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國際學碩士學位論文

**Does Trade liberalization attract more
Foreign Direct Investment? :
the case of Latin America**

貿易自由화가 外國人直接投資誘致에
미치는 影響 分析:
中南美 事例를 中心으로

2013年 8月

서울大學校 國際大學院
國際學科 國際地域學 專攻

朴 珉 景

**Does Trade liberalization attract
more Foreign Direct Investment?:
the case of Latin America**

Thesis by

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Graduate Program in International Area Studies
For the degree of Master of International Studies

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Graduate School of International Studies
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Seoul, Korea

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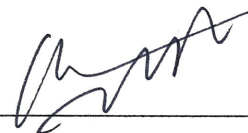
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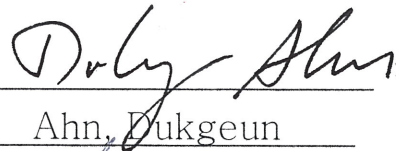
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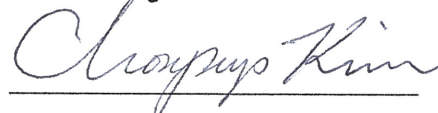
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ABSTRACT

Does Trade liberalization attract more Foreign Direct Investment? : the case of Latin America

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There has been dramatic increase of Foreign Direct Investment Latin America region, which coincides with the period of trade liberalization. The main objectives of this paper are, to examine the relationship with various factors with respect to trade liberalization in attracting FDIs in LAC and secondly, to explore the pattern of FDIs in the region.

The analysis in this paper uses a panel data that allows panel data regression, which would give a more concrete result. The panel data regression results indicate that both market size and openness to trade and tariff has significant influence in FDIs in the region which weakens the tariff jumping argument. Moreover, natural resource did not have significant impact different from what expected. This paper suggests that market-seeking and efficiency seeking FDIs coexist in Latin America and the size and stability of the market as well as the trade liberalization contribute to attract more investment. In that sense, the regional integration and FTAs could be an opportunity for the region.

Keywords: Trade liberalization, Tariff Reduction, Foreign Direct Investment, Latin America

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CHAPTER I. INTRODUCTION

Major studies have agreed on that Foreign Direct Investment (henceforth FDI) is a key boost for the developing economies enabling them to achieve greater and faster economic growth. (Kang and Huang, 2012) There has been a rapid growth of FDI during the last decade especially with the trend of globalization, thus it has been considered as an effective channel to transfer technology and foster growth in developing countries (Kok and Ersoy, 2009).

1.1 Recent Trend

In 2012 FDI flowing into Latin America and the Caribbean hit a new record high of US\$ 173.361 billion, having grown for the third year in a row. This reached a 12 percent of total international FDI, while they were set in an international context of falling global FDI flows. The report of ECLAC (2013) attributes the World's falling FDI flows to the Macroeconomic uncertainty¹ in

¹ ECLAC (2013), "The differing performances of FDI going to the developed countries and to the Latin American and Caribbean region reflected several processes. First, the economic crisis and uncertainty in the developed economies has been displacing investment towards emerging markets. Second, local conditions in Latin America are favorable and particularly attractive to global investors at present. Natural resources are enjoying a long price boom, while the region's domestic markets have seen several years of steady growth and offer business opportunities for services development (telecoms, commerce and financial services)"

the U.S and the E.U behind this drop in global investment, which was sharpest in flows to developed countries (22.5%). Moreover, the developing countries as a whole also saw a decline in inward FDI, although the drop was much more modest (3%).

<Table 1-1> Flow, variation and distribution of global foreign direct investment, by region, 2008-2012

Region	Investment Flows: billions of dollars (Share: %/World Total)				
	2008	2009	2010	2011	2012 ²
World	1791	1198	1381	1604	1311
Developed economies	1020 (57)	606 (51)	675 (49)	808 (51)	549 (42)
- European Union	542 (30)	357 (30)	358 (26)	440 (27)	287 (22)
- United States	306 (17)	144 (12)	198 (14)	227 (14)	147 (11)
- South-Eastern Europe and the Commonwealth of Independent States	121 (7)	72 (6)	75 (5)	94 (6)	81 (6)
Developing economies	650 (36)	519 (43)	631 (46)	703 (44)	680 (52)
- Latin America and the Caribbean	138 (8)	83 (7)	123 (9)	164 (10)	170 (13)
- Financial centers in the Caribbean	-17 (-1)	-10 (-1)	-48 (-3)	-70 (-4)	-88 (-7)
- Africa	58 (3)	53 (4)	43 (3)	43 (3)	46 (3)
- Middle East	92 (5)	66 (6)	59 (4)	49 (3)	47 (4)
- Asia and the Pacific	291 (16)	251 (21)	339 (25)	394 (25)	352 (27)

Source: Economic Commission for Latin America and the Caribbean (ECLAC)³

² Estimates

1.2 Evolution of FDIs in Latin America

The first FDI boom in Latin America was in the late 80s, however the region did not take advantage of it. Inflows of FDI into the region remained fairly stable from 1980 through 1993, increasing at an annual rate of less than 2%.

