

Factors Affecting Foreign Direct Investment in a Small Town in America

C. Joe Ueng, Ph.D. CFA¹, C. Christopher Lee, Ph.D.², & Noel Gee³

Abstract

The purpose of this research is to investigate factors affecting the acceptance of outside investment in a small city in the Midwest area in the United States. These factors include research and development, education, tax breaks, cultural diversity and local government support. A significant amount of research has been conducted on FDI in developing countries. Yet, little research focuses on determinates of FDI locations in developed countries and how the community members feel about FDI in general. An online survey was conducted in a small city in the Midwest. Multiple regression and ANOVA models were developed. The multiple regression models showed statistical significance, in which factors such as research and development and education proved to be statically significant.

Introduction

The concept of Foreign Direct investment is not new to the business world. However, its demand in today's economy it is becoming increasingly important. Since FDI often brings innovation, employment and prosperity to a community it is important for cities to understand what factors attract FDI to specific locations. Understanding the factors can help cities change to become more attractive to outside investing companies in the long run.

Currently, there are several articles written about location factors for FDI in transitioning and developing countries. These studies identified several determinates such as institutions, agglomerations and trade openness. It has been argued that in developing and transitioning countries, these are the factors that determine the location of FDI (Kinoshita & Campos, 2003). Another study argues that determinates of FDI tend to be both country specific and investor specific. (Ho & Rashid, 2011) As noted, there is a tremendous amount of research focusing on these arguments however; there is a significant lack of studies focusing on FDI factors in developed areas like the United States and Europe. One study, regarding the United States, argued that factors such as employment, research and development expenditure and state spending on education were positive and statistically significant determinants of FDI inflow into the United States (Kornecki & Ekanayake, 2012). A report on FDI, published by The Financial Times Limited of London, stated that the fastest growing recipient of FDI is the market for renewable energy. Europe's renewable energy market generated the most FDI in 2011, with North American in second place (Anonymous, 2012). The last study, by Oxford Analytica Daily Brief Service, studied the southwest region of the United States and reported on the factors that directed FDI to this specific area. One factor included the close relationship with Mexico and the NAFTA agreement (Anonymous, 1999).

¹ Cullen Foundation Chair of Finance, Dept. of Economics and Finance, Cameron School of Business, The University of St. Thomas – Houston, USA. Email: ueng@ssthom.edu, Phone: 713-525-2114, Fax: 713-525-2110

² Associate Professor of Management & Organization, Dept. of Management & Organization, School of Business, Central Connecticut State University, USA. christopher.lee@ccsu.edu, Phone: 860-832-3288

³ Client Analyst, ForeSee, Noel.Granger@foresee.com, Phone: 800-621-2850

As shown in the literature review, there is very little research focusing on attracting companies to invest in small town communities in the United States. Therefore, the purpose of this study is to identify how the members of the small city feel about FDI coming to their town and how those feelings match up with the wants and needs of future investing companies as indicated in the literature review.

Online surveys were given to local community members and local opinion leaders. A multiple regression model and ANOVA model were used to analyze the data. Section 2 offers a brief review of prior studies related to the topic. Sections 3 and 4 present the methodology and the statistical results. Managerial implications are suggested in Section 5, followed by a conclusion in Section 6.

Literature Review

Kinoshita and Campos (2003) conducted a study to indicate why Foreign Direct Investment (FDI) goes where it does and through its research it identified three major determinates: institutions, agglomerations and trade openness of the area. Their hypothesis focused on two important theories, Factor Endowment and New Trade Theory. The Factor endowment based trade theory believes that FDI is dominate in areas with low wages and vast amounts of natural resources. The New Trade Theory argues that FDI is driven by economies of scale, and therefore, agglomeration plays an important role. The purpose of their paper was to explore the link between institutions and agglomeration versus factor endowments and initial conditions of the country as determinates for FDI locations. This study was primarily conducted in Central Europe and the former Soviet Union during 1990-1998. At this time, both regions were undergoing market transitions to a market economy and away from centrally planned rules.

