

**THE FACTORS AFFECTING THE LOCATION OF FOREIGN  
DIRECT INVESTMENT BY U.S. COMPANIES PRE AND POST 9-11**

A Senior Scholars Thesis

by

BRENT ALEXANDER NEWTON

Submitted to the Office of Undergraduate Research  
Texas A&M University  
in partial fulfillment of the requirements for the designation as

UNDERGRADUATE RESEARCH SCHOLAR

April 2008

Major: Maritime Administration

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Approved by:

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## ABSTRACT

The Factors Affecting the Location of Foreign Direct Investment by U.S. Companies  
Pre and Post 9-11 (April 2008)

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This research examines the motivational factors that influence the location of U.S. Foreign Direct Investment (FDI) in a post 9-11 world. Market factors, in the past, have been a dominant motivation in choosing a location for investment. Political stability of the host location has also been a factor. Political stability refers to the characteristics of a country that provide U.S. firms with a sense of security, such as a consistent legal system and a stable government friendly to the U.S. This research looks at whether political stability is the dominant driving force in the location of U.S. FDI post 9-11. This hypothesis is tested through a comparison of the location characteristics of all the world's countries pre and post 9-11 where the U.S. has reported investments. Using data provided by Dunn and Bradstreet Investor Information Service for 1995, 2000 and 2005, I use ordinary linear regression analysis. Results, in fact, show that political

stability is a driving force for post 9-11 U.S. FDI. Further, this research compares past studies in order to explain differences in U.S. FDI in a pre and post 9-11 world.

## **DEDICATION**

To my mother and sister, the sources of my inspiration and persistence.

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## NOMENCLATURE

- O Ownership-Specific Advantages
- L Location-Specific Variables
- I Internalization-Incentive Advantages

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## CHAPTER I

### INTRODUCTION: FOREIGN DIRECT INVESTMENT

Prior research shows that investment choice is based on a certain set of conditions. Particularly noteworthy is John H. Dunning's OLI Paradigm, which suggests that a firm's participation in foreign value-adding activities is determined by the existence of three conditions (Dunning, 1993). These conditions include ownership-specific advantages (O), location-specific variables (L) and internalization-incentive advantages (I).

Each component of Dunning's OLI Paradigm may be explained further. For example, ownership-specific advantages (O) refer to the special characteristics of a firm that potentially set it above and apart from competition in a host country, such as property rights, management expertise, technical innovations and human capital. Location-specific variables (L) refer to the unique features that make a country attractive or unattractive for investment, such as availability of natural resources, cost of labor, trade barriers, quality of infrastructure, and style of government. Finally, internalization-incentive advantages (I) refer to the opportunities available for protecting against or exploiting market failure in a country, such as avoiding costs, avoiding government intervention and controlling supply.

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This thesis follows the style and format of the Journal of International Business Studies.

According to Dunning's OLI Paradigm, there are four factors that determine why locations are selected for foreign direct investment (FDI). The first factor is resource based, which involves firms seeking advantages such as access to capital and natural resources, stability of supply and control of markets. The second factor is market based, which involves firms seeking advantages such as information skills, management expertise, low labor cost, investment incentives, low transaction cost and buyer uncertainty. The third factor is efficiency based, which involves firms seeking security advantages such as economies of scope, product specialization, production incentives, common governance and vertical integration. The final factor is strategic based, which involves firms seeking advantages such as market access, product distribution, access to sources of inputs, close proximity to customers and protection of input quality and performance.

Research has confirmed that attractive location factors increase FDI. Prime examples of such research include Guisinger and Associates (1985) and Mileski (2000). However, these studies were conducted before 9-11, an event that has proved to be enormously influential, both politically and economically. In addition, post 9-11 research on international investment activities lacks an in-depth investigation of possible change in location factors of FDI.

There is evidence that the global environment affects international investment. Prior research has shown that global events impact firms' choice of investment, as well as investment factors. Particularly noteworthy is the research conducted in Mileski (2000), which proved that key events affecting the international oil supply altered companies' location of foreign investment. As one of the most significant global events in the last 50 years, 9-11 shows potential for affecting international investment activities. Consequently, it is very important that the impact of 9-11 on location of investment and FDI flows be addressed.