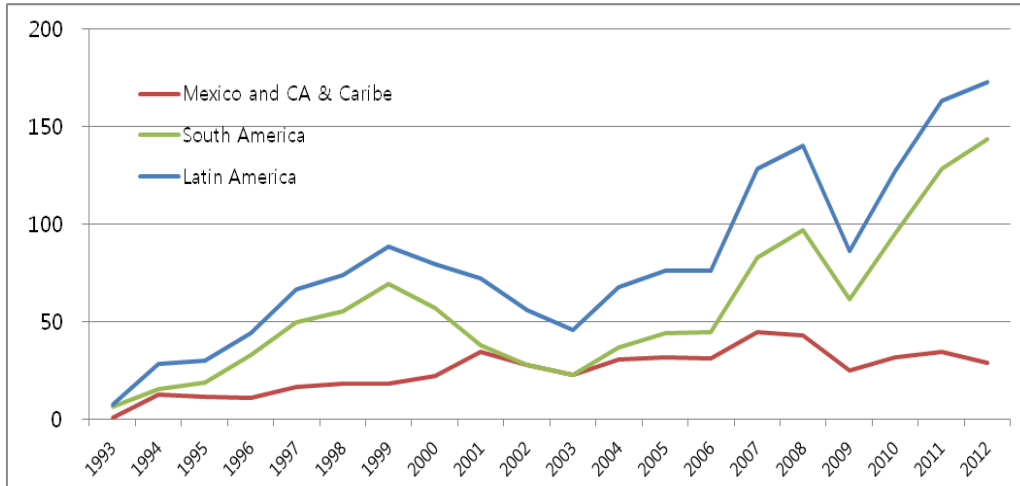
It was not until 1993 that the real boom of FDI began after many decades of sluggish inflows. Many countries in the region suddenly became hosts to massive flows of FDI. By the end of the decade, FDI was the major source of foreign capital in Latin America, greatly exceeding the value of financing obtained through emerging stock markets, bank borrowing and other forms of external finance. <Figure 1-1> demonstrates that the FDI flows into the region have been growing at almost 30% per year since 1993. As a result of the latest boom, Latin America has regained the share in FDI flows it had lost during the late 1980s.

<Figure 1-1> also gives the details of the patterns of FDI in Latin America dividing it into South and Central region. The graph shows that South American region is getting more FDI inflows which is logical taking into consideration the number and the significance of the size in Southern region.

³ On the basis of official figures; United Nations Conference on Trade and Development (UNCTAD), World Investment Report 2012. Towards a New Generation of Investment Policies (UNCTAD/WIR/2012), Geneva, July 2012; and Global Investment Trends Monitor, No. 11, Geneva, 2013; FDI in Figures, Organization for Economic Cooperation and Development (OECD), Paris, 2013.

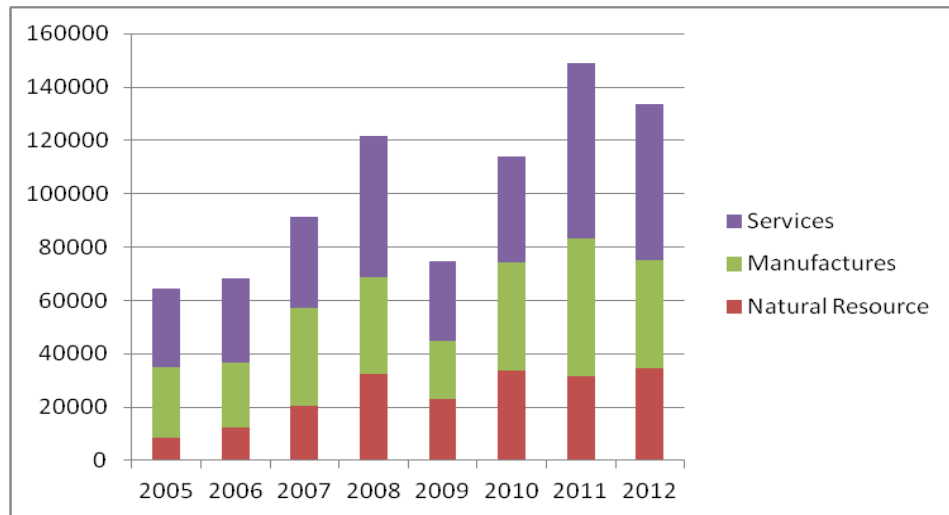
In fact, among the 34 LAC countries, Brazil, Chile, Mexico, Argentina, Peru and Colombia always have been major recipients of FDIs.

<Figure 1-1> Evolution of FDI inflows to Latin America (billions US\$)



Source: ECLAC (2013)

<Figure 1-2> Recent trend of FDI inflows to Latin America by sector



Source: ECLAC (2013)

<Figure 1-2> demonstrates the recent trend of FDI inflows to LAC by sector and we could observe that the service sector is expanding its proportion, which is different from the general assumption on the LAC countries, that investment on the Natural resource would be the highest in the region. This is the fact already mentioned from the ECLAC(2013) on the report.

