The relationship between trade agreements and FDI in developing countries

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Abstract

This master thesis investigates the relationship between free trade agreements (FTAs) and foreign direct investment (FDI) in developing countries. In particular, it focuses on the ASEAN (Association of Southeast Asian nations) and MERCOSUR (Mercado Comun del Sur) agreements.

The standard approach towards this area is an investigation of how trade agreement might create or divert FDI inflows into a specific country or groups of country. This thesis investigates whether entering into ASEAN or MERCOSUR agreements have a positive impact on FDI.

The relevant theoretical perspectives are presented and different theories on the relationship between MNEs, local institutions, and their co-evolution are employed.

A meta-analysis of corresponding empirical evidence is provided, in which selected studies are classified and analyzed in order to check which theoretical arguments are supported.

Results of the meta analysis indicate that entering into ASEAN and MERCOSUR agreements do not have an impact on FDI in these regions.

The results have important policy implications because developing countries are entering into bilateral and multilateral agreement in order to attract FDI. They not only lower or eliminate trade barriers but they also adopt measures to make their business environment more attractive.

However, the results should be evaluated taking into account the main limitations of the thesis, that are both related to the type of methodology used, the meta-analysis (which is often criticized by researchers for having several flaws) and to the fact that only two treaties are evaluated in the analysis.

Keywords: BITs, *FDI, FTAs, MNEs, institutional quality, meta-analysis, bilateral and multilateral trade.*

To my family,

for all the love and support.

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List of Abbreviations and Acronyms

AEC: ASEAN Economic Community

ACIA: ASEAN Comprehensive Investment Agreement

AFAS: ASEAN Framework Agreement on Services

ASEAN: Associations of South East Asia Nations

ATIGA: ASEAN Trade in Goods Agreement

BITs: Bilateral Investment Treaties

ES: Effect size

EU: European Union

FDI: Foreign Direct Investment

FTAs: free trade area

MNEs: Multinational Enterprises

MERCOSUR: Mercado Comun del Sur

PTA: Preferential Trade Agreement

RIA: Regional Integration Agreement

TNCs: Transnational Corporations

WTO: World Trade Organization

UNICTAD: United Nations Conference on Trade and Development

1 Introduction

The growth in Foreign Direct Investment (FDI) can be regarded as one of the key features of today's world economy. Since Second World War FDI has followed an increasing path both in absolute terms and compared to the levels of trade and gross domestic product (GDP). Since the 1990's FDI has started to grow more rapidly than world GDP and world trade. The total amount of FDI has increased from 7.4% of the world GDP in 1982 to 22.1% of world GDP in 2002 (OECD, 2013).

FDI plays an important and useful role in the global business since it can provide firms with new markets and marketing channels, it enables firms to implement cheaper production facilities, it increases access to new technologies, products, skills and financing. For the foreign or host country receiving the investment, it can be a source of new capital, processes, products, organizations technologies, management skills and it can also confer a significant input to economic development (G.P. Graham, R.B. Spaulding, 2004).

This significant increase in FDI experienced over the past few decades has been accompanied by a similar increase in the number and intensity of regional trade agreements (RTAs) since the 1990s, that often include also special investment provisions (OECD 2001). Countries have agreed and entered into new bilateral investments treaties and doubles taxation treaties in the last decade. In the late 1990's there were 1,513 bilateral investment treaties and 1,794 double taxation treaties in place. Bilateral treaties have increased from 500 in 1980 to 2923 in 2014 (UNICTAD, 2015). At the end of 2011, 221 RTAs were in place (WTO, 2011). RTAs are seen as the formal means to integrate investments flows and trade and they often contain special provisions concerning FDI agreements (M. Thangavelu, C. Findlay, 2011).

There are different ways in which FTAs can influence and drive FDI flows. FTAs remove export regulations decreasing trade barriers and facilitating the movement of products between the headquarters (in the home countries) and foreign affiliates in host countries. Additional measures negotiated in the FTA and contained in the agreement could make easier the movement of resources from the home country to foreign affiliates when needed (e.g. the construction of a new plant in the foreign country).

Thus, countries that want to increase inflows of FDI from a particular country or a specific region have an incentive to enter into FTAs agreements with that particular country, using it as a tool to achieve their purpose.

FTAs provide also less tangible benefits. The signing of FTAs brings more economic, political and institutional cooperation among signing countries.

According to Chia (2010), FTAs are used as tools to stimulate political diplomacy and they can also help nations to make their regulatory and institutional frameworks more harmonized. Thus FTAs create a more stable and safe institutional and business environment making easier for MNCs to invest in these countries and contributing to the increase in FDI flows.

