
RGDP	Real GDP	449,305,263,967.0000	791,533,383,927.0000	506,998,239,983.0000	869,248,133,343.0000	434,092,144,096.0000	746,048,660,462.0000	403,963,326,903.0000	757,761,601,939.0000
LRGDP	Ln (Real GDP)	25.6413	1.6554	25.8071	1.6305	25.6231	1.6529	25.4848	1.6911
POP	Country Population	68,719,341.1900	203,508,017.0000	67,947,412.7400	205,790,697.0000	68,941,427.7900	204,420,827.0000	69,306,947.9000	203,084,483.0000
LPOP	ln(Population)	16.5072	1.7601	16.4467	1.8058	16.5475	1.7193	16.5298	1.7763
PTRADE	Proportion of GDP in Trade (Exports + Imports)	1.0092	0.7026	1.0511	0.7197	1.0150	0.7141	0.9590	0.6789
PSTRADE	Proportion of Total Trade in Services	0.2199	0.1138	0.2181	0.1155	0.2182	0.1154	0.2235	0.1118
RAVGFX	Real Value of the Average Exchange Rate	7,056.8700	95,844.4600	311.9357	1,687.6100	399.9407	1,896.9300	21,034.3500	168,296.1500
LAVGFX	ln(RAVGFX)	1.9614	2.6100	1.4930	2.2788	1.9949	2.4455	2.4222	3.0209
Tax Rate-Related Distance Variables									
TRATEP	Corporate Tax Rate in a Country	0.2599	0.0913	0.2523	0.0783	0.2556	0.0961	0.2723	0.0986
TAXR0	Dummy Variable for Countries whose Tax Rate = 0	0.0509		0.0270		0.0556		0.0714	
TAXR1	Dummy Variable for Countries where 0% < Tax Rate <= 10%	0.0185		0.0270		0.0278		0.0000	
TAXR2	Dummy Variable for Countries where 10% < Tax Rate <= 20%	0.1667		0.2027		0.1806		0.1143	
TAXR3	Dummy Variable for Countries where 20% < Tax Rate <= 30%	0.4722		0.5405		0.4583		0.4143	
TAXR4	Dummy Variable for Countries where 30% < Tax Rate <= 100%	0.2917		0.2027		0.2778		0.4000	
Geography-Related Distance Variables									
LATAM	Dummy Variable Identifying Latin and South American Countries	0.2222		0.2162		0.2222		0.2286	
AFRICA	Dummy Variable Identifying African Countries	0.0694		0.0676		0.0694		0.0714	
ASIA	Dummy Variable Identifying Asian and Middle Eastern Countries	0.1991		0.2027		0.1944		0.2000	
WESTHM	Dummy Variable Identifying Other Western Hemisphere Countries	0.0602		0.0541		0.0694		0.0571	
OCEAN	Dummy Variable Identifying Oceania Countries	0.0278		0.0270		0.0278		0.0286	
EUROPE	Dummy Variable Identifying European Countries	0.4213		0.4324		0.4167		0.4143	
Firm-Related Distance Variables									
RPAYFOR	Receipts from Foreign Companies/Payments to Foreign Companies	1.1469	0.7751	1.1662	0.9415	1.1950	0.7487	1.0771	0.5912
LPAYFOR	Ln (Receipts from Foreign Companies/Payments to Foreign Companies)	-0.0268	0.5885	-0.0196	0.5855	0.0092	0.6214	-0.0714	0.5619
RPAYDOM	Receipts from Domestic Companies/Payments to Domestic Companies	1.2357	3.0619	0.8726	1.2043	1.4416	3.7606	1.4079	3.5931
LPAYDOM	Ln (Receipts from Domestic Companies/Payments to Domestic Companies)	-0.6738	1.3347	-0.7702	1.2555	-0.5588	1.2440	-0.6900	1.5055
Business Climate-Related Distance Variables									
NNUSCR	Number of Non-U.S.-Controlled Foreign Corporations (CFC)	1,009.0900	1,535.8600	1,035.5000	1,584.2300	1,005.0000	1,544.7000	985.3857	1,496.0700
LNNUSCR	ln(Number of Non-U.S. CFCs)	4.9520	1.6674	4.9443	1.7197	4.9892	1.6048	4.9218	1.6975
BUSF	Business Freedom Index	71.6525	14.1096	72.7053	14.4037	71.9688	15.4061	70.2143	12.3780
TRADEF	Trade Freedom Index	73.7287	13.5102	78.4514	11.0663	73.0056	13.4675	69.4800	14.4834
GOVTF	Government Freedom Index	61.2154	23.9305	62.3661	23.4357	60.5434	23.7100	60.6903	24.9541
INVF	Investment Freedom Index	60.0926	19.1685	59.4595	19.2952	60.0000	19.5729	60.8571	18.8620
FINF	Financial Freedom Index	60.2778	18.7000	60.1351	17.3200	59.8611	18.9509	60.8571	20.0538
PROPF	Property Rights Freedom Index	58.9352	24.7175	57.9730	25.0741	58.6111	24.6271	60.2857	24.7288
Time-Related Distance Variables									
DV04	2004 Dummy Variable	0.3241							
DV06	2006 Dummy Variable	0.3333							
DV08	2008 Dummy Variable	0.3426							
Number of Observations		216		74		72		70	

