To Rwanda and Back:
A Study Examining the Feasibility of Successful Foreign Direct Investment in Rwanda

by

Tori Carmel High

Advisor: Dr. Robert B. Stapp

An Honors Thesis in partial fulfillment of the requirements for the degree Bachelor of Science in International Business with an emphasis in Marketing.

Sam M. Walton College of Business
University of Arkansas
Fayetteville, Arkansas

December 4, 2009

Abstract

The main objective of this paper is to investigate if the implementation of foreign direct investment (FDI) in Rwanda will have a positive effect in the country. The analysis focuses on five main indicators on which FDI can have an effect: GDP, exports, imports, and value added to industry. The purpose of this study was to conclude if FDI in Rwanda was having a positive, negative, or no effect on each of these indicators. It was hypothesized that FDI is having a positive effect on these four indicators. With this information, potential investor can be aware of the current investment environment of Rwanda. Annual data from years 1970-2007 for each indicator were analyzed using correlation and statistical procedures. Results suggest that FDI has both a positive, contemporaneous affect that lasts one year on GDP. FDI is also positively correlated with the value added to the industry after one year's time. However, FDI did not seem to have any correlation with exports or imports. In conclusion, FDI in Rwanda seems to have an immediate and short-term positive effect within the country yet these results are not proven to extend from Rwanda externally. This means that while FDI impacts the internal economy of Rwanda in a beneficial way, it is not proven in this study that FDI improves Rwanda's trade sector, nor is it proven that FDI will result in a return on capital for investors.

I. Introduction

Foreign direct investment (FDI) can be defined as a measure of ownership of foreign productive assets (factories, mines, land, etc.). Over the past fifteen years, foreign direct investment (FDI) has become the leading type of capital flow in the global economy, even for developing nations. Both developing and newly industrializing countries have been strongly encouraged to rely on FDI so as to supplement national savings via capital inflows and promote economic development (Nunnekamp, 2002). Foreign direct investment is playing a growing role in today's global world of business, providing companies with new markets, cost advantageous production facilities, access to innovative technology, new products, additional skills, and financing. For host countries, FDI provides a basis for new technologies, products, processes, capital, and organizational/management know-how, all of which can provide significant momentum to economic development.

FDI can be beneficial to both investing firms and host countries. Because of this, it is important to consider what qualities attract FDI to particular developing countries. When investors look into injecting capital into the markets of developing nations, they take time to assess a country's investment environment including the presence of a legal framework that defines investors' rights and obligations, payment discipline and enforcement procedures, availability of a guarantee from government or another multilateral agency (Lamech and Saeed 2003). They also consider adequacy of cash flows in the sector, stability and enforcement of laws and contracts, government responsiveness to the needs and time frames of investors, investors' control over investments, and regulatory independence (Lamech and Saeed 2003).

Root and Ahmed (1978) recognize a list of 44 possible variables of economic, social, political, and policy nature that can be potentially significant discriminators of successful FDI. Each variable can be cited by one or more authors as a determinant of

FDI. These variables will be discussed in further detail in the literature review. Empirically, one factor that is common to most studies concerning the statistical analysis of the political, economic, and institutional aspects causally associated with FDI flows is market size or real GDP (Florence, 2004).

Additionally, Douglas Nigh identified political stability or government policy (Brewer, 1993) as a key variable capable of influencing FDI. FDI is more likely to transpire in locations that have quality infrastructure such as ports, developed roads, and bridges because the backbone for international business functions is already in place. For this reason, quality of infrastructure and density of roads is noted by both Cheng and Kwan (2000) as key influencers of FDI. In more recent years, Dhakap, Dharmendra, Franklin, and Kamal (2007) have released a study that cites inflation rates as a significant director of foreign direct investment. Lastly, is important to note that studies show that two variables that are often attributed to attracting FDI to developing nations have been proven ineffective in sub-Saharan Africa. These two variables are fiscal incentives (Lim, 1983) and investment promotion efforts (Loewendahl, 2001).

The purpose of this paper is to analyze the aforementioned potentially significant discriminators of successful FDI to determine which ones have a statistically significant effect on whether FDI in Rwanda will succeed or fail and if Rwanda is a viable recipient for foreign investments that will benefit the country. For this purpose, Rwanda's economic history and background will be explored. Ultimately, this paper should accept or not accept the feasibility that FDI in Rwanda produces a positive affect on the country. This paper also provides an overview of Rwanda's economy, highlighting potentially investible industries via a list of domestic and foreign investors currently operating in-country; qualitative and quantitative sector backgrounds; and industry metrics.

The remainder of this paper is organized as follows: Section 2 provides a thorough background to the study via a descriptive review of current literature on possible indicators of FDI and Rwanda's current investor environment. Section 3 identifies the study's methodology by recognizing the study's theoretical model, as well as illuminating both primary and secondary data used to reach the study's conclusions. Section 4 details the empirical results of the study including both results expected and unexpected and Section 5 gives concluding remarks.

II. Review of Literature

One of the best resources found on potential determinants of foreign direct investments was in a study by Root and Ahmed on the determinants of foreign direct manufacturing investment. This study initially recognized 44 possible variables of economic, social, political, and policy nature with the intention of determining which factors in the manufacturing sector was significantly correlated with FDI. After much consideration and research, the following variables are ones deemed applicable for analyzing determinants on FDI for the country as a whole: "GDP per capita, ratio of exports to imports, energy production, extent of urbanization, and corporate taxation (Root and Ahmed 1978)." One study in particular found that GDP per capita had a strong positive affect on FDI in the country (Lim, 1983). As stated before, each of these variables can be sited by one or more authors as a determinant of FDI.

In terms of the relationship between market size (real GDP) and FDI, Florence's paper: "The Market Size Effect" gives evidence supporting the hypothesis that most

foreign direct investments are allocated to markets that are large enough to support the economies of scale needed for production. This point explains why most investment is given to developed nations rather than emerging economies. The hypothesis of this paper was tested on a sample of over 70 developing countries over a 19 year period and concluded that "market size had a positive impact on the FDI received by member countries" (Florence, 2004).

In terms of political stability, Douglas Nigh's paper reports that "in interviews and surveys of executives of multinational corporations, political events have been reported as one of the most important factors in the direct foreign investment decision (Nigh, 1985)." In particular, most executives place emphasis on the stability and attitude of the government in the host country. For developing countries, it was determined that both inter- and intra-national conflict have an affect of FDI. Intra-nation events cited include "assassinations, general strikes, purges, riots, anti-government demonstrations, coups d'état, revolutions, and irregular executive transfers (Nigh, 1985)."