Enterprises that are part of the transnational system (parent firms and affiliates) gain immediate benefits but these assets can also be transferred to domestic firms and to the wider economies of host countries. If there are good links and distribution between foreign affiliates and domestic firms the latter will be better able to capture spillovers (indirect effects) induced by the presence and competition from foreign firms (Padma Mallampally, Karl P. Sauvant, 1999).

A large number of studies have investigated the relationship between RIAs and the economic effects of regional integration agreements on both member countries and non-member countries. Despite the huge body of literature available, there is still no homogeneous empirical evidence that entering into a regional agreement leads to an increase in FDI. There are several motives explaining why the effects of regional integration on FDI are difficult to predict.

RIAs vary in their features: there are some that are mainly market driven and involve only a minor degree of institutionalization. Deeper institutional integration does not imply automatically an increase in FDI flows. The degree of institutionalization varies in depth (depending if the countries are part of a free trade area, customs union or common market) but also on the extent to which agreements have been implemented.

Heterogeneity of FDI is another crucial factor since regional integration will have different effects on FDI coming from other member countries (intra-flows FDI) and the one coming from nonmember countries. The distinction behind the motives for FDI should also be taken into account since a *market-seeking* FDI is likely to have different effects compared to efficiency-*seeking FDI.*

The main objective of this thesis is to examine whether the current theories on the relationship between FDI and FTAs are supported by empirical findings and to which extent Free Trade agreements and other forms of regional integration influence FDI. The research question investigated in the thesis is the following: *to which extent FDI influence FTA in developing countries?*

There is still no supporting and homogeneous empirical evidence in the international trade studies

estimating the effects of FTAs on FDI, which is surprising giving the diffusion of these agreements across the globe and their importance for the word economy.

International business theories on the relationship between MNEs, local institutions, and their co-evolution are used.

The standard approach towards this area is an investigation of how trade agreements might create or divert FDI inflows into a specific country or groups of countries.

This thesis focuses on the analysis of developing countries also defined as "least developed countries", by analyzing in particular the effects that two regional integration agreements have on FDI: MERCOSUR and ASEAN. The reason is that FDI towards developing countries has experienced a significant increase in recent years. In 2012 for the first time ever developing countries were the recipient of more FDI than developed countries since (they accounted for 52% of global FDI flows). This is also reflected in the global rankings of the biggest recipients of FDI since 9 of the 20 largest recipients were developing countries. This is a reversed situation compared to the past. FDI flows in the developed countries have followed an increasing trend starting from the 1990s. They reached a peak in the early 2000s. Between 1982 and 2004 FDI growth was mainly attributed to the increase in FDI within OECD countries. In this period 80% of FDI took place among OECD countries each year on average. (WTO, 2013). Then it dropped in 2005 and in 2012 mainly as a result of low investor confidence and high risks level in the overall growth scenario (FDI towards developed economies accounted only 42% of global flows in 2012). (UNICTAD, 2012).

Since the available empirical literature exploring the impact of entering into a BITs or FTAs on FDI inflows provides different and conflicting results, the research question is investigated through a meta-analysis. The meta -analysis is the most suited methodology because it enables to get a quantitative overview over a specific research question that does not have statistical certainty. The explanation could be that results of individual studies are influenced by specific features like study setting, the sample under investigation, the timing when the research has been conducted, the specific locations. It may be influenced by biases introduced by the researcher itself. The advantage of the meta-analysis is that it enables to get more reliable, precise results with respect to the ones contained in the narrative, non-quantitative reviews. It also helps to investigate the magnitude, variability, statistical reliability of the collected empirical results, the relationship amongst results and study methods, the relationship between results and specific features of the studies and to investigate the history of the research (time trends, publication patterns). But the meta-analysis has several flaws such as that it

mixes studies without considering the different methodologies and studies setting that have been used (apples and oranges problem).

The thesis is divided in the following way: the second chapter presents the main theoretical arguments on the relationship between FDI and FTAs with an overview of arguments reflecting the theoretical development of the subject from a historical perspective. In the third chapter, an overview of the International agreements implemented in the Latin American and Asian developing countries e.g. MERCOSUR and ASEAN is presented. In the fourth chapter, the methodology that has been used in the thesis is illustrated and the main limitations of the thesis are investigated. In the fifth chapter, the meta-analysis is conducted through different steps. First relevant studies are collected, coded and a database is constructed. Then, an effect size statistic is calculated for each study by converting summary statistics covering the quantitative relationship under examination into a common standardized metric that is possible to compare across different studies. In the last step the weighted mean effect size is calculated to check if it is statistically significant.

The last chapter concludes with a discussion of the analytical results obtained to verify to which extent they are in line with the relevant theoretical arguments, the possible policy implications that these results may have taking into account the main limitations of the thesis. Possible future lines of research within this area also investigated.