We explore the following research questions in this paper: "Do the factors that affected investment location prior to 9-11 also affect post 9-11 investment?" and "Is there greater emphasis on certain factors pre and post 9-11?" We test these questions through analysis of international investment data provided by the Dunn and Bradstreet Investor Information Service. This international investment data contains information on country characteristics, such as style of government, market growth, trade barriers, infrastructure, available technology, investment incentives, and international alliances, as well as other information relevant to each country's political, economic, and cultural systems. With this research, we intend to confirm our hypothesis that the same location factors that drove investment prior to 9-11 will drive investment post 9-11. In addition, we seek to support the hypothesis that more emphasis will be placed on efficiency factors rather than market factors, due to increased concern for security.

## CHAPTER II

### EVALUATION OF FDI RESEARCH AND THEORY

As U.S. companies continue to find themselves competing in an increasingly globalized marketplace, the subject of foreign direct investment (FDI) becomes ever more relevant. After all, FDI offers potential opportunities for profit, growth, promotion, product line creation and expansion of market share to investing U.S. companies (Dikova and Witteloostuijn, 2007). Furthermore, FDI offers potential benefits to host countries, such as increased efficiency, greater product variety and improved productivity (Globerman and Shapiro, 2003). As a result, FDI can be advantageous to both U.S. firms and host countries, causing it to be a very important activity in the global economy. Considering the great importance of FDI, it is not surprising that much research has been conducted on this topic. Consequently, there have been a variety of theories applied to the broad area of international investment.

However, I am interested in comparing the location characteristics of different countries. For this reason, this paper will explore Dunning's OLI Paradigm on foreign direct investment (Dunning, 1993). This paradigm is significant for two reasons. First, it provides a framework for evaluating country characteristics as they relate to influencing the location of FDI. Second, Dunning provides a framework for evaluating multinational firms' investment choices and he presumes that there are four basic motivations for

choosing one location over another. These four motivations include resource-based, market-based, efficiency-based, and strategy-based.

The OLI Paradigm requires the satisfaction of three conditions in order for FDI to occur. First, a firm must possess ownership-specific advantages (O) that potentially set it above and apart from competition in a host country. According to Dunning, this (O) refers to the tacit knowledge, capabilities and/or competencies that give certain firms sustainable competitive advantage over other firms.

Second, a firm must have access to the location-specific variables (L) that make a host country attractive for investment. As explained by Dunning, when a firm goes to a location, it must be able to exploit its ownership-specific advantages. Thus, the (L) represents the marriage of a firm's advantages with the specific location's characteristics that are found there.

Third, there must be market failure present in order for the firm to decide to internalize, giving rise to internalization-incentive advantages (I). Here, Dunning explains that when a firm decides to exploit its ownership-specific advantages (O) in a certain location, it does so by internalizing them. For example, a firm may choose to have a wholly-owned subsidiary versus exporting, licensing, etc. In other words, a firm will choose to

internalize (I) when there are various reasons why it is better for the firm to own the investment than not own it.

In addition, Dunning argues that as a fourth condition, a firm must believe that the FDI in question is consistent with its long-term management strategy (Dunning, 1977 and 1980). If all of these conditions occur for the investing firm, the firm will probably initiate FDI.

For this paper, I will focus on the location (L) part of the OLI Paradigm. In particular, I am going to investigate what makes an (L) a “good (L),” or, attractive for FDI. In doing so, I will verify and examine what drives a firm to go to one location over another; in order to exploit their ownership-specific advantages (O) as they internalize (I).

A particularly important attribute of the OLI Paradigm is its identification of location factors. Under his paradigm, Dunning identifies certain motivations for locating in a particular (L). These include natural resource-seeking, market-seeking, efficiency-seeking, and strategic asset or capability-seeking. Mileski (1994) effectively operationalized and tested each of these motivation types. For example, resource-seeking firms are motivated to invest in a country for the resources present that include things like physical resources, human resources and operational resources, such as land, oil,

infrastructure and inexpensive labor. Market-seeking firms are motivated to invest in a country by the market advantages offered, such as economic stability, consumer demand, increased market share and potential for growth. Efficiency-seeking firms are motivated to invest in a country by the amount security offered to the firm in the form of legal and political advantages offered, such as common governance, familiar legal system, few trade barriers and economies of scope and scale. Finally, strategic asset or capability-seeking firms are motivated to invest in a country by the strategic advantages offered, such as market access, input access and product distribution.