Quality of infrastructure is one of the key structural variables that aids in the success of FDI entering a developing country. One study called "What are the determinants of the location of foreign direct investment?" notes that the effect of quality infrastructure on FDI is one of diminishing returns. That is to say that the fourth bridge is less important and crucial than the third bridge, which in turn was less important than the one before that, and so on. This study states that countries with more developed infrastructure would not only attract more domestic investment but would also be "expected to attract more FDI (Cheng and Kwan, 2000)."

A recent paper, "Foreign Direct Investment and Transitional Economies", hypothesizes that the effect of inflation uncertainty within a host country has a negative association with FDI. The reason given for this effect is that "a high rate of inflation indicates internal economic instability (Dhakal, Dharmendra, Franklin, and Kamal, 2007)." This is usually because in times of high inflation rates, companies must deal with strong levels of product and input pricing uncertainty.

Lastly, there are multiple studies citing that fiscal incentives have in unsuccessful in sub-Saharan Africa due to various factors that act against the current FDI business environment (Lim, 1983). Cleeve in his paper, "How Effective are Fiscal Incentive to Attract FDI to Sub-Saharan Africa", says that "fiscal incentives, the most popular instrument for attracting FDI in Africa, have failed to deliver the expected increase in FDI inflows. (Cleeve, 2006)" The data of this paper largely support the belief that the benefits of securing FDI in the country are heavily outweighed by the cost of the incentives. It is also believed that incentives may even "exacerbate problems like governance and corruption and it would be better to improve the local infrastructure and stabilize the macro-economy. (Cleeve, 2006)"

Brewer (1993) presents government policy, specifically taxation, as a key item to address when debating the affects on FDI implementation. The key question asked in this paper is: what is the appropriate level that a host country's corporate tax burden should be set in order that FDI will react to taxation positively? This study suggests that "on average, FDI decreases by 3.7% following a 1 percentage point increase in the tax rate on FDI. (Brewer, 1993)" Brewer goes on to talk about how tax planning can significantly reduce the tax burden placed on FDI. It is concluded that across different

countries, different approaches to the handling of investments, both inbound and outbound in nature, is to be expected.

It is crucial in the development of this paper to understand Rwanda's background and note the presence of its 1994 genocide. Since Rwanda's devastating 1994 genocide took the lives of nearly one million people, progress, including rehabilitating infrastructure and restoring social norms, has been made. A program called Vision 2020, initiated by President Kagame is underway in an effort to transform Rwanda from a low-income, agricultural-based economy into a knowledge-based, service economy by 2020 (World Bank 2009). It is very important to have a thorough grasp of Rwanda's current economic standings and performance as a platform for this hypothesis. Below is a table indicating Rwanda's recent economic performance 2001-2007:

Table 1

	2001		2003	
Sector	**Million USD**	**% GDP**	**Million USD**	**% GDP**
Agriculture	**$ 491.0**	**37.3%**	**$ 538.1**	**36.8%**
Food Crop	421.3	32.0%	467.7	32.0%
Export Crop	15.1	1.1%	12.6	0.9%
Livestock	31.2	2.4%	33.0	2.3%
Fisheries	18.4	1.4%	19.5	1.3%
Forestry	5.1	0.4%	5.3	0.4%
Industry	**186.2**	**14.2%**	**201.6**	**13.8%**
Mining, quarrying	9.9	0.8%	6.0	0.4%
Manufacturing	91.0	6.9%	100.0	6.8%
Electricity, gas, water	5.9	0.4%	7.4	0.5%
Construction	79.4	6.0%	88.3	6.0%
Services	**562.8**	**42.8%**	**639.9**	**43.7%**
Import duties and Imputed bank charge	**75.4**	**5.7%**	**83.9**	**5.7%**
GDP RwF billion	**$ 1,315.2**	**100%**	**$ 1,463.5**	**100%**

	2005		2007	
Sector	**Million USD**	**% GDP**	**Million USD**	**% GDP**
Agriculture	**$ 564.7**	**34.2%**	**$ 564.2**	**30.6%**
Food Crop	488.8	29.6%	482.6	26.2%
Export Crop	15.1	0.9%	16.3	0.9%
Livestock	34.8	2.1%	37.8	2.1%
Fisheries	20.4	1.2%	21.5	1.2%
Forestry	5.7	0.3%	5.9	0.3%
Industry	**242.2**	**14.7%**	**294.9**	**16.0%**
Mining, quarrying	11.7	0.7%	14.0	0.8%
Manufacturing	110.1	6.7%	134.4	7.3%
Electricity, gas, water	7.3	0.4%	8.3	0.5%
Construction	113.3	6.9%	138.1	7.5%
Services	**752.8**	**45.6%**	**888.7**	**48.2%**
Import duties and Imputed bank charge	**89.9**	**5.4%**	**96.1**	**5.2%**
GDP RwF billion	**$ 1,649.6**	**100%**	**$ 1,843.6**	**100%**

III. Methodology:

This study was designed to test the theory that FDI has a positive affect on the country of Rwanda. After a thorough study of what information was available on

Rwanda, the original variables as designated by the literature review had to be altered. Each variable will be addressed in verbiage but only a select few variables had enough data points to be tested empirically. The time frame of these variables will be from 1970-2007 due to scarcity of recorded and available data common to developing countries and countries that have recently experienced genocide. The dependent variables are defined as each of the possible measurements (GDP, Industry Value Added, Exports, Imports) that could have been affected by the independent variable, FDI.

Based on prior research, a set of hypotheses was developed for this study. Since this study considers specifications in which the 5 aforementioned indicators depend on the lagged values of FDI, a lag structure for the hypotheses will need to be determined. It is important to note that there will be a high correlation between FDI_t, FDI_{t-1}, FDI_{t-2}, and FDI_{t-3}, that is going to cause problems with multicollinearity. A common solution for multicollinearity is to hypothesize that the process has a parsimonious lag structure (Dougherty, 2007). For this reason, the research hypotheses are as follows:

$GDP_t=A+B_1(FDI_t)-B_2(FDI_t-FDI_{t-1})$

For GDP, the null hypotheses are that FDI does not have an impact on Rwanda's GDP extemporaneously or after lagging one year. The alternative hypothesis is that FDI does have an impact on the country's GDP.