2 Theoretical perspectives on the linkages between FTA and FDI

2.1 Key definitions

This paragraph provides the definition of the key terms that will be used in the thesis.

FDI

FDI is referred to an investment made by transnational corporations or multinational enterprises in foreign countries with the purpose of getting control of assets and managing production facilities in such countries (International Monetary Fund, 1999).

The OECD defines FDI as "c*ross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy". The lasting interest implies the establishment of a long-term relationship between the direct investor and the enterprise and a relevant degree of influence by the direct investor on the management of the enterprise.* (OECD, 2013).

The exact threshold for defining FDI is when an investor has direct or indirect ownership of 10% or more of the voting power of an enterprise located in a different country.

It can take different forms such as the direct acquisition of a foreign firm, construction of a facility, investment in a joint venture or strategic alliance with a local firm with the attendant input of technology, licensing of intellectual property. The direct investment in buildings, machinery, equipment is in contrast with making a portfolio investment, classified as an indirect investment.

FDI promotes the long-term economic ties between countries (by providing to investors in the home country direct access to production units located in the host country), the development of local enterprises in host countries and the promotion of international trade through greater access to markets and the transfer of technology and know-how between countries. (OECD 2008).

It not only leads to international economic integration but with the appropriate policy framework, it can stimulate economic development and the well-being of societies. In addition to its positive effects on the development of international trade it also represents an important source of capital for *host* and *home* economies (G.P. Graham, R.B. Spaulding, 2004).

FDI has historically played a crucial role in the internationalization of business. But the scope, size and methods of FDI have undergone significant changes over the past decade due to new trends in trade and investment policies, to changes in the regulatory environment on a global level (growing liberalization of the national regulatory framework that govern investment enterprises), to the easiness of restrictions on FDI and acquisition in many nations, deregulation and privatization of many industries, and changes in capital markets. In addition, new information technology systems and decline in global communication costs have made management of foreign investments easier.

FTAs

They are agreements among governments to liberalize trade and to co-ordinate other trade related activities. There are several types of regional trading agreements including free trade area, preferential trade agreements, customs union, common market and economic union. They can affect FDI's incentives through multiple channels (Blomstrom and Kokko, 1997).

The simplest integration agreement is the "preferential trade area" (PTAs) where member countries have preferential access (lower tariffs) to goods produced in the integrating region. PTAs are unsuccessful in bringing the desired restructuring in the regional industry because trade barriers (both tariffs and non-tariffs) continue to be present within the PTA and national markets remain segmented.

According to Baldwin (2006), the formation of PTAs induces the participation of external and additional parties through *juggernaut* and domino *effects*. The juggernaut effect states that political economy considerations tend to increase trade opening. The domino effect instead states that countries are willing to enter into open trading arrangements to avoid being left behind.

Bilateral investment treaties (BITs) include conditions on treatment of foreign firms with a special focus on investor protection. Regional integration agreements (RIAs) include provisions for investment.

A free trade area (FTA) overcomes this problem since it removes all tariff barriers between the participating countries that have few or little price controls (tariffs, quotas) between each other. Free Trade areas allow the agreeing nations to exploit their comparative advantages by focusing on the production of those goods they are particularly efficient at making, increasing the efficiency and profitability of each country. But non-tariff barriers still persist and they could limit market access also due to differences in external trade policy. A customs union overcomes this problem because it harmonies external tariffs. The establishment of a common market removes all non-tariff barriers (technical standards) and it ensures free flow of goods between member countries. Even if they vary widely all Regional agreements have the objective of reducing barriers to trade between countries and discrimination against trade with other countries.

MNEs

In order to analyze the relationship between FDI and FTA is important to provide an overview of the theoretical linkages between MNEs and FTAs.

The reason is that today cross-border FDI transactions are mostly carried out by large multinational enterprises (MNEs). (OECD, 2010).

According to J.H. Dunning (2007), Multinational Enterprises (MNEs) are "*multi-activity firms undertaking FDI"*. They are similar to international trading companies because they undertake cross/border transactions: the main difference with respect to international trading companies is that MNEs have direct control over foreign production facilities.

MNEs have several production units, activities amongst these units are internalized and at least one of their production units are based in a foreign country. (John H. Dunning, 2007).

Dunning and Lundan (2008) define MNEs as: "a *coordinated system or network of cross-border value creating activities, some of which are carried out with the hierarchy of the firm and some of which carried out through informal social ties or contractual relationships".*

John Cantwell et al. (2010) define MNEs by the number of foreign production facilities they own and the sum of all of their value creating activities. The activities can include foreign sourcing of intermediate inputs, sourcing of knowledge, production and marketing and distribution activities.