The data collected in Kinoshita and Campos's (2003) study was composed of a panel of 25 countries, such as The CEE, The Baltics and The CIS, which were undergoing market transitions during 1990-1998. The dependent variable in this study was per capita FDI stock (measured in constant million USD). While the independent variables were factors such as lagged FDI, education, labor costs, telephone lines, rule of law, bureaucracy, trade dependence, FDI restriction, natural resources, inflation, etc. Both the time series aspect and cross sectional aspects of this study are important to take into consideration. Kinoshita and Campos's borrowed the model proposed by Cheng and Kwasn (2000) in order to test for agglomeration effects. Using this model, the researchers tried to investigate factors beyond the traditionally studied variables.

Major findings of this study are as followed. Reform, policy and institutional variables results were positive and significant to the study. With this being said, those countries that are increasingly liberal received more trade and FDI. In addition, Kinoshita and Campos's study indicated that trade flow is often complemented by FDI. In addition, restriction on FDI showed to be negative but significant, meaning that harsh regulations on FDI lowers the chance of investment being brought into that country. Their conclusion indicated that the most important factor in determining FDI location is "institutions and agglomeration economies that override the importance of other economic variables" (Kinoshita & Campos, 2003).

Another study relating to a set of developing countries (Indonesia, Malaysia, the Philippines, Singapore and Thailand) showed that factors relating to FDI are both country specific (such as development level) and foreign-investor specific. The purpose of this study was to identify the macroeconomic and country-specific determinates of FDI in the ASEAN countries. The two main macroeconomic determinants found in this study were rate of economic growth and degree of openness to FDI. The study showed that the main driver for FDI in Malaysia was the exchange rate. However, manufacturing output and tourism were factors used to determine FDI in the Philippines. (Ho & Rashid, 2001)

Ho and Rashid collected historical time series data from institutions' such as the International Monetary Fund and Global Market Information Database. The economic indicators (independent variable) used in this study were gross domestic products, manufacturing output, exchange rate, consumer price index and international trade. The dependent variable was FDI. The results of the study showed that each independent variable varied in terms of significance for each country. For example, exchange rate only significantly impacted FDI in Malaysia and manufacturing output was statistically significant in the Philippines.

The study also showed that lower consumer income may encourage FDI and unemployment rates may indirectly affect FDI. The conclusion of this study stated that overall, the macro determinates that are statistically significant are economic growth and degree of openness. (Ho & Rashid, 2011)

Kornecki and Ekanayake conducted a study between 1997 and 2007 to determine what factors drive FDI to the United States. According to Kornecki and Ekanayake, the United States is the leader in inflow FDI because of its attractive investment and low risk profile (Kornecki & Ekanayake, 2012). However, the recent recession has lowered the USA's attractiveness and FDI is decreasing. Since FDI brings economic prosperity to the United States, it is important to understand how and why FDI locations are determined. The significance behind Kornecki and Ekanayake's research is the focus on state-specific needs, a topic that is sparsely researched. Kornecki and Ekanayake's findings indicated that real per capital income, education based on real per capital expenditure, employment, dedication to research and development and capital expenditure had a significant positive relationship to FDI inflows into the United States.

The dependent variable of Kornecki and Ekanayake research was FDI, while the independent variables were per capital real disposable income of each state (PClit), per capital state taxes for each state (TAXit), real per capita expenditure on education for each state (EDUit), labor quality (SEt), FDI-related employment (FDIEMPt), research and development (RDit), real capital expenditure (CAPit), labor cost (LCOSTit), manufacturing density (MANDEN), amount of unionized workers (UNIONit), and unemployment rate (UNEMPit). Their findings showed real per capital disposable incomes as a positive variable yet not statistically significant. Real per capita taxes were negative and statistically significant at $\alpha=.05$. (Kornecki & Ekanayake, 2012)

The above findings are consistent with studies published by Coughlin, Terza, Arromdee and Azarloughlou. Their studies showed that factor such as FDI related employment, research and development expenditure and state spending on education were positive and statistically significant determinants of FDI inflow into the United States. While, manufacturing density, taxation, unionization and unemployment rates showed a negative, statistically significant determinant. (Kornecki & Ekanayake, 2012)

Anonymous (2012) reported on different economic sectors that experienced the most FDI involvement on a global basis. This report indicated that the year 2011 was a rocky year for the global FDI market. The decrease in global FDI was related to multiple natural disasters that plagued the Asian Pacific area and political and economic disorder in the European Union. These events created uncertainty in the FDI market leading to a sudden decline in overall investment. North America, Latin American and Africa, however, saw growth during this time.