With these background and recent trends in mind, this paper attempts to examine the relationship between trade liberalization and FDI in LAC region, based on the fact that the FDI boom coincidence with the period of Trade reforms in 1990s.

The two main research questions in this paper are as followings:

1. What would be the major factor of trade liberalization related with FDI behavior in Latin America?
2. How would be the recent pattern of FDI in LAC region?

To deal with and prove the main hypothesis, the rest of the paper is organized as follows. Chapter 2 reviews previous related literature on the variety of foreign direct investment and causal link of trade liberalization and investment. In chapter 3, the trade liberalization in Latin America will be presented. Chapter 4 will show the empirical analysis on the relation between the factors of the trade liberalization and foreign direct investment in Latin America. The conclusion stresses out the relation between trade liberalization and FDI in the region and gives its implications for further studies.

CHAPTER II. LITERATURE REVIEW

2.1. Motives for Foreign Direct Investment⁴

Dunning(1993) has classified the motives for firms to engage in foreign investment in four groups as follows, based on the standard OLI approach which includes Ownership, Location and Internalization advantages.

- 1) **Market seeking FDI** could imply a deeper involvement of the firm, following the successful export flows, or the expansion of the firm to a new market. The main reason behind market seeking FDI would be the transportation costs and government regulations⁵. However, Dunning (1993a: pp.58-59) suggested that strategic reasons may also be associated with this type of FDI; Following the clients abroad and the need to localize their products or the reduction of transaction costs.

Another motivation for market-seeking takes place when producers have saturated sales in their home market, or when they believe overseas investments bring higher returns than additional

⁴ Dunning(1993) and University of Thai Chamber of Commerce

⁵ UTCC(University of Thai Chamber of Commerce)

investments at home. High technology goods are often the major target of this case. Sutherland(1998) noted, “The minimum size of market needed to support technological development in certain industries is now larger than the largest national market”

- 2) **Natural resources seeking FDI** is based on that resources are tend to be location specific. During the 1800s and early 1990s, many industrialized countries invested larger amount to the less developed countries in search for the cheap and safe supply of natural resources (Dunning, 1993a). And the foreign facility may be able to obtain superior or more economic access to the inputs of production such as land, labor, capital, and natural resources.

- 3) **Efficiency seeking FDI**⁶ can be divided into two; First of all, firms often seek to increase their cost efficiency by transferring production, totally or in part, to low labor costs locations. This is most frequent type of efficiency seeking FDI and is likely to be observed in industries where unskilled or semi-skilled labor represents an important part of the production costs. Common examples are US investment in Mexico’s *maquiladora*.

⁶ University of Thai Chamber of Commerce

The second type of efficiency seeking FDI corresponds to investment targeting the operations of existing MNEs. However, prior market seeking FDI or costs reducing FDI is a pre-condition for this investment type. Exchange rates fluctuation may also lead the firm to shift the allocation of its resources

- 4) **Strategic asset seeking FDI** could be the fastest growing of the four motives for overseas investment, (Dunning (1994) Different from other motives for FDI, this does not imply the exploitation of an existing ownership advantage of the firm. Instead, FDI may encourage firm to build the ownership advantages that will support its long-term expansion both at home and abroad. Moreover, strategic asset seeking investment may not involve strengthening the firm's position, but rather to weaken the competitive position of its competitors (Dunning, 1993a). Such as distribution networks or new technology, the establishment of partnerships with other existing foreign firms that specialize in certain aspects of production

2.2 Vertical FDI

Helpman (1984) and Krugman (1985) first presented model of vertical FDI where the firms localize “*each ‘stage’ of production to take advantage of international differences in factor prices.*”⁷ The vertical FDI normally includes resource-seeking, efficiency-seeking and, in some instances, the asset-seeking categories of FDI. This gives the implication that there would be no FDI taking place between countries with similar factor endowments. This type of FDI is usually seen in America and Asia.

Vertical FDI has a characteristic of complementary of trade. Levy(2002) pointed out that barriers to trade discourage vertical FDI by increasing the transaction costs involved in a vertical integration strategy . Speaking with Regional Integration Agreements, the reduction of trade barriers is preferential, thus the impact will be larger since transaction costs are reduced only for member countries, making them relatively more attractive as location for investment ⁸.

⁷ Lee (2002)

⁸ Lee (2002)

2.3 Horizontal FDI

Contrary to Vertical FDI, Horizontal FDI is mainly characterized as market-seeking behavior and some instance, the asset-seeking categories where the firms invest abroad producing homogeneous good in multiple production facilities. The volume of horizontal FDI depends on the interplay between firm-level fixed costs, plant-level fixed costs, and trade costs. Thus Horizontal FDI is less likely to be found among countries with very different factor proportions.