The point of this paper is to expand this research. Loree and Guisinger (1995) and Mileski (2000) have confirmed that firms do in fact locate their foreign investments in host countries that have these factors. This was empirically confirmed to be true for countries showing positive factors, such as good resources, good market conditions, efficient markets, strategic advantages, etc.

However, these findings are supported by data entirely from post-World War II research, including Cold War era and pre-9-11 era research. In light of this fact, I ask the question “Does the OLI Paradigm hold when the world has gone into what could be perceived as World War III?” There has been a major shift in political stability, based on the events of 9-11; yet, there has not been any research that has really tested whether this paradigm is going to hold after a major event such as 9-11. In addition, there has not been a

substantial world shock and political stability change since 9-11, worldwide. It should also be noted that the U.S. is the leading investor abroad, or, “big dog” of FDI (Congressional Research Service, 2006). This leads me to also ask the question “Since the ‘big dog’ was directly attacked in 9-11, does this change the paradigm?” I also ask “Does this event have an impact on how the U.S. invests as the largest investor of FDI?”

The argument posed by this paper is that of all the motivational factors, political stability will be the most preferred, post 9-11. The underlying premise of why firms engage in FDI is unchanged. However, I anticipate that political stability will be much more relevant to U.S. firms post 9-11 than resource, market, or strategic factors. This is because I acknowledge that the U.S. experienced severe trauma in 9-11. Accordingly, I presume that U.S. firms will desire to invest in countries that provide them with a sense of security. In this case, security would mean a familiar government and legal system, such as what these firms would find in the U.S. Post 9-11 research supports this possibility. Globerman and Shapiro (2003) found that countries that receive no U.S. FDI are usually those with weak governance structures and legal systems not rooted in English common law.

With the above argument and questions in mind, I have developed four basic hypotheses. First, if a country is more politically similar to the U.S., then it will see more U.S. FDI after 9-11. Second, if resources were the motivation for investing in a country before 9-

11, it will be less significant after 9-11. Third, if market was the motivation for investing in a country before 9-11, then it will be less significant after 9-11. Fourth, if strategic advantage was the motivation for investing in a country before 9-11, then it will be less significant.

My methodology for testing the above-mentioned hypotheses is provided in the following chapter. I also provide information on the variables considered.

## CHAPTER III

### FDI RESEARCH METHODOLOGY

The purpose of this section is to describe the methodology used to test the research questions and the hypotheses derived from them. First, certain constructs are operationalized into measures before the analysis or testing is done. The following steps are followed in the testing procedures.

Step 1 - Define country characteristics measures - This step provides the independent variables that are used in the analyses. A data reduction strategy includes testing each combination of variables for correlation through the use of Pearson correlation coefficients and selecting the combination, which exhibits the least amount of collinearity among the independent variables.

Step 2 - Define controls - This step provides the control variables to be used in determining what influences FDI attraction.

Step 3 - Define FDI measures - This step provides the FDI levels (attraction performance) dependent variables to be used in the analyses.

Step 4- Test FDI performance through Generalized Least Squares of policy measures and country characteristics to FDI level to period. Additionally, control for the direct effects for FDI levels is included.

## CHAPTER IV

### RESULTS AND CONCLUSION

There were four basic hypotheses tested in this research. First, if a country is more politically (representing the efficiency motivation) similar to the U.S., then it will see more U.S. FDI after 9-11. Second, if resources were the motivation for investing in a country before 9-11, it will be less significant after 9-11. Third, if market was the motivation for investing in a country before 9-11, then it will be less significant after 9-11. Fourth, if strategic advantage was the motivation for investing in a country before 9-11, then it will be less significant.