Globally, the fastest growing recipient of FDI is the market for renewable energy according to Anonymous (2012). Europe's renewable energy market generated the most FDI in 201, with North American in second place. In addition, the new FDI investment trend is expansion. Foreign companies are investing more money into their already established FDI projects instead of starting new ventures.

Lastly, an article, written by Oxford Analytica Daily Brief Service, studied the southwest region of the United States, specifically Arizona, New Mexico, Oklahoma and Texas. For several years, the economy of both Texas and Oklahoma was dominated by the oil industry. However, there has been little growth in this industry within the last two decades causing a need for employment. Texas, in 1995, had 19.5 million residents with a vast majority being immigrants from Latin America. Historically, there are several poor regions of Texas creating large economic disparities between the wealthy and poor. In addition, one fifth of Texas's population was composed of legal non-US citizens. These workers' wages were at least a third lower than wages granted to legal citizens. This cheap labor force which invited FDI to the area. For this region, FDI in labor intensive work has been dominating the Texas market since 1995. During the late 1990s, the number of workers in Texas employed by a foreign-owned company was three times higher than the national average (Anonymous, 1999).

Another factor, indicated by the article, is the Southwest's regions economic ties with Mexico created by NAFTA in 1994. After NAFTA was created the annual exports out of this region was nearly 50% more than the national average. This article estimated that Texas's low waged-production based workforce coupled with the NAFTA agreement created a lucrative area for FDI (Anonymous, 1999). In summary, a through survey of past studies shows a lack of research determining factors that attract FDI to the Midwest region in the United States, specifically in rural small-town environments. There are several studies that show why FDI is attracted to developing countries but very little showing empirical evidence for FDI inflow into specific states. This study investigates the factors that impact or restrict FDI location in the United States, specifically looking at a small town location in the Midwest.

Methodology

Inward foreign direct investment is very important to the US economy as a whole but it also plays an integral part in local economies. Historically, the United States has been a very attractive destination for foreign companies because of its low risk reputation and attractive investment profile. However, determining where the outside company will invest considers more variables. One important variable impacting the location of FDI is Education. Education can play a monumental role in the location of outside companies investing in the United States and for this reason real capital expenditure on education is an important factor to consider. (Korneck & Ekanayake, 2012)

H1: Education is significantly related to attracting FDI to a state.

Another important factor affecting the location of FDI is the areas expenditure on research and development. "Research and Development (R&D) means investment in creative work undertaken systematically to increase the stock of knowledge and its application - including basic research, applied research, and experimental development" (Foreign Direct Investment in R&D, 2007). Research and Development in specific fields, such as technology can attract outside firms that is interested in the community's research efforts. However, if the foreign firm is a low tech company, research indicates there is low coloration with R&D and investment. Nevertheless, one way to attract FDI to a specific region is to dedicate more money to research therefore attracting high technology or research specific foreign investment (Korneck & Ekanayake, 2012)

H2: Research and Development affects the location of FDI.

The third factor that greatly affects the location of FDI is taxes. When companies are offered tax breaks or tax incentives, outside companies see an advantage to invest. Tax breaks are especially important when a foreign company is deciding between two locations. Offering tax incentives to investing companies could be the deciding factor for outside companies. (Korneck & Ekanayake, 2012)

H3: Offering tax breaks and incentives can positively affect location of FDI.