Table 2: Negative Binomial Analysis of Total US CFCs in a Country

Dependent Variable: NUSCR	**Model 1**					**Model 2**				
Variable	**Coefficient Estimate**	**Std. Error**	**T-Ratio**	**Prob.**		**Coefficient Estimate**	**Std. Error**	**T-Ratio**	**Prob.**	
Intercept	-1.6953	0.7257	-2.3400	0.0195	**	-1.7551	0.7480	-2.3500	0.0190	**
Economic Activity and Flow Variables										
LRGDP	0.1765	0.0361	4.8900	<0.0001	**	0.1605	0.0367	4.3700	<0.0001	**
LPOP	-0.0263	0.0266	-0.9900	0.3236		-0.0160	0.0270	-0.5900	0.5545	
PTRADE	0.0416	0.0387	1.0700	0.2824		0.0509	0.0397	1.2800	0.1991	
PSTRADE	-0.3590	0.2357	-1.5200	0.1278		-0.2286	0.2397	-0.9500	0.3402	
LAVGFX	0.0084	0.0088	0.9600	0.3384		0.0110	0.0090	1.2200	0.2210	
Tax Rate-Related Distance Variables										
TRATEP	-	-	-	-		0.6261	0.2724	2.3000	0.0215	**
TAXR0	-0.4494	0.1107	-4.0600	<0.0001	**	-	-	-	-	
TAXR1	0.1094	0.1410	0.7800	0.4376		-	-	-	-	
TAXR2	-0.0400	0.0514	-0.7800	0.4366		-	-	-	-	
TAXR4	0.0422	0.0462	0.9100	0.3606		-	-	-	-	
Geography-Related Distance Variables										
LATAM	0.2466	0.0816	3.0200	0.0025	**	0.2272	0.0843	2.6900	0.0070	**
AFRICA	0.1856	0.0938	1.9800	0.0479	**	0.1362	0.0953	1.4300	0.1530	
ASIA	0.3000	0.0746	4.0200	<0.0001	**	0.2696	0.0759	3.5500	<0.0001	**
WESTHM	0.4004	0.1112	3.6000	<0.0001	**	0.2831	0.1019	2.7800	0.0054	**
OCEAN	0.1700	0.1165	1.4600	0.1444		0.1488	0.1218	1.2200	0.2215	
Firm-Related Distance Variables										
LPAYFOR	-0.0018	0.0363	-0.0500	0.9607		-0.0113	0.0373	-0.3000	0.7623	
LPAYDOM	0.0411	0.0154	2.6600	0.0077	**	0.0481	0.0155	3.0900	0.0020	**
Business Climate-Related Distance Variables										
LNNUSCR	0.5356	0.0254	21.0700	<0.0001	**	0.5436	0.0263	20.7000	<0.0001	**
BUSF	0.0020	0.0020	0.9600	0.3388		0.0023	0.0021	1.1000	0.2734	
TRADEF	-0.0020	0.0020	-1.0000	0.3161		-0.0005	0.0020	-0.2400	0.8104	
GOVTF	0.0006	0.0013	0.4800	0.6297		0.0004	0.0013	0.3000	0.7657	
INVF	0.0068	0.0016	4.3300	<0.0001	**	0.0053	0.0015	3.4400	0.0006	**
FINF	-0.0008	0.0015	-0.5500	0.5839		-0.0008	0.0016	-0.4800	0.6321	
PROPF	0.0017	0.0016	1.0500	0.2926		0.0020	0.0016	1.1900	0.2332	
Time-Related Distance Variables										
DV06	-0.0075	0.0425	-0.1800	0.8599		-0.0002	0.0438	0.0000	0.9968	
DV08	-0.0176	0.0471	-0.3700	0.7091		-0.0023	0.0480	-0.0500	0.9618	
Model-Specific Parameters										
Negative Binomial Disutrbance^	0.0526	0.0058	9.1300	<0.0001	**	0.0569	0.0061	9.2600	<0.0001	**
Unrestricted Log-Likelihood			-1214.0000					-1214.0000		
Restricted Log-Likelihood			-1574.0000					-1574.0000		
Chi-Square Statistic			720.000	<0.0001	**			720.000	<0.0001	**
Degrees of Freedom			25					22		
Number of Observations			216					216		

** indicates statistical significance at the five percent level.

* indicates statistical significance at the ten percent level.