H_0: B1=0
H_1: B1≠0
H_0: B2=0
H_1: B2≠0

Industry $V.A._t=C+D_1(FDI_t)-D_2(FDI_t-FDI_{t-1})-D_3(FDI_t-FDI_{t-2})-D_4(FDI_t-FDI_{t-3})$

For industry value added, the null hypotheses are that FDI does not have an impact on Rwanda's value added industries extemporaneously nor lagging one, two, three, or four years. The alternative hypothesis is that FDI does have an impact on the country's value added industries for these years.

H_0: D1=0
H_1: D1≠0
H_0: D2=0
H_1: D2≠0
H_0: D3=0
H_1: D3≠0
H_0: D4=0
H_1: D4≠0

$Exports_t=G+H_1(FDI_t)$

For exports, the null hypotheses are that FDI does not have an impact on Rwanda's exports extemporaneously and the alternative hypothesis is that it does.

H_0: H1=0
H_1: H1≠0

$Imports_t=I+J_1(FDI_t)$

For imports, the null hypotheses are that FDI does not have an impact on Rwanda's imports extemporaneously and the alternative hypothesis is that it does.

H_0: J1=0
H_1: J1≠0

The Rwandan Development Board (RDB) and the Office of the President provided primary data which is combined with ethnography-type interviews with representatives from both the public and private sectors of nearly every industry in the country. These interviews are documented for reference and integrated into sector overviews. Secondary data is sourced directly from documents received from interviewed individuals, Rwanda government databases, and reliable sources via textbooks, internet, and library material.

The literature review cites developed infrastructure as a good proponent of FDI. Rwanda has 14,008 km (8,704 miles) of roads. Currently, 19% of the road network is paved. Since 1994, the Government of Rwanda and international donors have invested heavily in upgrading and resurfacing the road network. By African standards the Rwandan roads system is in good condition. There are no railroad systems available within Rwanda. The closest railway is located in the middle of Tanzania (over 1200 km away) and was built in 1910. That railroad has a limited capacity, and is more costly and less dependable to use than truck transport. In July of 2007, the governments of Rwanda, Tanzania, and Burundi received a $1.7 million grant from the African Development Bank (ADB) for a feasibility study of a new railway line from Isaka, Tanzania to Kigali, Rwanda. This grant money was awarded to the German firm DB Consulting to determine the proposed route, alignment, cost, and estimated tonnage volumes. Results from this study have not yet been received. Simultaneously, Burlington Northern Santa Fe railways (BNSF – U.S. based railway company) conducted a pro-bono analysis of the same Isaka to Kigali route. In January 2009, BNSF was awarded a $700,000 United States Trade and Development Act (USTDA) contract to analyze the viability of rehabilitating the existing railway line from Dar es Salaam to Isaka, Tanzania. BNSF will be presenting their findings at the end of September 2009 to the Government of Tanzania. These studies will help determine the viability of a railway project to Kigali, Rwanda.

Government-owned sanitation and waste collection systems in Kigali and other urban areas are challenged to meet current waste collection needs. Population growth and lack of landfill space exacerbate the situation. Electrogaz, Rwanda's public supplier for water and electricity, provides drinking water to Kigali City and all urban centers of Rwanda. The water supplied by Electrogaz is treated according to international standards and is sourced from rainwater, surface water (lakes and rivers) and ground water. Aided by government policy and significant donor support, access and quality of water supply and sanitation in Rwanda is rapidly improving in many rural areas. See below table for more details:

Table 2

	Urban	Rural
Access to Improved Source of Water	80.0%	71.0%
Adequate Sanitation	10.0%	8.0%
Water Infrastructure		
Systems	15	796
Standpipes	286	7,905
Private Connections	22,806	2,461
Managed Springs/Hand pumps	0	18,299

Currently, Electrogaz is the public utility responsible for generating and distributing electricity within Rwanda. Rwanda's available electricity generation capacity is 60-69 Mega Watt (MW) of which approximately 50% is hydro-generated and 50% is diesel-generated (GE railway motors). 12 MW of hydropower capacity is imported from Sinelac, a generation utility owned by the governments of Rwanda, Burundi, the Democratic Republic of Congo (DRC), and SNEL (the national utility of DRC). Over the last several years Rwanda's energy position has improved due to increased capacity of their hydro plants and better management of the Energy sector.

In terms of financial structure, Rwanda currently has five insurance companies and six insurance brokers that offer a range of insurance products including life, property, automobile, and health insurance as well as retirement funds. In addition to the reduction of losses and damages in Rwanda, the insurance sector has helped mobilization of savings and investments amongst the private sector. The combined balance sheet for the insurance sector has risen by 30% in2008 and is expected to grow by 15% in 2009. The three most prominent insurance companies are SONARWA, COGEAR and AAR Insurance. SONARWA estimates its market share to be about 75% of all the premiums paid to insurance companies in Rwanda. COGEAR is a private insurance company with an array of products to help save for and insure school fees and pensions. It also provides debt insurance. AAR Insurance is an HMO that began as an insurance company governed by the Rwanda National Bank (BNR) 25 years ago. They are capitalized at about $1.2 million with a customer base of predominantly Non-governmental organization and private individuals and companies.

Since corporate taxation is a serious point of controversy between host countries and investors, it is important to analyze Rwanda's law on taxations. Rwanda's taxation laws incorporate both direct and indirect taxes. Direct taxes include tax on income, pay as you earn tax, tax on loans, value added tax, and property tax. Indirect taxes include excise duties and import duties. Generally speaking the effective income tax for country operations is roughly 30% with a Value Added Tax rate of 18%.

Rwanda's banking sector is comprised of approximately $200 million of equity capital which supports total assets of roughly $1 billion. Estimates made in 2007 show that about 12% of the population held a bank account. The Central Bank discount rate is 12.87%, which is up from 11.25% charged in December of 2008. Current lending rates are approximately 17% (June 2009) while deposits earn a rate of approximately 10% (May 2009). The inflation rate is approximately 8%. As is the case in the rest of the world, the banking industry has encountered some liquidity challenges due to relatively large numbers of non-performing loans (9%) and banks' decreased access to short-term lines of credit. To date, most loan demand is for items other than productivity improvements. The comparable rates for Rwanda and neighbouring countries are in the below tables.