Another factor is leadership or government support in attracting FDI. Acceptance and openness to FDI is critical. If a government or local leader is not willing to work with a foreign firm nor are they proactive about finding firms to locate in their city, little FDI investment will locate there. This is because there are many cities in the United States who see the benefits of and are willing to work with the foreign company. This gives little reason for a new foreign company to locate in an area that is hostile to FDI. (Korneck & Ekanayake, 2012, Ho & Rashid, 2001)

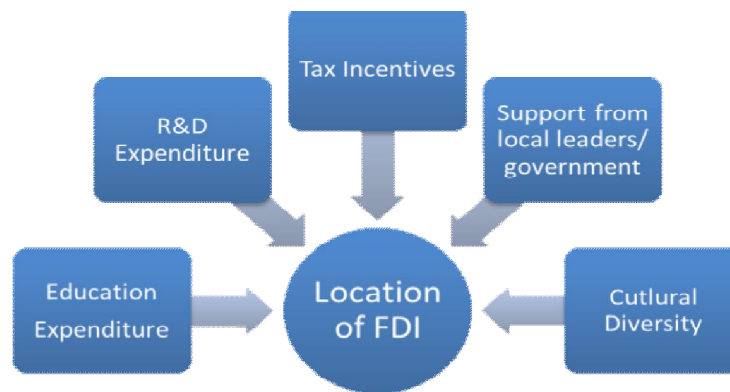
H4: Leadership and government support makes a significant impact on FDI.

The last factor to consider is the communities' acceptance to cultural diversity. Like government official acceptance level, the community can have a huge impact on diversity entering their community. If community members are prejudice or uncomfortable around diversity, then the acceptance of FDI may be low, therefore affecting FDI to the region.

H5: Low acceptance of cultural diversity can have a negative impact on FDI.

In summary, a main hypothesis for this research states that FDI is positively related to real capita expenditure on education, research and development expenditures, tax incentives offered to the new company, support from local leaders such as government officials and acceptance to cultural diversity. The frame work for this research is represented in Figure 1.

Figure One: Research Framework



A multiple regressing model was used to test this research hypothesis. The equation uses acceptability of FDI in a city as the dependent variable (Y). The six independent variables that factor into the location of FDI are education (X₁), research and development (X₂), tax incentives (X₃), government support (X₄), acceptance of cultural diversity (X₅).

$$Y = b_0 + b_1 * X_1 + b_2 * X_2 + b_3 * X_3 + b_4 * X_4 + b_5 * X_5$$

The survey questionnaire used to conduct this research was designed around these research hypotheses. Online surveys were given to local community members, local opinion leaders and students at a state university in the small town. A total of 102 surveys were collected.

Results

Of the 102 random surveys collected, the descriptive statistics indicate that 30 (29.04%) respondents were male and 69 (67.6%) were female (3 respondents did not indicate a gender). In addition, of the respondents, 45 (44.11%) indicated they were under the age of 24 and were students. The remaining of the respondents were 25 years or older. All but 7 (6.86%) of the respondents had some college background .With 29 (28.43%) having their bachelor’s degree, 13 (12.74%) with their masters and 1 (.98%) with their doctorates.

X_j	Description	N	Mean	Standard Deviation
X ₁	Favorableness of outside investment	101	6.09	1.327
X ₂	Favorableness to change	102	6.45	1.001
X ₃	Favorableness to Tax funds spent on education	102	6.21	1.300
X ₄	Favorableness to Tax breaks to FD companies	102	5.45	1.446
X ₅	Favorableness to Tax funds spent on R&D	102	5.36	1.501
X ₆	Satisfaction with community	102	4.58	1.410
X ₇	Productivity level of leaders in attracting FDI	102	3.25	1.668
X ₈	Diversity level	102	2.93	1.441

The multiple regression models show statistical significance with a p-value of .001. This proves that the multiple regression model explained in the methodology section is a reliable indicator of the favorableness of FDI locations. The multiple regression models showed three factors that had statistical significance results. These factors were education (p-value of .011), tax breaks (p-value of .025) and student vs. adult (p-value of .032). Table two shows the results of the multiple regression models.