^ indicates an estimate of the degree to which the variance of the distribution exceeds the mean.
This indicates that the negative binomial model is preferred over alternatives, such as the Poisson.

Table 3: Ordinary Least Squares Analysis of Total Real Assets per US CFCs in a Country

Dependent Variable: LRASSNO	Model 1					Model 2				
Variable	Coefficient Estimate	Std. Error	T-Ratio	Prob.		Coefficient Estimate	Std. Error	T-Ratio	Prob.	
Intercept	9.0955	1.8403	4.9400	<0.0001	**	9.6984	1.8547	5.2300	<0.0001	**
Economic Activity and Flow Variables										
LRGDP	0.3460	0.0915	3.7800	0.0002	**	0.3548	0.0918	3.8600	0.0002	**
LPOP	-0.2139	0.0696	-3.0800	0.0024	**	-0.2402	0.0700	-3.4300	0.0007	**
PTRADE	0.1752	0.1003	1.7500	0.0823	*	0.1493	0.1002	1.4900	0.1379	
PSTRADE	4.1276	0.5952	6.9300	<0.0001	**	3.7389	0.5899	6.3400	<0.0001	**
LAVGFX	0.0538	0.0220	2.4500	0.0154	**	0.0521	0.0221	2.3600	0.0194	**
Tax Rate-Related Distance Variables										
TRATEP	-	-	-	-		-0.6166	0.6520	-0.9500	0.3455	
TAXR0	0.5358	0.2728	1.9600	0.0509	*	-	-	-	-	
TAXR1	-0.4253	0.3398	-1.2500	0.2122		-	-	-	-	
TAXR2	-0.1218	0.1305	-0.9300	0.3519		-	-	-	-	
TAXR4	-0.1921	0.1165	-1.6500	0.1010		-	-	-	-	
Geography-Related Distance Variables										
LATAM	0.2427	0.2068	1.1700	0.2421		0.2159	0.2115	1.0200	0.3085	
AFRICA	0.6029	0.2316	2.6000	0.0100	**	0.6145	0.2338	2.6300	0.0093	**
ASIA	0.0346	0.1947	0.1800	0.8592		0.0336	0.1953	0.1700	0.8634	
WESTHM	0.3821	0.2884	1.3200	0.1869		0.4837	0.2644	1.8300	0.0688	*
OCEAN	-0.4460	0.3054	-1.4600	0.1458		-0.4313	0.3126	-1.3800	0.1693	
Firm-Related Distance Variables										
LPAYFOR	-0.0170	0.0894	-0.1900	0.8498		-0.0056	0.0901	-0.0600	0.9501	
LPAYDOM	-0.0818	0.0374	-2.1900	0.0299	**	-0.0827	0.0370	-2.2400	0.0265	**
Business Climate-Related Distance Variables										
LNNUSCR	0.4186	0.0629	6.6500	<0.0001	**	0.4135	0.0638	6.4800	<0.0001	**
BUSF	-0.0096	0.0052	-1.8400	0.0681	*	-0.0096	0.0053	-1.8200	0.0711	*
TRADEF	0.0023	0.0052	0.4400	0.6606		-0.0020	0.0051	-0.3900	0.6998	
GOVTF	-0.0008	0.0033	-0.2400	0.8135		0.0002	0.0034	0.0700	0.9444	
INVF	-0.0054	0.0039	-1.4100	0.1600		-0.0037	0.0038	-0.9800	0.3274	
FINF	0.0144	0.0040	3.6000	0.0004	**	0.0137	0.0040	3.4000	0.0008	**
PROPF	0.0004	0.0040	0.1100	0.9159		0.0009	0.0041	0.2200	0.8244	
Time-Related Distance Variables										
DV06	0.0080	0.1094	0.0700	0.9417		0.0057	0.1105	0.0500	0.9592	
DV08	0.0467	0.1212	0.3900	0.7006		0.0588	0.1213	0.4800	0.6284	
R-Square			0.7424					0.7297		
Adjusted R-Square			0.7086					0.6989		
F-Statistic			21.9100	<0.0001	**			23.6800	<0.0001	**
Degrees of Freedom			25, 190					22, 193		
Number of Observations			216					216		

** indicates statistical significance at the five percent level.

* indicates statistical significance at the ten percent level.