Table 3

2009 Lending Rates

	Jan	Feb	Mar	Apr
Rwanda	16.3%	16.2%	15.7%	16.8%
Kenya	14.8%	14.7%	14.9%	14.7%
Uganda	18.9%	20.7%	21.0%	N.A.
Tanzania	14.9%	15.0%	15.1%	15.5%
Burundi	16.8%	16.6%	16.3%	16.1%

Table 4
2009 Deposit Rates

	Jan	Feb	Mar	Apr
Rwanda	6.5%	6.0%	7.4%	8.2%
Kenya	5.2%	5.2%	5.1%	5.1%
Uganda	11.2%	10.7%	9.0%	N.A.
Tanzania	6.4%	6.6%	6.8%	6.9%
Burundi	8.0%	8.0%	7.6%	7.5%

Table 5
2009 Intermediation Margin

	Jan	Feb	Mar	Apr
Rwanda	10.0%	9.9%	8.1%	8.6%
Kenya	9.6%	9.4%	9.8%	9.6%
Uganda	7.7%	10.0%	12.0%	N.A.
Tanzania	8.5%	8.4%	8.3%	8.6%
Burundi	8.8%	8.6%	8.7%	8.6%

The Government of Rwanda has identified the development of the financial sector as a crucial part of meeting the country's economic needs. As such the country is in the process of ensuring its banks conform to international standards. According to Rwanda's Minister of Finance, the sector has been growing at an annual rate of 20% over the past 5 years. One initiative that is largely credited for this growth rate is the "Financial Sector Development Program." Among other things, this program increased the minimum capital requirement for banks from $2 million to $8 million and requires that banks prove they are qualified before they receive a charter.

The National Bank of Rwanda (BNR) is the regulatory body for the entire financial sector (excluding the capital markets which are regulated by the Capital Market Authority Council). The Rwanda Revenue Authority (RRA) is the enforcement arm of the RNB and is the entity that issues bank charters. The RRA, formed in 1998 in response to the large loss of money following the genocide, has been undergoing reform for the past seven years in an effort to better ensure a sound banking systems.

The microfinance sub sector consists of more than 50 relatively small institutions. Approximately 11% of Rwandan assets and an estimated 3.5% of the population hold accounts in those institutions. The URWEGO Opportunity Microfinance Bank (UOMB) of Rwanda, headquartered in the central district of Kigali, has offices in 27 of the 30 districts in Rwanda. Microfinance institutions (MFIs) play a crucial role in enabling a majority of the population of Rwanda access to financial services and are said to serve more than one million customers nationwide. Considering the number of depositors and borrowers, MFIs serve a larger population (88% and 90% respectively, compared to 12% and 10%) than commercial banks.

The banking sector is comprised of eight commercial banks, one primary microfinance bank, one discount house, one development bank and one mortgage bank. Commercial banks represent about 76% of the economy's total financing while micro finance institutions fill the bulk of individual banking needs. The Government of Rwanda has been actively seeking to ensure its banks meet and comply with international banking standards.

Table 6

Foreign Owned

Bank Name	Type of Bank	Ownership	Capital (000 USD)	Assets (000 USD)
ECOBANK	Commercial	100% Priv.	$9,500	$9,700
ACCESS BANK	Commercial	100% Priv.	$11,000	$90,400
FINABANK	Commercial	92% Priv.	$10,300	$64,700
KCB	Commercial	100% Priv.	$10,000	$11,200
CDH	Discount House	100% Priv.	$500	$11,800
URWEGO	Microfinance	100% Priv.	$3,600	$7,500
Total			**44,900**	**276,300**

Domestically Owned

Bank Name	Type of Bank	Ownership	Capital (000 USD)	Assets (000 USD)
Banque de Kigali	Commercial	100% Gov.	$ 30,600	$ 216,700
BPR	Commercial	98% Priv.	$ 27,500	$ 178,000
BCR	Commercial	80% Priv.	$ 15,000	$ 167,300
COGEBANQUE	Commercial	100% Priv.	$ 14,800	$ 68,900
BRD	Development	56% Govt.	$ 34,600	$ 72,500
BHR	Mortgage	84% Priv.	$ 16,700	$ 26,200
Total			**$ 139,200**	**$ 729,600**

There was high inflation in 2008 since currency in circulation increased by 28% as compared to the 20% increase in 2007. Since 10th November 2008, the National Bank of Rwanda (BNR) reference rate is based on the market rates from commercial banks and previous day's operations. The rate is determined every morning and operates as the day's average reference rate.

The distribution system also plays a large role on whether a company wants to invest in a foreign country. Currently, the Rwandan distribution system faces physical and regulatory challenges. Rwanda's physical location hinders its ability to distribute goods to and from the country. This reality is exacerbated with the lack of a railway corridor that extends to a sea port. As a result, all cargo must travel in one of three routes. 1) across the entire length of Tanzania on a two lane, often dilapidated, road to the port of Dar es Salam, typically a seven day trip. 2) across Uganda and Kenya, on a two lane, often dilapidated road that cross over two mountain passes before finally arriving at the port of Mombasa in Kenya, typically a seven day trip. The cost to ship one container carrying 39,000 pounds to either of the ports is approximately $3500 or $.08 a pound. To ship from the port to the U.S. cost an additional $3500 3) air cargo flights to Europe costing approximately $51,000 a container ($1.31 a pound).

From a regulatory standpoint, many checkpoints, weigh stations, roadblocks, and slow processing times at ports also hinder the distribution system. These obstacles combined put Rwanda at a competitive disadvantage. Rwandan importers spend roughly 40% of the value of goods on transport and insurance; the average for developed countries is 8% and 17% for least developed countries. As a consequence of a poor infrastructure, median land-locked counties have only 30% of the trade volume of median coastal countries. If infrastructure conditions improve from the 75th to the 50th percentile, trade will increase by 50%. If transport cost can be halved (better roads or railway), the volume of trade can increase by a factor of 5. The Government of Rwanda

is fully aware of the critical nature of solving its distribution issues and is working to reduce the number of days containers take traveling to and from Rwanda.