Table Two: Multiple Regression Model					
Dependent Variable (Y) = Favorableness to FDI (Q1)					
R ² = 0.461, F = 3.284, p = .001					
X _j	Factor	b _j	SE	SB	T
(Constant)		3.216	.852		3.773
X ₁	Education	.296	.114	.291	2.599**
X ₂	Tax Break	.208	.091	.227	2.276**
X ₃	R&D	-.012	.105	-.013	-.110
X ₄	Small Town	.000	.091	.000	.005
X ₅	Leadership	-.054	.083	-.066	-.649
X ₆	Diversity	.031	.095	.034	.325
X ₇	Student/adult	.855	.393	.321	2.175**
X ₈	Age Ratio	.001	.012	.016	.108
X ₉	Female/male	.012	.272	.004	.045
** p < 0.05					
b _j	Unstandardized regression coefficient for X _j				
SE	Standard error of unstandardized b _j				
SB	Standardized regression coefficient of X _j				

The ANOVA test showed that between the three groups (students, community members and local opinion leaders) the participants answered some questions with statistically significant different answers. Favorableness to outside investment was significantly different with a p-value of .09 between the three groups. Favorableness to R&D had a p-value of .04 and opinion on diversity had a p-value of .09. Showing that the three groups had differing opinions on these factors, the means of each group for the different factors can be found on table three.

Table Three: Each Group Mean on Differing Factors

Independent Variable	Students	Community Members	Opinion Leaders
Favorableness to outside investment	5.60	6.42	6.50
Favorableness to R & D	5.60	5.35	4.43
Diversity level (7 being very diverse)	2.47	3.43	2.79

Further investigating the differences, the Post Hoc Test indicated that in terms of favorableness to outside investment, students and community members were significantly different with a p-value of .016. While students and opinion leaders showed significantly different with a p-value of .066. Other interesting findings from the Post Hoc test are shown in table four.

Table Four: Tukey Test for Post-Hoc Analysis

Dependent Variable	Difference:	p-values:
R&D Investment	Significant difference between students and opinion leaders	.03
Diversity	Significant different between students and community members	.006

Discussion

Results of this study found that community members, local leaders and students are favorable to the idea of FDI in their community. However, each of the three groups varied in how they would welcome FDI. For example, all three groups believed in spending more tax money on education in order to increase jobs through FDI. While, students were more favorable to increasing the tax money spent on Research and Development than the other two groups. Overall, however, local opinion leaders favored the opportunity of outside investment the most. Therefore, local opinion leaders should act on their willingness to attract outside investment to the area by offering tax incentives and increase expenditures on R&D and education.

The community's willingness to offer tax incentives to outside investments relates to the study conducted by Korniecki and Ekanayake. Their results showed that companies shied away from areas with harsh taxes on companies. Offering tax breaks would encourage these companies to locate in the small city area versus areas with little to no tax breaks. In addition, Korniecki and Ekanayake's study noted that companies look for areas willing to invest in research and development and education. The results of the study done in the small city in the Midwest showed that members of the small city were willing to utilize tax funds on these areas in the event it would attract FDI. This study showed that the communities' willingness to bring outside investment and the resources they are willing to expend correlate with the statistically significant variables Korniecki and Ekanayake reported FDI companies looked for in potential locations.

However, the study indicated that the members of the small city feel this regional area is lacking in terms of cultural diversity. This factor could create tension with foreign companies if community members, students and local leaders are afraid of diversity change. This however, does not seem to be the case because as a whole the three groups indicated they were very favorable of change in their community (mean of 6.45). In summary, the three groups tested are willing to offer tax breaks, spend more on education and R&D if these efforts could attract outside investments and bring more jobs to the area.

Conclusion

This study shows the factors affecting FDI location (as described by the literature review) are similar to the willingness of the small city community members, students and leaders, to attract FDI to their area. Further studies on this subject should investigate other determinates such as types of research and development the community members would support (ie. green energy). In addition, the sample size of the survey should be expanded to achieve a better distribution of males, females, local leaders, community members and students. In addition, it would be helpful to compare these results to a study conducted in another small town in the same state. This research provides empirical evidence of the willingness to attract outside investment to a small town in the hopes of increasing employment opportunities. Evidence suggests students, community members and local leaders support outside investment and are willing to make changes, such as offering tax breaks to companies, in order to increase employment opportunities in their area.

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