In this case, High trade barriers increase the cost of serving a local market through trade, and thus increase the incentives of jump the tariffs establishing foreign affiliates to serve the local market. That is to say, FDI will arise when trade costs are large because firms have tariff-jumping advantage. One could say that Horizontal FDI is a substitute for trade.

CHAPTER III. TRADE LIBERALIZATION IN LATIN AMERICA

The 1990s in Latin America were a decade of intense structural reform as well (Singh et al. 2005). The first years of the decade saw the implementation of various major macroeconomic stabilization programs that were successful after much trial and error⁹.

<Table 3-1> Reformers by the Timing of Trade Reforms

Early Reformers	Second-phase Reformers (1986-1990)	Third-phase Reformers (1991-1996)	Non-reformers
Chile (1991 ¹⁰) Mexico (1986) Bolivia (1985)	Costa Rica Uruguay	Argentina Brazil Colombia Guatemala Nicaragua Paraguay Peru Venezuela	Ecuador

Source: Edwards, retake from University of Minnesota

⁹ Campos et al. (2008)

¹⁰ Perry (2006): Chile first liberalized in 1975-6, though this was followed by backtracking after the debt crisis during 1983-1985 and liberalization since then. For the purposes of graphs showing developments before and after liberalization we are using 1985 here as the date of definitive liberalization. Similarly, we are using 1989 as the date for Argentina's definitive liberalization and not the late seventies failed liberalization.

Macroeconomic stability paved the way for the adoption, implementation, and deepening of important structural reforms. Aggressive programs of trade liberalization (e.g., Chile) were implemented, privatization programs were adopted, and the liberalization of labor and credit markets were pursued with different degrees of success across the region.

The Latin American and Caribbean trade reforms were characterized by four basic elements¹¹; First, the reduction of the coverage of nontariff barriers such as quotas and prohibitions. Secondly, reduction of the average level of import tariffs is also significant variable for the reform. Reduction of the dispersion for the tariff structure is important as well, and lastly reducing or eliminating export taxes is major factor for the liberalization.

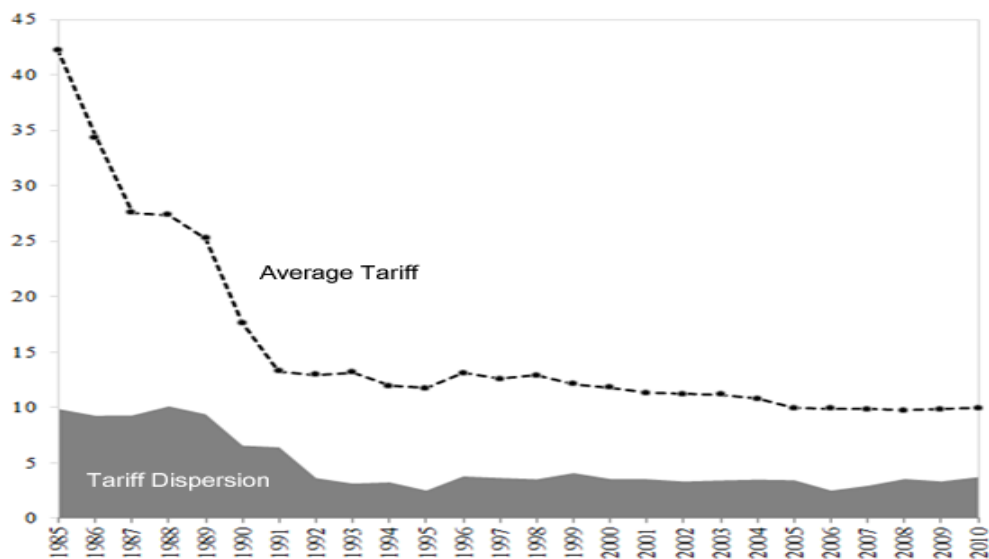
Latin America and Caribbean region has made great progress in reducing barriers to trade in recent years through multilateral trade negotiations¹², regional and bilateral efforts and unilateral measures. Between the mid-1980s and 1990s the region unilaterally reduced its average external tariff from over 40% to 12%. The average maximum tariffs in the region fell from more than 80% to 40% with only two countries presently applying maximum tariffs of up to 100% on a small number of products. Tariff

¹¹ University of Minnesota

¹² Kuwayama (2001)

dispersion, on average, has declined from 30% in the mid-1980s to a low of 9% today. Both the highest average rate and the highest dispersion rate, as measured by the standard deviation, are currently under 15% (IDB, 2000).

<Figure 3-1> Evolution of Average Tariff and Tariff Dispersion (1985-2010)



Source: Inter-American Development Bank (IDB)

<Figure 3-1> shows the drastic reduction of Average tariff and tariff dispersion in Latin America since the trade liberalization period as of today. These reductions in the tariff rates have been very fast, in many countries it took only one year to go from very protective levels to very low levels of nominal protection. As for the tariff dispersion, the ISI strategies created a highly dispersed protective structure.