Transnational Corporations (TNCs) can be either incorporated or unincorporated enterprises including the parent enterprise and the foreign affiliate. A *parent* enterprise has control over the assets of other entities not located in its home country, by owning a certain equity capital stake of 10% or more of the ordinary shares or voting power for an incorporated enterprise. *A foreign affiliate* can be either an incorporated or an unincorporated enterprise where an investor resident in a different country owns a stake enabling it to maintain significant control over it (OECD, 2013).

Developing countries

As stated by The World Bank and the United Nations "*there are no official definitions of developing countries"*. Thus different terminology is used to define developing countries. The World Bank uses the GNI (Gross National Income) as the main criterion to classify countries and it defines a developing country as one in which: "*The majority of its population earns much less income, and has substantially lower social indicators with respect to the population in high-income countries. and they live with significantly less money: they also often do not have basic public services compared to the population living in highly industrialized countries".* (The World Bank, 2015)

There are also not WTO official definitions of "developed" and "developing" countries. Members inform if they are classified developed or developing countries. But other members can challenge the decision of a member to exploit and using those provisions directed only to developing countries (WTO, 2015).

2.2 Theoretical Aspects: early generation theories

Many theories have been developed trying to explain the link between FDI and the location decision of MNEs. FDI can be seen as an alternative mean for a firm to acquire an internationally nontransferable foreign asset in an indirect way (e.g labor, natural resources, a market) and a firm's decision to invest abroad can be driven by different motivations.

The early literature examining the effects of regional *integration did not* focus explicitly on FDI.

It regarded trade and capital movements as substitutable and alternative modes of serving foreign markets. This view suggests that tariff barriers can motivate import-substituting FDI and that tariff reductions can reduce FDI flows or stimulate "repatriation" of foreign-owned assets to the home countries of MNCs.

Early quantitative studies demonstrated that RIA had only limited welfare effects on trade (less than 1% of GDP). The low quantitative impact could be attributed to the fact that the neoclassical view assumes that countries having different factor price ratios and industry structures will benefit more from regional integration agreement.

Many regional agreements were stipulated among countries already closed to each other both on a business and on a cultural and geographical perspective (e.g. similar industry structures); thus additional gains from trade creation were very limited.

In the 1950s international economics was dominated by classical and neo-classical theories that only explained: "the location" of production. These traditional standard theories of international trade did not include any factor mobility in the absence of trade costs.

I The neoclassical trade theory

According to the *neoclassical trade theory*, the concept of factor prize equalization (FPE) eliminates all the incentives to undertake international factor mobility. It does not take into account the issues of ownership and of the organization of economic activity because markets are regarded as "perfect mechanisms", it assumes that there are no transaction costs and that firms perform just one activity. The *neoclassical view* suggests that the effects of regional integration are mainly linked to *trade creation* and *trade diversion.* This view implies that tariff barriers can motivate import-substituting FDI.

According to Viner (1953), the introduction of regional trade preferences stimulates *trade creation* because firms in one of the partner countries are able to gain market share held by local firms located in another partner country. An increase in welfare on a regional and global level should be expected since an inefficient producer (that previously benefited from import protection) is replaced by a more efficient one enabling consumers to benefit from a lower price level.

A reduction of both regional and global welfare instead is predicted as a result of *trade diversion*. Trade diversion arises when regional trade preferences enable firms from one of the partner countries to capture those regional market shares held by producers in another partner country. This negative welfare effect is mainly due to the fact that more efficient producers are replaced by less efficient ones (Lipsey, 1961).

The *Heckscher-Ohlin-Samuelson trade model* (one the first theoretical model that tried to explain FDI) is based on the principle that FDI is part of the international capital trade. It is based on a 2x2x2

general equilibrium framework where there are two countries (home and foreign), two factors of production (capital and labor) and two goods. It assumes perfectly competitive goods and factor markets, constant returns to scale and no transport costs (Faeth, 2008).

As stated by Steven Brakman, Harry Garretsen (2004) alternative theoretical explanations to the classical Heckscher-Ohlin-Samuelson (HOS) types of trade models are needed to explain FDI and the presence of multinational enterprises (MNEs).

In the 1960s two important theories about the theory of foreign production were developed.

The first theory was developed by Stephen Hymer (1960, 1976), recognized as the pioneer of industrial organization. In his works, he stated that the theory of indirect capital transfers was not suitable to explain the foreign operations of firms for several reasons. The first one is that when risk and uncertainty are added to the classical portfolio theory its predictions do not hold anymore since the imperfection of markets disrupt firms' behavior and the strategy they adopt when they expand their activities outside their home markets. He also added that FDI is not limited to the transfer of financial capital as the traditional portfolio theories assume, but it implies the transfer of a whole set of resources (technology, management skills, entrepreneurship). According to Hymer, FDI implies no change in the ownership of resources transferred (with respect to indirect investment). Firms are induced and motivated to shift their production in a foreign market because they wish to earn an economic rent on these resources. The existence of such ownership-specific advantages implies the existence of structural market imperfections.