Table 7

Time For Imports (Days)	Rwanda	Uganda	Kenya	Tanzania	Burundi
Assemble import/ Bank-related Documents:	25	10	11	15	14
Time in Ports & Terminal Handling:	7	7	7	10	15
Customs Clearance at Seaport & Destination:	10	7	4	5	5
Arrange For Inland Transportation:	15	-	-	-	-
Waiting Time At Border Crossing:	2	-	-	-	-
Inland Transportation and Handling:	10	13	4	1	37
Total Time:	**69 Days**	**37 Days**	**26 Days**	**31 Days**	**71 Days**

Table 8

Time For Export (Days)	Rwanda	Uganda	Kenya	Tanzania	Burundi
Assemble/Process Documents:	17	9	13	14	14
Inland Transport:	17	18	4	2	25
Customs Clearance and Technical Control:	7	6	6	4	4
Time in Ports & Terminal Handling:	6	6	6	4	4
Total Time:	**47 Days**	**39 Days**	**29 Days**	**24 Days**	**47 Days**

Both exports and imports are analyzed in the empirical results section but it would be beneficial for future investors to also know the more recent export and import numbers as well as some information about the country's more dominant sectors. Below are charts indicating Rwanda's total annual imports in million USD followed by Rwanda's total annual exports in million USD:

Table 9

Imported Product	2007	2008
Energy & Lubricants	$ 115.7	$ 161.5
Industrial Products	88.6	139.2
Food Products	71.8	87.1
Health & Care	69.8	66.5
Transport Material	59.3	63.3
Equipment Goods	26.5	54.2
Clothing	28.6	45.0
Supplying Goods	18.6	29.4
Papers & Cartons	15.7	28.4
Other Goods	14.3	23.0
Manure	18.1	19.1
Domestic Articles	18.7	17.0
Beverages & Tobacco	5.8	9.7
Non-utility Transport	4.5	7.4
Total	**$ 556.0**	**$ 750.8**

Table 10

	Coffee	Tea	Minerals	Hides & Skins	Pyrethrum	Other Products	TOTAL
2000	$22.5	$24.3	$ 12.6	$ 0.4	-	$ 9.2	**$69.0**
2001	19.4	22.7	42.6	0.8	1.8	5.1	**92.4**
2002	14.6	22.0	15.9	2.6	1.1	8.5	**64.8**
2003	15.0	22.5	11.1	3.8	1.3	9.4	**63.1**
2004	32.2	21.6	29.3	3.4	0.6	10.8	**97.9**
2005	38.3	24.4	37.3	4.7	-	20.2	**124.9**
2006	54.0	31.9	36.6	2.0	1.9	20.9	**147.3**
2007	35.7	31.6	70.6	3.6	3.0	45.6	**190.1**
2008	47.1	40.7	91.3	2.8	0.4	86.1	**268.4**

Agriculture is still the backbone of Rwanda's economy with a bulk of the industry comprised of food crops (27% of GDP). In 2008, according to Rwanda's Ministry of Agriculture and Animal Resources, 31% of Rwanda's GDP, a majority of its exports, and over 85% of Rwanda's workforce was engaged in subsistence farming. One of Government of Rwanda's main objectives is to help people emerge from a state of under-development and poverty by achieving both economic and agricultural growth. With that in mind, agricultural products such as coffee, tea, livestock, unprocessed animal products, fish, fresh vegetables, fruits, pesticides and fertilizers are exempt from value added tax (VAT).

The future of Rwanda's agriculture sector primarily entails the acceleration of activities that develop and promote agricultural and livestock production. In response to the falling trend in productivity of crops and the minimal use and low availability of fertilizer in the country, the Government of Rwanda embarked on a plan to improve productivity and increase fertilizer availability through the Crop Intensification Program (CIP) in August 2007. The CIP program specifically targeted eight of Rwanda's thirty districts (Kirehe, Kayonza, Bugesera, Gatsibo, Musanze, Burera, Rulindo, and Gicumbi). This program has two core activities. First, bulk buying of fertilizer and seeds by the Government of Rwanda, and second, training district and sector agronomists, as well as beneficiary farmers in the application of fertilizers. After only one year, this program resulted in a 15% increase in agricultural production and a 6% increase in the production of fruits and vegetables which contributed to the 16% and 20% increase in overall food production and export crop production respectively. In 2008, food production was the highest since 2000, making it the first time in four years that Rwanda's food production has exceeded its consumption needs.

Rwanda's construction sector has seen phenomenal growth over the past 10 years and has been a major contributor to the continued growth of the country's GDP. According to the Rwanda Development Board (RDB), from 2003 to 2008, Rwanda's construction sector grew from a $100 million industry to a $350 million industry. The demand for residential construction countrywide is said to be 25,000 single family dwellings per year. The demand for commercial property is growing as well. The recent increase of foreign investments in Rwanda has created a shortage of modern office space that is fully equipped with telecommunications, utilities, and power. This rapid growth is creating opportunities for both local and foreign investors as the sector transitions from state funding to private funding.

The Construction and Construction Material Manufacturing has three key skill set requirements which are dominated by the following companies: engineers and architects (FAIR Construction, CCECC, Thomas and Pyron), construction material and hardware dealers (Cimerwa, Ruliba, Tolirwa, HIMA, Contraco, Enterprise Sebulikoko), and investors in property and real estate management (SONARWA, SORAS, CSR, CARITAS, RAMA). Construction materials and hardware dealers can be public (government run companies) or private and are usually classified as producers or merchants. Since the majority of materials used in construction are imported, merchants play an important role in the provision and distribution of construction materials and hardware.

Rwanda does not have the capacity to meet local demand for construction material. In 2007 Rwanda imported $64.6 million of construction materials and $140

million in 2008. Construction products are imported from Uganda, China and Kenya. Rwanda's geographical constraints and minimal capacity for production creates exorbitant pricing for very basic construction materials. One hundred percent of all steel is imported, as well as a majority of flooring, walling, paint, wood, ceiling, plumbing and electrical material. Roofing Uganda, a steel manufacturing company is capitalizing on the high steel demand in Rwanda with plans to open a regional distribution center in Kigali. Mid-size construction equipment is in short supply in Rwanda (pick-up trucks, transport trucks, small concrete mixers, bulldozers, graders, vibrating rollers and brick tile making machines). Most construction companies are not well capitalized and are forced to rent or lease rather than own their equipment.

Rwanda's construction material sector demand is driven by the rapid pace of expansion in both commercial and residential properties. This demand is being fueled by three forces: 1) Population growth of 2.8% combined with urban growth currently at 4% per annum (12% of the population lives in urban settings) 2) Growth of the middle class – driving the demand for residential properties 3) Diaspora (People living outside of Rwanda) are returning to Rwanda, desiring a home in their native country.