“The region also actively participated in the Uruguay Round and all Latin American countries were members of the WTO by the end of the decade. Meanwhile, there was a parallel wave of new reciprocal free trade and integration arrangements. These factors caused, or were caused by, an upsurge of international trade in the 1990s - especially on the import side- until the Asia crisis, and a marked increase in intra-regional trade towards the end of the decade. Government authorities have often resorted to regional integration to signal their continued commitment to liberalization, even when economic conditions for further unilateral opening are difficult, or when reciprocal multilateral initiatives are in a transition phase, as has been the case since the end of the Uruguay Round.” (IDB, 2000)

<Table 3-2> Overall statistics of Trade Liberalization in LAC

Country	GATT	WTO	Trade Liberalization	Pre-liberalization		Post-liberalization	
				Tariff rate	Dispersion	Tariff rate	Dispersion
Argentina	1967	1995	1991	42.0	15-115	12.5	5-22
Bolivia	1990	1995	1985	12.0		10.3	5-10
Brazil	1948	1995	1991	51.0	0-105	17.32	0-65
Chile	1949	1995	1976	35.0	35	11.33	11
Costa	1990	1995	1986	53	0-1400	14.30	5-20

Rica							
Dominican Rep.	1948	1995	1992			16.70	
Ecuador		1996	1991	37.0	0-338	11.29	2-25
El Salvador	1991	1995	1989	20.0		9.38	5-20
Guatemala	1991	1995	1988	50.0	5-90	10.27	5-20
Honduras	1994	1995	1991	41.0	5-90	8.90	5-20
Mexico	1966	1995	1986	24.0	0-100	12.53	0-20
Peru	1951	1995	1991	37.6	0-120	16.80	5-25
Uruguay	1953	1995	1990	32.0	10-55	14.00	12-24
Venezuela	1990	1995	1996	37.0	0-135	14.31	0-50

Source: Moreno & Perez, ECLAC(2009)

<Table 3-2> shows the overall status of liberalization of Latin American countries. As mentioned earlier, the majority of reform took place in 1990s. Almost of the countries have joined WTO in 1995, although Argentina, Brazil, Chile, Dominican Republic, Peru and Paraguay became the members of GATT around 1950s. The table also shows that the year of trade liberalization of each Latin country and the drastic reduction of tariff and change in the tariff

dispersion. Also <Table 3-3> demonstrates the list of Free Trade Agreements taking place up to date in Latin America. Apart from customs unions such as Andean Community, CARICOM¹³, CACM¹⁴ and MERCOSUR, each Latin country is expanding its potential size of market by reducing tariff with the FTAs.

<Table 3-3> Free Trade Agreements in Latin America¹⁵

Countries	Partner countries	Countries	Partner countries
Bolivia	Mexico (2010 ¹⁶)	Nicaragua	Taiwan (2008)
CARICOM	Costa Rica (2004* ¹⁷) Dominican Republic (1998*)	El Salvador	Taiwan (2007*)
		Guatemala	Taiwan (2005)
CARIFORUM	European Union (2008)	Honduras	Taiwan (2007*)
Central America	Chile(1999*) Dominican Republic (1998*) Mexico (2011*) Panama (2002*)	MERCOSUR	Israel (2007*) Peru (2005) Bolivia (1997) Chile (1996)

¹³ Caribbean community

¹⁴ Central American Common Market

¹⁵ As of July 2013

¹⁶ Date of Entry into Force of the Agreement

¹⁷ *this mark refers the date of signature not having entered into Force

Chile	Australia (2009) Canada (1997) China (2006) Colombia (2009) EFTA (2004) EU (2003) Japan (2007) Korea (2004) Malaysia (2012) Mexico (1999) New Zealand, Singapore and Brunei Darussalam P4 (2005*) Panama (2008) Peru (2009) Turkey (2011) United States (2004)	Mexico	EFTA (2001) EU (2000) Israel (2000) Japan (2005) Nicaragua (1998) Northern Triangle (2000*) Peru (2012) Uruguay (2004)
		NAFTA	US-CANADA- MEXICO (1994)
		CAFTA	Central America- Dominican Rep.-US (2004*)
Colombia	Canada (2011) EFTA (2011) Mexico (1994*) Northern Triangle (2007*) United States (2012)	Panama	Canada (2013) Peru (2012) Singapore (2006) Taiwan (2004) United States (2012)
Costa Rica	Canada (2002) China (2011) Mexico (1995) Peru (2013) Singapore (2013)	Peru	Canada (2009) China (2010) EFTA (2011) EU (2013) Japan (2012) Singapore (2009) South Korea (2011) Thailand(2011) United States (2011)

Source: SICE. Foreign Trade Information System

CHAPTER IV. METHODOLOGY AND HYPOTHESIS

4.1 Methodology

In order to explore the relationship between trade liberalization and other different variables, the panel least squares model is used in this paper. The data consist of 108 countries and time period from 1993 to 2011. 34 Latin America and Caribbean Countries¹⁸ were included due to the availability of the data. Also, for each year, the countries with FDI inflows lower than 10 million dollar are excluded in order to eliminate possible outlier countries that could have odd effect on the regression result.