The real novelty brought by Hoymer is that he recognizes that firms owning or controlling foreign facilities should possess some forms of marketing or costs advantages (*called ownership-specific advantages*) that enable them to counter-balance the disadvantages that they face when they operate in a foreign market.

R. Vernon (1966) was the first to recognize the importance of the new trade theories developed in the 1950's and 1960's. He stated that the ability of countries to undertake trade depends on their capacity to upgrade their existing assets or to develop new assets (defined as technological capacity). He used the concept of "product cycle" in order to explain the activities of US MNEs after the war. At the beginning the product is produced in the home country, then in the following stage of the product cycle it is exported to foreign markets having a similar structure to the home market. At later stages of the product life cycle the real competitive advantages of firms lie in their ability to reduce costs (since imitators and competitors start to catch up) and to differentiate the product. When labor costs

start to account for a significant portion of total costs firms have incentives to move their production into the foreign market. If the foreign market has a good investment climate firms will establish subsidiaries instead of exporting.

During the1960's and the 1970' the theories of Hymer and Vernon were further expanded and redfined by many scholars so that the two theories started to merge.

Kindleberger (1966) was the first to point out that *trade creation* resulting from regional integration agreements could stimulate *intra-regional FDI* due to changes in the regional production structure. The potential effect on intra-regional FDI was defined as "investment or FDI creation".
He also identified the potential to stimulate FDI inflows from third countries outside the integrating region occurring if the average level of protection increased after the establishment of RIA.
FDI diversion occurs when firms from third countries diminish the investment in the region; investments shift from an efficient location to an inefficient location.
According to Kindleberger (1966), investment creation occurs when firms from third countries invest in the region because of the tariffs placed on their exports and the market enlargement effect of RIAs. It is a response to the trade diversion brought by RIAs since it occurs when outside firms lose export markets after investment shifts from an inefficient location to a more efficient location.
These investment responses were still regarded as consequences of temporary imbalances in cost structures and the investment effects of regional integration agreements were still perceived as having a limited quantitative impact.
Rugman (1979) and Robert Aliber (1970) developed two relevant theories that on a historical perspective contributed to the explanation of the location and ownership of firms' international activity.
Rugman (1979) developed the risk diversification hypothesis stating that the location's decision of firms undertaking FDI depends both on the firm's perception of the risk and on the location of their current activities. This implies that country-specific risks influence the decision of firms of where to locate their value adding activities and the geographical distribution of their asset portfolio.
Aliber (1970) focused his research on the reason why firms based on countries with strong currencies can raise capital more cheaply than firms based in countries with weaker currencies. He provided an important contribution about the timing of FDI.

2.3 Theoretical Aspects: Modern perspective

By the 1970s it became evident that the theories developed so far could not be used to construct a unique general theory or paradigm to explain MNEs incentives to invest abroad.

According to the theories developed so far, FDI was motivated by tariff-jumping arguments. New theories were developed to explain foreign activities of firms: Internalization theory of the MNE, the eclectic paradigm of international production and the macroeconomic theory of FDI.

The internalization theory developed in the mid-1970 by a group of Swedish, Canadian, British and U.S. economists seeks to explain the emergence and growth of the multinational enterprise on the basis of how cross-border transactions in intermediate goods are organized. It is based on the concept that international production occurs when the benefits of an in-house organization of transactions exceed those offered by external markets. (The Theory of International production, John H. Dunning, 2007).

Kohima (1973) developed the *Macro Economic Theory of FDI* that represents an extension of the neoclassical theory of factor endowments used to explain trade in intermediate products. According to this theory, through FDI intermediate products should be transferred and the timing and direction of these investments should depend on market forces and not on some forms of hierarchical control.

I *The Eclectic Paradigm*

The eclectic paradigm or the so-called OLI framework, developed by John H. Dunning is a general framework explaining the extent and the pattern of foreign-owned production implemented by a country's firms and of domestic production owned by MNEs based in a foreign market. Dunning was the first to specify the importance of exploiting firm-specific intangible assets in order to conduct FDI (Kokko, Gustavsson, 2004).

According to Dunning (1971), the decision of a firm to undertake foreign production is based on three different types of advantages by enterprises: *ownership advantage (O)s, internalization benefits(I)* and *location advantages (L)*. The term *locational advantage* indicates the degree to which is regarded advantageous from a profitability perspective to locate an economic activity in a specific location. These refer to the availability and cost of various production factors, the country's geographic location, and the general macroeconomic environment.