Wood combustion (cooking with wood) accounts for more than 80% of the county's energy production/consumption. Electricity represents 3% of the nation's energy consumption. Government of Rwanda identifies energy as a priority sector with a goal to produce 90% of the country's electrical energy through renewable energy sources. This could be done by shifting energy production from the intensive use of traditional sources (fossil fuels) to the use of renewable energy sources (geothermal, hydropower, wind and solar). The Rwandan consumer is currently paying $0.19 (112 RwF) pre-VAT per KWh and $0.23 post-VAT. This cost is indirectly subsidized as the Government of Rwanda pays for the capacity charges for 10 MW diesel generation and charges no import duty on diesel fuel used for electricity generation. In comparison, Ugandan's rate is $0.24 /KWh, Kenya's is $0.18 /KWh, Tanzania's is $0.11 /KWh (Tanzania's energy is highly subsidized by the government yet TANESCO is not making a profit), and the United State's average rate is $0.09 /KWh.

Rwanda's available electricity generation capacity is 60-69 MW of which roughly 50% is hydro-generated and 50% is diesel-generators (GE railway motors). 12 MW of hydropower capacity is imported from Sinelac, a generation utility owned by the governments of Rwanda, Burundi, the Democratic Republic of Congo (DRC), and SNEL (the national utility of DRC). The charts on the following page outline the country's peak available capacity for each source of electrical generation and the forecast demand growth for years 2010-2020. Rwanda currently has 20 MW of heavy fuel oil generation financed by the World Bank and 6 MW of diesel generated capacity in Jabana. Negotiations have been established for 10 MW of rented diesel generation from Aggrekko in Gikondo near Kigali.

Hydro electricity, specifically micro-hydro, provides a renewable source of energy at low cost relative to other alternative sources and could significantly reduce the need for diesel generators and power from neighboring countries. Because of the many rivers in Rwanda, micro hydro power could be an efficient solution to many of Rwandan's rural energy needs. As of 2008, 333 potential sites have been identified for micro-hydro plants with capacity ranging from 50 KW to 1 MW each. Currently, 2 micro-hydro sites have been built and 21 are under construction and 10 are scheduled for

future construction. Micro-hydro plants are environmentally friendly in that they generate power by rerouting a stream or river through a small turbine to generate power.

The electricity transmission network has a two-axis, publically-owned grid, Byumba-Kigali-Cyangugu and Gisenyi-Kigali-Kibungo, and consists of both medium voltage and low-voltage networks. The Government of Rwanda predicts that by 2012, these transmission and distribution networks will expand from 3,300 km to 5,000 km of high, medium, and low voltage networks. While transmission is poor and substations are in a deteriorating condition, they are currently being rehabilitated with donor money. The scattered population has made distribution and development of power in rural areas very difficult. The Kigali transmission grid branches throughout the city, but detailed information about the specific locations of underground cables are incomplete and frequent accidental damages occur.

Part of the government's vision for the country is to develop its most valuable resource: its people. Central to this vision is the development of a knowledge based economy capable of delivering services both domestically and globally. Rwanda is the most densely populated nation in Africa with a population of 10.4 million people in a land area of 26,340 km², and the Government of Rwanda projects that population will grow to 16 million within the next 10 years. According to the US State Department, the 2008 evaluation of Rwanda's service industry was valued at $1.45 billion and contributed to 42.7% of the country's GDP. The service industry's core services include commerce, tourism, storage, communication, and financial services. The general service industry is in its infant stages and under-developed. The demand for quality services is high yet often there are insufficient resources to meet the demand. The growth of the service industry is largely limited by lack of education, knowledge, and skills needed for a thriving service sector. In order for a service industry to have long-term success, an initial investment in the training and establishment of a service based culture for every industry must be addressed. The development and modernization of the service industry is a critical step in the development of an efficient and competitive economy. Below is a chart indicating Rwanda's current labor costs followed by current, top foreign investors in the service industry:

Table 11

Labor Type	Required Skill	Pay Rate
Level Casual	No skill	$3/day
Clerks	Lower skill	$100/month
Specialized	Graduate	$500-$1,500/month
Management	Graduate + special skills	$300-$10,000/month
Local Consultant		$150-$500/month
International		$800-$1,500/month

Mining started in Rwanda in the 1930's and has since been one of Rwanda's chief exports adding $70.6 million (40% of total export revenues) to the country's 2007 exports. In 2008, the mining sector increased revenues by 31% with mineral exports valued at $94 million. This large increase caused the mining sector to take first place in export receipts, leading both tea and coffee.

Rwanda's key mining elements include tin (from cassiterite ore), tungsten (from wolframite ore) and tantalum (from niobium-tantalite ore). At the height of production,

Rwanda exported 2,239 tons (1977) of cassiterite and 836 tones (1977) of wolframite. In the 1940s, Rwanda was producing 1% of world tin requirements. The collapse of the mining industry in the mid 1980s was a result of the financial collapse of the single company SOMIRWA which had a monopoly on all mining in Rwanda. Rwanda metal ores are of good quality and less radioactive than the average world's minerals. Pegmatite rocks, which contain rare elements such as cerium, neodymium, praseodymium, lanthanum, yttrium, and niobium are also found in Rwanda. Relatively large mining projects are at the exploratory stage, and some are extracting enough material today to pay for the exploration.

The mining industry is comprised of small cooperatives, individual apprentice miners, national companies, and international companies. Relatively large scale companies include Wolfram Mining and Processing Ltd., Pyramides, Eurorade International, National Resources Development Rwanda, Gatumba Mining Concession, Rutongo Mines Ltd., Rwanda Metals, Bay View Group, and others. Three relatively large companies are involved in gold exploration and between them have shipped tens of thousands of samples for analysis; ROGI Mining (Russian), Kivu gold (Canadian) and Transafrika (South African). Minerals are exported as concentrates.

Rwanda's mining industry currently has about 170 mining permits outstanding with a majority of these permits held by small scale dealers working below capacity. Up to three years ago, 90% of all known reserves were held by a public company. However, all the former government concessions are now in private hands. Concession agreements are available for exploration on four year terms not currently tied to mineral rights. Upon discovery of an economic deposit and completing a feasibility study the company and the government will enter negotiations for 30 year agreements.

Import tax exemption policies have been placed on all mining equipment and plant machinery. There are no tax breaks for exports, which greatly hinders the country when compared to the 10% export tax break that many neighboring countries in West Africa receive. A new mineral code and mining law was passed in June of 2009.

The Government of Rwanda is investing roughly $22.6 million (12.5 billion RwF) in the sector for 2008-2010 to strengthen sector regulations, avail new data to interested investors, support value addition to metallic ores and quarries, work to consolidate the sector, and develop a sensitization program. Operated by the Government of Rwanda, Rwanda Geology and Mines Authority (OGMR) trains, regulates, and supervises the mining sector. The government has also set a sector goal that mining should increase its exports by 250% from $38 million in 2005 to $106 million by 2012. This increase would boost employment from 25,000 to 37,000 (20%-30% women).