4.1.1 Basic Regression Equation

The following equation is used to test the inverse relationship between Trade liberalization and FDI inflows related variables.

¹⁸ I have selected 34 Latin America and Caribbean countries as follows based on the criteria of World bank and ECLAC/CEPAL; Central and Caribbean region(Antigua and Barbuda, Bahamas, Barbados, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti , Honduras, Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago) and for South America(Argentina, Bolivia, Brazil, Chile, Colombia, Paraguay, Peru, Uruguay, Venezuela)

Ln(FDI inflows) =

$$\beta_0 + \beta_1 \ln(\text{GDP current US\$}) + \beta_2 \text{GDP growth} + \beta_3 \text{Inflation} + \beta_4 \text{RealExchangeRate} + \beta_5 \text{Government Effectiveness} + \varepsilon$$

FDI inflows in current US\$ is used as a dependent variable. Eichengreen and Irwin(1997) have proposed way to deal with the problems in case of the datas in minus simple working with $\log(1+\text{trade})$, instead of the log of trade. Thus, in many cases adding 1 to the FDI inflows before taking log was well known. However, I decided to take the data of FDI inflows over a million dollars, instead of adding 1 to all data in order to take countries with the significant importance of the economy.

In this paper, Log of current GDP and the GDP growth will be used in the same regression equation as controlling variables. As many literatures say, GDP is the traditional determinants of investment to measure the size of the host market. Inflation and the Real Effective Exchange rate (computed by Bruegel) are also important factors for the investment which imply the macroeconomic stability of the region. As a measure of political stability, Government effectiveness was also used as an independent variable for the regression analysis.

4.1.2 Trade Openness and Natural resource indicators

In order to answer the research question of the relationship between the tariff and trade openness, I have added 3 more variables to the regression model, Openness to trade (sum of import and export divided by GDP) to measuring the portion of trade in the economy and the weighted tariff.

Ln(FDI inflows) =

$$\beta_0 + \beta_1 \ln(\text{GDP current US\$}) + \beta_2 \text{GDP growth} + \beta_3 \text{Inflation} + \\ \beta_4 \text{Government Effectiveness} + \beta_5 \text{RealExchangeRate} + \beta_6 \text{Openness to} \\ \text{Trade} + \beta_7 \text{WeightedTariff} + \beta_8 \text{Natural Resource} + \varepsilon$$

4.1.3 Overall Variables

Overall, eight different variables are used in this panel regression analysis. <Table 4-1> summarizes the variables used in this paper. In addition to this, Natural resource dependence is used. It is usually measured by the degree of dependence in terms of primary exports as a percentage of GDP. So export dependence on natural resources is computed by dividing the share of commodity exports by the total exports of a country.¹⁹

¹⁹ Share of SITC 0 to SITC 4 exports in total export amount

<Table 4-1> Overall Variables

Variable	Definition	Source
FDI inflows (log)	Foreign Direct Investment inflows to the country	World Bank, ECLAC
GDP (log)	Gross Domestic Product (current\$)	World Databank
GDP growth (%)	Growth rate of GDP (%)	World Databank
Real Effective Exchange Rate	The development of the real value of a country's currency against the basket of the trading partners of the country. 2007 = 100	Bruegel
Inflation	The consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services	World Databank
Government Effectiveness*	The quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Ranging from approximately 0 to 100	World Databank
Openness to trade	trade(sum of import and export)/GDP	World Databank
Weighted Tariff	Weighted average tariff to all products (%)	World Databank
Export Dependence on Raw Material	The share of commodity exports to the total exports of a country.	Computed based on UN Comtrade Data

* Note: World Databank dataset does not include the data of the variables 'Control of Corruption' and 'Government Effectiveness' for year 1997 and 1999. The average of 1996 and 1998 values is used as a proxy for year 1997 and the average of 1998 and 2000 values is used for year 1999.

4.2 Hypothesis

The main focus in this paper is to examine the relation between trade liberalization and the investment and to explore the type of FDIs taking place in the region. Thus, I have set main hypothesis as below.

Trade Liberalization: The inflows of Foreign Direct Investment in Latin America have increased after Trade reforms in the region. Thus, the level of Openness of trade must be positively correlated with FDI because it shows the relation with the country's foreign capital. Previous graphs show that Trade pattern seems to be correlated with the recent trend of FDIs.

Hypothesis1. A country that is more open for trade is expected to also be more open to foreign capital. – OPENNESS.

Hypothesis2. In that case, the trade cost(tariff, non-tariff, transport cost) might hinder?

Market Size: as many literatures say, GDP is the traditional determinants of investment to measure the size of the host market. Previous graphs demonstrate the similar patterns of increase of GDP and FDIs

Hypothesis3. the bigger the market, the more will receive host countries

Economic stabilities: 1) The rate of inflation is one of the main economic elements to show the level of economic stability in a country. Investors are more likely to invest in more stable economies with a lesser degree of uncertainty.