According to Dunning (1977), international-oriented firms competing in foreign markets (where local firms have superior market knowledge of the local market, consumer preferences and business prac-

tices) should possess firm-specific intangible assets (e.g.: technological and marketing expertise) conferring them a competitive advantage. MNEs will engage in production in a foreign market if they have ownership advantages that cannot be exploited through standard transactions like trade or license; in this case the firm should internalize the market for its particular firm-specific advantage (FSA) across borders (i.e. FDI). (John Dunning, 1971). The exploitation of *intangible assets* is the driving force behind the foreign investment. This framework is relevant because it shows the role of location in the overall FDI's decision of a firm.

Buckley and Casson (1976) suggest that in order to exploit these intangible assets firms should internalize their international operations through the establishment of *foreign affiliates* since alternative international business modes like *exports* and *licensing of technology* to foreign firms involve too high transaction costs.

Dunning (1993) built a model to analyze FDI's motivations, which is built on the basis of the OLI paradigm. The model proposes four different FDI's motivations. One of the main determinants of the location of investment among different potential host countries is the *policy FDI framework.* It is referred to the overall economic, social and political stability of countries, to rules regarding entry and treatment of foreign affiliates, to policies on the function and regulation of markets (about competition and mergers & acquisitions), international agreements on FDI, privatization policy, trade policy (including tariff and non-tariffs barriers) and tax policy.

In this regard, developing countries have started to liberalize their national policies to offer a more stable, reliable *regulatory framework* for foreign direct investors. Measures that have been adopted include more permissive and open rules about foreign entry and foreign ownership, better treatments to foreign firms and a general improvement in the function of markets.
Another factor that influences the location decision of foreign direct investors and on which developing countries are working includes the *coherence* between different policies that have effects on FDI like FDI policies and trade policies.
Since policy frameworks are becoming more similar to each other, developing countries are working to adopt measures facilitating business like investment promotion, financial and fiscal investment incentives, after-investment services (that encourage reinvestment by existing investors), and measures that in general reduce the cost of doing business

Table 1: Types of International Production: Some Determining Factors

Types of International Production	Ownership Advantages (the why of MNC activity)	Location Advantages (the "where" of production)
1 Resource based	Capital, technology, access to markets: complementary assets	Possession of natural resources and related infrastructure
2 Market based	Capital, technology, information, management and organizational skills, surplus R&D and other capacity, economies of scale, Trademarks, goodwill	Material and labor cost, markets, government policy (e.g. with respect to regulations and to import controls, investment incentives, etc.)
3 Rationalized specialization of products and processes	As above, but also access to markets: economics of scope and geographical diversification	(a) Economies of product specialization and concentration (b) Low Labor costs, incentives to local production by host governments
4 Trade and Distribution (import and export merchandising)	Market access, products to distribute	The source of inputs and local markets. Need to be near customers. After sales servicing, etc.
5 Miscellaneous	Variety, but include geographical diversification	Markets

Source: John H. Dunning (1988) The theory of international production, The International Trade Journal, 3:1, 21-66.

Other important determinants of the location decision of FDI include *economic determinants.* They can be classified into three different groups: those related to the availability of location-bound resources or assets, those connected to the size of markets for goods and services and those connected to cost advantages in production.

Even if the traditional factors attracting investments to a specific location (i.e. large availability of natural resources, large host country markets, availability of low-cost flexible labor) will continue to play a significant role their importance will change since multinational corporations are adopting new strategies to increase their competitiveness. Strategies adopted my multinationals have evolved from traditional stand-alone strategies where foreign affiliates produce autonomously to simple integration

strategies based on strong connections at the production level towards complex integration strategy where activities are divided and splitter into smaller ones and carrying out these activities in the most cost effective location. Thus multinational companies making new investments are interested in cost reduction, access to larger markets and "c*reated assets*". The latter include communications infra-structure, marketing networks, technology and the capacity to innovate together with the concept of "clusters and agglomeration of economies". They have become essential for companies to maintain a competitive advantage in a rapidly changing economic environment.
According to P.M Mallampally, K.P Sauvant (1999) what will be critical in the future is the unique combination of locational advantages and created assets that a country is able to provide to foreign investors.