The Rwandan population in 2009 is estimated at 10.4 million people with a growth rate of 2.8% per year. Of that population, urban population accounts for 12% with a growth rate of 4% per year. The Government of Rwanda recognizes that urbanization is essential to sustainable economic development and projects that by 2020 approximately 30% of the population will live in urban areas. To date, only about 5% of residents in Kigali, Rwanda's capital city, own modern-style houses (tiled roofs, fired bricks, cement floors).

In 2007, Rwanda's development and public works sectors experienced a growth of 10% which left the commercial and residential real estate sector with a shortage of fully functional office spaces and residential housing. Today, demand for property is so

high that properties are booked and partially paid for long before construction has even commenced. According a real estate construction company in Rwanda that recently built out 28 new units, "all were sold well before project completion" and there is a "long waiting list and reservations" for future construction plans.

Construction and property development firms, while typically small in size, are one of the most consistent and main contributors of tax revenue in Rwanda. Figures from the Rwanda Development Board (RDB) state that from 2003-2008, investment in the construction sector experienced a 351% growth rate, from $100 million to $351 million. During this time, 35%, or 142 out of the 404 projects, were under construction. Today, 40 of the 68 operational projects for 2009 are in the real estate sector. In 2008 the general construction sector increased revenues by 51%. Taxes on rented land, residential, and commercial units are levied on net profit from generated income and paid by the property owner.

There are three main categories of land: private state land, private district land, and individual land. Private state and district owned land may be leased while individual land can be fully owned or leased. In the case of private state land, both individuals and legal persons can acquire land through applying with the Ministry of Agriculture. Land value depends on location. Prices range between $6-$26 per sq foot. Prime locations usually cost between $26-$32 per sq foot/month.

The majority of Kigali's commercial buildings are four stories tall or less. The recent increase in foreign investments in Rwanda has created a shortage of upper end office space with fully equipped telecommunications, utilities, and power. From 2003 to 2006 rent on these buildings increased between 50%- 200%. Currently, it costs roughly $46 per sq ft to rent office space and $53 per sq ft to rent retail space, per annum. To build office space costs approximately $335-$365 a sq ft. Today there is a shortage of expertise (contractors, engineers, and hardware/material dealers) available to construct commercial properties.

There is a perceived need for another five-star luxury hotel in Rwanda. The Kigali Serena Hotel is the city's premier hotel in Rwanda and a meeting place for diplomats and business people from all over the world. The hotel is located only 10 km from the Kigali International Airport with accommodations comprised of 104 air-conditioned rooms and an average room rate of $230 a night. Occupancy averages above 90%. This demand is largely driven by Non-Governmental Organizations (NGOs), business travelers, and tourists.

Lastly, political stability is noted by studies and companies alike as one of the most influential indicators of the future success of FDI. In 2007, Laza Kekic published an index called the "Democracy Index". This index measures the "set of practices and principles that institutionalize and protect freedom (Kekic, 2007)." In this index, Rwanda is ranked 118th in the World for having a government that resembles that of a democracy. Also, the Heritage Foundation and Wallstreet Journal together have created the 2009 Index of Economic Freedom. In this index, Rwanda is ranked 124th within the world and 22nd regionally. In this study, variables are rated on a 0-100 scale with 100 representing the most economic freedom. Specifically, Rwanda ranks "58.9 for business freedom, 61.2 for trade freedom, 76.8 for fiscal freedom, 76.8 for government size, 70.8 for monetary freedom, 40 for investment and financial freedom, 30 for property rights, 28 for

freedom from corruption, and 59.5 for labor freedom" (Heritage Foundation,2009). Table 12 below compares Rwanda's economic freedoms with regional countries:

Table 12

	Rwanda	Burundi	Tanzania	Kenya	Uganda
World Rank	124.0	153.0	93.0	90.0	63.0
Regional Rank	22.0	32.0	11.0	10.0	4.0
Business Freedom	58.9	34.4	48.1	66.9	58.7
Trade Freedom	61.2	63.0	75.6	71.8	75.2
Fiscal Freedom	76.8	72.5	80.6	78.6	80.4
Government Size	76.8	55.8	83.4	81.5	86.9
Monetary Freedom	70.8	72.7	73.4	74.0	78.4
Investment Freedom	40.0	40.0	60.0	50.0	50.0
Financial Freedom	40.0	30.0	50.0	50.0	60.0
Property Rights	30.0	30.0	30.0	30.0	30.0
Freedom from Corruption	28.0	25.0	32.0	21.0	28.0
Labor Freedom	59.5	64.3	49.9	63.1	87.9

IV. Empirical Results

In this study, FDI for current period, lagged one year, lagged two years, and lagged three years was run against GDP, value added to industry, exports and imports. Table 13 below identifies the indicators that showed no relationship to the presence of FDI. These indicators included Rwanda's trade sector: exports & imports.

Table 13: Indications without Significant Correlation Time Frame: 1970-2007			
		Exports	Imports
Constant	Coefficient	9.233072892	22.63146721
	Standard Error	0.731912022	1.743332285
	t Stat	**12.61500374	**12.98172896
FDI t	Coefficient	4.78337E-08	8.38256E-09
	Standard Error	4.94795E-08	1.17855E-07
	t Stat	0.966737626	0.071126293
R square		0.025303702	0.000140507
F		0.934581637	0.00505895
**significant at the 95% level *significant at the 90% level			

With both the exports and imports hypotheses, the null hypothesis must be accepted. This is reflected in the data presented in Table 13 where FDI has no significant relationship with either exports or imports. Data in Table 13-15 make the case that FDI is currently beneficial to the country of Rwanda internally yet this benefit has not yet extended to the external aspects of Rwanda's economy such as imports and exports.

Table 14

		GDP	GDP	GDP
Constant	Coefficient	1170475587	1037359656	1452303519
	Standard Error	138308868.3	165310074	204653872
	t Stat	**8.46276599	**6.27523556	**4.38208727
FDI t	Coefficient	37.56276194		35.58320438
	Standard Error	9.350101112		9.350007611
	t Stat	**4.01736424		**4.88847774
FDI t-1	Coefficient		124.6654241	
	Standard Error		57.87168519	
	t Stat		**2.154169585	
FDI t - FDI t-1	Coefficient			172.6491608
	Standard Error			63.36218972
	t Stat			**4.773739123
R square		0.30954082	0.441698127	0.459419056
F		16.13921551	5.06333249	5.064461613
**significant at the 95% level *significant at the 90% level				

Table 14 results show that the first and second null hypothesis for GDP can be rejected because data shows that FDI has both and immediate and one year lasting affect on Rwanda's GDP.