Hypothesis4. inflation/Government effectiveness to have negative/positive effect in attracting FDIs, respectively.

Natural Resource in Latin America: Many studies have considered that Latin America, as resource-abundant countries attracts more investment.

Hypothesis5. The raw material exporters would receive more investment?

CHAPTER V. EMPIRICAL ANALYSIS RESULTS

A panel data analysis is conducted to test the theoretical models that are previously described in Chapter IV. All the analysis has the time frame of 1993 through 2011 and includes 34 Latin American and Caribbean countries.

5.1 Basic Model

<Table 5-1> Basic Model

Independent Variables	Basic Model
GDP current US\$ (log)	0.8428 *** (41.9667)
GDP growth (%)	0.03188 *** (2.9974)
Inflation	-0.0132 ** (-2.0559)
Government Effectiveness	0.01843 *** (8.5541)
Constant	-0.595
No. of Observations	421
R ²	0.82

(Standard error in parentheses; *, **, ***: 10%, 5% and 1% level of significance.)

Source: World Databank and UN Comtrade

<Table 5-1> illustrates the empirical result of the basic model. The signs of coefficients of each variable resulted as expected. With every other variables being equal, *ceteris paribus*, size of GDP and the growth rate of GDP have

positive effect to attract FDIs. For macroeconomic stability, the inflation has significant and negative effect to the FDI inflows. Speaking of the political stability, measured by government effectiveness in this paper also seems to attract more FDIs according to the regression analysis.

5.2 Trade Liberalization variables

<Table 5-2> Regression with Trade Openness

Independent Variables	Openness
GDP current US\$ (log)	0.9076 *** (35.2901)
GDP growth (%)	0.0248 ** (2.2811)
Inflation	-0.0123 (-1.9075)
Real Effective Exchange Rate	-0.0055 *** (-4.3147)
Government Effectiveness	0.0177 *** (8.1329)
Openness to Trade	0.0056 *** (3.8136)
Constant	-2.5095
No. of Observations	405
R ²	0.83

(Standard error in parentheses; *, **, ***: 10%, 5% and 1% level of significance.)

Source: World Databank

<Table 5-2> summarizes the results of regression with openness to trade variable. Although the original variables have the same sign and significance, the result implies that trade would attract more investment in the region. That is, trade might be complementary to investment, not substitute.

<Table 5-3> Regression with Trade Openness and Tariff

Independent Variables	With Openness and Tariff
GDP current US\$ (log)	0.8301 * (27.5080)
GDP growth (%)	0.0310 *** (2.4547)
Inflation	-0.0051 (-0.7028)
Government Effectiveness	0.0184 *** (6.7249)
Openness to Trade	0.0035 ** (2.0410)
Weighted Tariff	-0.0292 *** (-3.1282)
Constant	-0.3239
No. of Observations	283
R ²	0.85

(Standard error in parentheses; *, **, ***: 10%, 5% and 1% level of significance.)

Source: World Databank

Meanwhile, <Table 5-3> shows the same regression model as <Table 5-2> except the weighted tariff variable. The main focus of this paper lies here, the result shows that the tariff has quite significant and negative effect on the

FDIs in LAC. The result is almost identical as the previous regression with openness to trade that the sign of coefficient of weighted tariff is negative, that is, when the tariff is high, FDIs would decrease. This leads to the conclusion that trade is complementary to investment in overall Latin America weakening the tariff-jumping argument. Considering the fact the major Latin American countries were regarded as place to tariff-jumping FDI, this would be new phenomena.

On <Table 5-4> I have added the final variable related to natural resource based on the recent studies on the resource boom in Latin America. Different from the expectation that natural resource would have significant and positive impact on the FDIs, the result is unclear in this case. This might be linked to the recent trend of increasing investment in the service sector such as telecommunication and financial services rather than natural resources in the region as mentioned earlier. (ECLAC, 2013)

Overall, the variables representing the size and stability of market such as GDP and GDP growth and government effectiveness have significant and positive relation to the investment as expected. For the openness to trade and tariff, the regression result showed quite significant impact. And the export dependency on Raw Material was not highly correlated to the FDI inflows contrary to the expectation. As <Table 5-5> shows, there is no major difference such as sign change across each regression.

<Table 5-4> Regression with Trade and Natural Resource

Independent Variables	With Openness and Tariff
GDP current US\$ (log)	0.8334 *** (27.2905)
GDP growth (%)	0.0325 ** (2.5372)
Inflation	-0.0048 (-0.6652)
Real Effective Exchange Rate	-0.0024 (-1.4062)
Government Effectiveness	0.0183 *** (6.6353)
Openness to Trade	0.0035 ** (2.0410)
Weighted Tariff	-0.0299 *** (-3.1790)
Natural Resource	-0.0039 (-0.7276)
Constant	-0.3804
No. of Observations	283
R ²	0.85

(Standard error in parentheses; *, **, ***: 10%, 5% and 1% level of significance.)