The examined literature often makes the distinction between the different types of FDI: market seeking, resource seeking and efficiency seeking FDI, as illustrated in table 2.
Market seeking FDI, referred to those firms choosing to invest abroad because they want to exploit the potential returns offered by a greater market. There can be many reasons behind this choice: to follow competitors or suppliers that have already built foreign production facilities there, to better serve local customers and to save the cost of serving the local market. They may also decide to invest abroad because they have recognized that their product is unique or superior to those provided by competitors in foreign markets, because producers have saturated sales in their home market and they have the belief that by investing abroad they will get higher returns compared to those expected at home. Resource Seeking: MNEs undertake this type of FDI when they want to obtain particular resources or raw materials that either they cannot acquire in their home country or that they can get at a lower price in the foreign market (e.g. cheaper labor cost). Efficiency Seeking FDI occurs in two different scenarios: in the first scenario MNEs take advantage of differences in the availability and costs of traditional factor endowments existing across countries, in the second scenario instead they take advantage of economies and scale and scope and of different consumer tastes and availability of capabilities. According to many authors this category overlaps with the one of resource seeking since it happens when MNEs wants to fragment production and to take advantage of lower labor costs. It is also undertaken when the aim of multinational companies is to reshape their overseas holdings as a result of significant economic changes (i.e. the creation of new free trade agreements among a group of countries). (John Dunning, 2002). Strategic Asset Seeking FDI happens when the purpose of firms is to acquire and complement a new technological base rather than exploiting existing assets. Thus it

is common among those companies interested in investing abroad to help build strategic assets (i.e. establishments of partnerships with other existing foreign firms specialized in specific aspects of production). This last category does not fit very well with the OLI paradigm because the latter is based on the assumption that MNEs invest in a foreign market to obtain and get access to those competencies and knowledge that is not inside the firm. Dunning notice that it is possible for FDI to arise even if trade barriers or significant cross-country differences in interest-rates are absent. The impact of FDI on home and host countries is particularly relevant since they are both expected to benefit from economies of scale and other externalities resulting from the additional international cooperation and contacts arising with FDI.

The Resource Seeking and the Market seeking type of FDI are also defined respectively as vertical and horizontal FDI. They are international trade models of multinational activities that try to formalize the OLI paradigm. The term horizontal was introduced by Markusen (1984) and it is referred to FDI motivated by the need to avoid transportation and trade costs or by tariff jumping motives. The firm has to establish whether is it cheaper to serve the foreign market by building a foreign production facility or to serve the market by exporting. As outlined by Caves (1996) Horizontal FDI takes place when MNEs produce the same goods and services in several locations with the purpose of exploiting their firm-specific advantages in the production process and of avoiding the "trade costs" of exporting goods. In developed countries, MNEs engage in FDI activities for "market access" reasons and not for differences existing in factor prices. The basic assumption behind the horizontal model is the existence of economics of scale on a firm level. With no trade costs, MNEs have no reason to have multinational production since they can produce in their home country exploiting economics of scale and then exporting in the foreign market through trade.

Since with RIAs trade costs decrease the reasons to manufacture in multiple countries also diminish. In this case FDI and trade are substitutes because without trade costs firms prefer to locate their production in the home country without undertaking multinational production.
The term Vertical FDI was first proposed by Helpman (1984). It occurs when a firm geographically fragments production by stages with the purpose of taking advantage of location-specific advantages (e.g. lower factor prices). This type of FDI is motivated by resource seeking motives.

Table 2: Host country determinants of Foreign Direct Investment (FDI)

Host country determinants	Types of FDI classified by motives of firms	Principal economic determinants in host countries
Policy framework for FDI		
• Economic, political, social stability • Rules regarding entry and operations • Standards of treatment of foreign affiliates • Policies on functioning and structure of markets • International agreements on FDI • Privatization policy • Trade Policy (tariffs and non-tariff barriers), Tax policy	**Market seeking**	• Market size and per capita income • Market growth • Access to regional and global markets • Country specific consumer preferences • Structure of markets
Economic determinants (see columns on the right)	**Resource Asset Seeking**	• Raw materials • Low unskilled labor • Skilled labor • Technological, innovative, created assets, Physical infrastructure
Business facilitation • Investment promotion • Investment Incentives • Hassle costs • Social amenities • After-investment services	**Efficiency seeking**	• Cost of resources and assets listed above, adjusted for labor productivity • other inputs costs (transport and communication costs) • Membership of a regional integration agreement

Source: UNCTAD, World Investment Report. 1998: trends and determinants, Table IV.1 , p.91

Vertical FDI occurs when there are Locational advantages and also the need for Efficiency seeking and Resource Seeking.

In this case FDI and trade are complements. MNEs can choose to relocate a portion of their production chain to a low-wage country (for example headquarter services and intermediate inputs) and then to re-exports final goods. According to this view FDI occurs independently of RIA's effect; locational advantage is the main factor influencing FDI (Caves, 1996).

This area of research is further complemented by Markusen´s knowledge-capital model (1984) where he combines both the horizontal and the vertical models.