A number of independent variables were used to operationalize each of these constructs. In order to operationalize the construct of efficiency motivation in the first hypothesis, I used whether a country has a democratic form of government and whether the country has a managed market system. Efficiency can be defined as efficiency in legal structures. U.S. investors are most familiar with democratic structures and therefore would find more efficiency in countries that are politically similar. In order to operationalize the construct of resource motivation in the second hypothesis, I used the infrastructure, presence of resources and the climate and size characteristic variables of country area, the presence of a tropical climate, the presence of a subtropical climate, the presence of a temperate climate, the presence of oil and the amount of seaports/cities. In

order to operationalize the construct of market motivation in the third hypothesis, I used the demand variables of population size and GNP. Finally, in order to operationalize the construct of strategic advantage motivation in the fourth hypothesis, I used the variable of the number of memberships in supranational organizations showing the importance of strategic alliances.

The results of this research are shown in the table on the following pages. A number of observations were made. Country area was significant for all three years at the .01 level, meaning the larger the country, the higher the FDI. Tropical climate was significant in 2000 at the .1 level, meaning the warmer the country, the lower the FDI. Tropical climate is dissimilar to most the U.S. climate. Population size was significant in 1995 at the .01 level and in 2005 at the .05 level, meaning the lower the population, the higher the FDI. GNP was significant in 1995 at the .05 level, meaning the greater the GNP, the higher the FDI. Finally, democracy government was significant in 2005 at the .1 level, meaning the presence of a democratic government increased FDI.

**Table 1. Parameter Estimates and Standard Errors for Independent Variables**

<b>Independent Variables</b>	<b>Model 1 1995</b>	<b>Model 2 2000</b>	<b>Model 3 2005</b>
<b>Resource</b>			
Country area	0.00412 .00129***	0.00725 .00186***	0.01433 0.00310***
Tropical climate	-5565.01259 5248.41084	-14694 7537.00208*	-16413 13591
Subtropical climate	-1737.89857 5126.33189	8983.01502 8170.53618	-15594 14686
Temperate climate	467.49059 6325.61717	2827.09271 7746.47128	-1761.42552 14521
Presence of Oil	4198.10991 4637.49051	-2881.17383 7902.56098	-16693 14091
Seaports/cities	-14.6498 14.53849	-90.62686 93.36729	-18.52689 19.12576
<b>Market</b>			
Population size	-0.00003343 0.00001140***	0.0001523 0.00008964	-0.00006973 0.00002920**
GNP	26.40861 12.51713**	-35.37352 38.93382	-51.80775 77.99779
<b>Efficiency</b>			
Democracy government	4810.52937 6240.82636	250225 103297	30757 18057*
Managed market system	-1395.75918 4299.83204	-10809 7009.59425	-15188 13832

**Table 1 Continued**

<b>Independent Variables</b>	<b>Model 1 1995</b>	<b>Model 2 2000</b>	<b>Model 3 2005</b>
<b>Strategic</b>			
Memberships in supranational organizations	-531.92107 1141.40381	-813.80728 1060.80353	-5230.9862 3285.95038
<b>Adjusted R-Square</b>	0.3582	0.4311	0.3143
<b>N</b>	46	41	53
*** indicates p-value of .01 or less			
** indicates p-value of .05 or less			
* indicates p-value of .1 or less			

It should be noted that the variables of country area, tropical climate, subtropical climate, temperate climate, seaports/cities, population size, GNP, democracy government, managed market system, and memberships in supranational organizations were obtained from the Dunn and Bradstreet Exporters' Encyclopedia. The variable of presence of oil and the level of FDI by country was obtained from the U.S. Department of Commerce.

These results confirm my first hypothesis at the .1 level and my third hypothesis at the .05 level. However, these results do not confirm my second and fourth hypotheses.

## **Conclusion**

In short, these findings support that U.S. firms were more concerned with market issues than efficiency (security) issues pre 9-11; and that U.S. firms are more concerned with efficiency (security) issues than market issues post 9-11. Furthermore, I found that the factors of resources, market, and strategic may be important, but political stability is now a major driving force for U.S. foreign direct investment in a post 9-11 world. This information not only helps to explain international investment activity by U.S. firms, but also helps decision-makers to review locations for investment.

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