Source: World Databank

<Table 5-5> summarizes the results of each regression equation

<Table 5-5> Overall Regression Model

Independent Variables	Openness	With Openness and Tariff	Trade and natural resource
GDP current US\$ (log)	0.9076 ***	0.8301 ***	0.8334 ***
	(35.2901)	(27.5080)	(27.2905)
GDP growth (%)	0.0248 **	0.0310 ***	0.0325 **
	(2.2811)	(2.4547)	(2.5372)
Inflation	-0.0123	-0.0051	-0.0048
	(-1.9075)	(-0.7028)	(-0.6652)
Real Effective Exchange Rate	-0.0055 ***	- -	-0.0024
	(-4.3147)	- -	(-1.4062)
Government Effectiveness	0.0177 ***	0.0184 ***	0.0183 ***
	(8.1329)	(6.7249)	(6.6353)
Openness to Trade	0.0056 ***	0.0035 **	0.0035 **
	(3.8136)	(2.0410)	(2.0410)
Weighted Tariff	- -	-0.0292 ***	-0.0299 ***
	- -	(-3.1282)	(-3.1790)
Natural Resource	- -	- -	-0.0039
	- -	- -	(-0.7276)
Constant	-2.5095	-0.3239	-0.3804
No. of Observations	405	283 **	283
R ²	0.83	0.85	0.85

(Standard error in parentheses; *, **, ***: 10%, 5% and 1% level of significance.)

Source: World Databank

CHAPTER VI. CONCLUSION AND FURTHER STUDIES

The purpose of this paper was to investigate how the tariff and openness after the trade liberalization are related to the evolution of FDIs. And the result demonstrates that higher trade openness and low tariff would attract more Foreign Direct Investment. Results demonstrate that conditions for macroeconomic growth and stability and also for economic openness are highly relevant for the Latin American Attractiveness towards Foreign Direct Investment. Therefore, although the focus on the study lies on the efficiency-seeking FDI, the Latin American markets as a whole are targets for both efficiency-seeking and market-seeking FDI, since the trade openness and the GDP were statistically significant and presented a positive relation to a dependent variable.

During the recent years, Latin America has been a focus of resource boom in the world. However the panel regression results in this paper lead to the conclusion that 1) natural resource itself was not the statistically significant factor to attract more FDIs in the region. Rather, 2) size of the market and macroeconomic and political quality were important factor as well as other developed countries. In addition to this, trade liberalization variables such as openness to trade and tariff play significant role in the regression that one could say that in the LAC market efficiency-seeking and market-seeking behavior coexist. Lastly, 3) we could finalize this paper confirming that trade

and FDI have complementary relationship overall in the region that weakens the tariff-jumping argument which was regarded general earlier in the stage. In that sense, the recent trend of regional integration and increase of trade agreements, along with the increasing investment in the service sector would be another opportunity for the region. Further, I would like to reiterate that it is worth noting that the government effectiveness was one of the key factors

Measuring a reform in Latin America is still a complex issue, among the variables of the reform in the region I have focused on the tariff barriers in this study. For further studies, I would like to include factors for the financial and transportation cost as well, which is also one of major problems in Latin America.

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SICE: Foreign Trade Information System, Organization of American States
http://www.sice.oas.org/agreements_e.asp

UN Comtrade

WorldBank Database

국문초록

외국인직접투자(이하 FDI)는 경제활성화의 한 방편으로 여겨지고 있으며, 특히 많은 중남미국가들은 외국인 투자 유치를 정부차원에서 장려하고자 한다. 최근 20년 간 중남미에 FDI 비율은 상당히 증가했으며 이는 무역자유화가 시작된 시기와 일치한다. 본 논문은 중남미의 무역자유화와 FDI의 관계를 진단하고 동 지역 FDI의 형태를 파악하고자 했다.

본 분석에는 패널데이터를 활용함으로써 더욱 구체적 결과를 얻기 위해 노력하였다. 패널데이터를 이용한 회기 분석 결과를 통해 중남미에서 시장의 크기와 무역개방도 및 관세가 FDI 유치에 상당한 역할을 하고 있다는 사실을 도출해냈으며, 이를 통해 기존에 중남미 지역을 규정하고 있던 관세회피(tariff-jumping)FDI이 설득력이 약해짐을 알 수 있었다. 또한 본 논문에서는 가설과는 달리 전체적으로 봤을 때 천연자원이 FDI유치에 미치는 영향력이 크게 도출되지 않은 것으로 나타났다.

본 논문을 통해 중남미지역에서도 시장확보(market-seeking)와 효율성(efficiency-seeking) 추구형 투자형태가 공존하고 있음을 도출하였으며 무역자유화와 더불어 시장의 크기와 경제적정치적 안정성이 주요 요인임을 밝혔다. 이에 최근 크게 증가한 중남미 지역통합체와 개별 FTA가 새로운 기회가 될 수 있을 것으로 사료된다.

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