Table 15

		Industry V.A.	Industry V.A.	Industry V.A.	Industry V.A.	Industry V.A.
Constant	Coefficient	16.78861343	14.69888245	15.12742473	15.76605157	14.91315359
	Standard Error	0.976514618	1.000837056	0.962712274	0.94749477	0.981774665
	t Stat	**17.19238311	**14.68658895	**15.71333942	**16.63972410	**15.22947382
FDI t	Coefficient	6.14764E-08				7.59498E-08
	Standard Error	6.60154E-08				1.27958E-07
	t Stat	0.931244282				0.093124428
FDI t-1	Coefficient		3.67864E-07			
	Standard Error		9.86671E-08			
	t Stat		**3.728335806			
FDI t-2	Coefficient			3.47875E-07		
	Standard Error			9.52075E-08		
	t Stat			**3.653857193		
FDI t-3	Coefficient				2.98494E-07	
	Standard Error				9.3212E-08	
	t Stat				**3.202315438	
FDIt-FDIt-1	Coefficient					7.72515E-07
	Standard Error					1.02614E-07
	t Stat					**3.998943743
FDIt-FDIt-2	Coefficient					3.48675E-07
	Standard Error					1.90415E-07
	t Stat					**3.742609732
FDIt-FDIt-3	Coefficient					8.95483E-07
	Standard Error					3.72848E-07
	t Stat					**4.000112439
R square		0.023522685	0.28426072	0.281953174	0.237079317	0.237101365
F		0.867215913	13.90048789	13.35067239	10.25482417	11.0752101
**significant at the 95% level *significant at the 90% level						

Table 15 reports that the null hypothesis must be accepted since FDI does not have an immediate affect on the value added to the industries in Rwanda. The rest of the null hypotheses can be rejected for Industry Value Added because after one year and for up to three years after FDI implementation, FDI positively impacts Industry Value Added. This means that while FDI does not immediately add value to Rwanda's industries, yet after one year FDI becomes positively correlated with the value added and this lasts for the next three years.

The Methodology section of this paper also gives a list of indicators that show Rwanda's current economic environment as becoming a better location for FDI each year. The country has infrastructure branching nation-wide with about 19% of the road system currently paved and the rest drivable. While Rwanda's current financial structure is still young, it remains stable and is on the path for internal sustainability. Corporate taxation is currently higher that most countries but is below average when compared regionally. Again, while distribution networks are not timely when compared worldwide, these networks rank above average when compared regionally. Agricultural, manufacturing, and service sectors are all showing signs of growth and increase in their

share of Rwandan GDP. Lastly, both Kekic and the Heritage Foundation give statistics that show Rwanda as increasing in democracy and score on the freedom index.

V. Conclusion

This paper set out to establish the impact that FDI has on the Rwandan economy. The results of this research show that FDI has a favorable contemporaneous and one year following impact on GDP. The results also demonstrate that FDI has a favorable impact on the value added areas of the economy contemporaneously and the three following years. However, the study showed no relationship between FDI and the trade sector. The data gathered and tested failed to generate evidence that FDI alters export or imports significantly.

These results have important implications. Given the Heritage Foundation's high safety rating for the country, it would appear that Rwanda is a good candidate for FDI with major benefits generated within the country for this point and time. The political stability of Rwanda since the 1994 genocide has seen substantial annual economic growth. It would be important for all potential investors to note that while FDI has a positive impact inside the country, there is no data supporting a positive external impact at this time. If the company or country is looking to invest in Rwanda for the purpose of ROI, this study does not provide any findings that would support or negate this initiative.

Bibliography

Brewer, T.L. (1993), "Government Policies, Market Imperfections and Foreign Direct Investment", *Journal of International Business Studies*, Vol. 24 No.1, pp.101-20.

Cheng, L.K., Kwan, Y.K. (2000), "What are the Determinants of the Location of Foreign Direct Investment? The Chinese Experience", *Journal of International Economics*, Vol. 51 No.2, pp.378-400.

Cleeve, Emmanuel (2006), How Effective are Fiscal Incentives to Attract FDI to Sub-Saharan Africa? Manchester Metropolitan University, United Kingdom.

Dougherty, Christopher (2007), Introduction to Econometrics: Third Edition. Oxford University Press, Ch. 11, pp.327-330.

Dhakal, Dharmendra, Franklin, and Kamal (2007). "Foreign Direct Investment and Transition Economies: Empirical Evidence from a Panel Data Estimator." *Economics Bulletin*, Vol. 6, No. 33 pp. 1-9.

Florence, Jaumotte (2004), "Foreign Direct Investment and Regional Trade Agreements: The Market Size Effect Revisited," IMF Working Papers 04/206, International Monetary Fund.

Heritage Foundation (2009), "Economic Opportunities and Prosperity: The 2009 Index of Economic Freedom." Retrieved from http://www.heritage.org/index/Ranking.aspx

Kekic, Laza (2007), "The Economist Intelligence Unit's Index of Democracy," Democracy Index.

Lamech and Saeed (2003). "What International Investors Look For When Investing in Developing Countries.", Energy and Mining Sector Board Discussion Paper: Paper No. 6.

Lim, D. (1983), "Fiscal Incentives and Direct Foreign Investment in Less Developed Countries", *Journal of Development Studies*, pp.207-12.

Loewendahl, H. (2001), "A Framework for FDI Promotion", *Transnational Corporations*, Vol. 10 No.1, pp.1-42.

Nigh, D. (1985), "The Effect of Political Events on US Direct Foreign Investment: A Pooled Time Series Cross-Sectional Analysis", *Journal of International Business Studies*, Vol. 16 No.1, pp.1-18.

Nunnenkamp, Peter (2002). Foreign Direct Investment in Developing Countries: What Economists (Don't) Know and What Policymakers Should (Not) Do!, CUTS; Jaipur, India.

Root, F.R., Ahmed, A.A. (1978), "The Influence of Policy Instruments on Manufacturing Direct Foreign Investment in Developing Countries", *Journal of International Business Studies*, pp.81-93.

Woodward, D.P., Rolfe, R.J. (1993), "The Location of Export-Oriented Foreign Direct Investment in the Caribbean Basin", *Journal of International Business Studies*, Vol. 24 No.1, pp.121-44.