Horstmann and Markusen (1987) extend the approach about horizontally integrated firms to develop the proximity- concentration hypothesis which is based on a tradeoff between maximizing proximity to customers and concentrating production to obtain scale economies. They state that firm-specific costs, tariff and transport costs stimulate firms to produce both in the domestic and in the foreign

market. Plant-scale economies create incentives to undertake exclusively domestic production and to export in the foreign market. According to this theory MNEs are typical of industries characterized by high firm-specific costs, high tariff and transport costs but low plant scale economies.

The new trade theory, developed in the late 1970's tries to explain both horizontal and vertical FDI by combining ownership and locational advantages with technology and country characteristics.
The new trade theory is based on the concept of economies of scale. According to this theory firms in small countries will have high average costs, whereas firms in large countries can grow larger and achieve lower average costs. Once international trade is established large countries firms will dominate exports in industries having high scale of economies.
As soon as this theory was developed the concept of Regional Integration started to dominate since it emerged as a major national policy alternative for those countries having a small domestic market. The discussion about the likely effects of regional integration agreements on FDI continued to develop as new, more advanced types of Regional Integration started to emerge.
Contrary to previous beliefs, FDI and trade were started to be seen as complements and not substitutes by those firms wanting to locate their production facilities in countries offering human capital and infrastructure facilities that better suit their needs. (Greenawaay and Milner, 1986).
As pointed out by Kokko and Gustavsson (2004) in the restructuring process only those firms big and powerful enough to acquire existing plants and equipment in the region or those able to find strategic alliances through mergers and acquisitions with their competitors will survive. Foreign transnational corporations may seek to enter into the region through new FDI.
This process will raise competition, accelerate technology transfer and stimulate information flows between countries involved.

Blomstrom and Kokko (1997) provide extensive theoretical links between changes in FDI and free trade agreements. They provide a two dimensional summary framework relating trade and investment liberalization initiatives to country and industry characteristics that is useful to explain the likely impact that FTA may have on the distribution of FDI, both within regions as well as between that region and the rest of the world. two different dimensions of integration should be taken into account to identify and assess theoretical linkages between them.
In their analysis of the effects of trade liberalization they distinguish between the impact of FDI that is a response to trade barriers and FDI that is only motivated by the need to internalize firm-specific

intangible assets. They also analyze the impact of special investment provisions connected to integration agreements.

According to their framework the response to an integration agreement depends on the environmental change brought by the regional integration agreement, the locational advantage of the country or region, the competitiveness of local firms as well as motives for FDI in and by the country in question.

Table 3: Attractiveness Matrix

	Locational Advantages (positive to negative ®)	
Environmental Change (Strong to Weak ©)	**1**	**2**
	3	**4**

Source: Kokko and Blomstrom (1997)

Table 3 presents the Attractiveness Matrix, two dimensional framework relating trade and investment liberalization initiatives to country and industry characteristics.

The term environmental change indicates the degree to which trade and investment flows are liberalized by the specific integration agreement; it depends both on the nature of the agreement and on the initial institutional environment in the region. By moving down the rows of Figure 1, the degree of liberalization is considered to be "weaker".

By moving across the columns (from left to the right), the locational advantages of a particular country (compared to those of other members in the RIA and the rest of the world) are weaker.

The identification of the position of a specific country is the starting point to determine the impact of regional integration on the investment level.

The most positive impact on investment will be experienced by those economic sectors falling in area 1, since they experience the strongest degree of integration and the country in question has a very strong location advantage (i.e. when the sector experiences trade liberalization and there are strong locational advantages with a significant flow of FDI in this location).

In Area 3 there are those economic activities for which the country in question has strong locational advantages but for which the impact of the integration agreement is relatively weak (i.e. economic integration among OECD countries, where barriers to trade and investment are already low).

In Area 2 the expected impact on inward FDI is negative and the potential for actual disinvestment increases. Even if activities in area 2 are affected by the integration agreement the country suffers locational disadvantages in these sectors.

In area 4 the impact of integration on activities is likely to be small. Even if the country or industry in question suffers from a locational disadvantage in terms of activities, the impacts of the integration agreement on the overall economic environment are weak. This area contains activities where investment decisions are not likely to be affected by the RIA either because the sector in question is excluded from the agreement (i.e. agriculture in the EFTA or EEA agreements) or because the market is too small to gain the attention of foreign competitors (Kokko and Blostrom, 1997).

Nimesh Salike (2010) analyses whether the formation of Regional Integration Agreement (RIA) leads to an increase in FDI inflow in the integrated region. She develops a theoretical framework for testing the effects of RIA based on the motives for FDI (tariff jumping and internalization) and on the modes (vertical and horizontal FDI). This framework is used for analyzing the conduct of FDI before and after the formation of RIA from four perspectives (motives, modes, intra-regional and inter-regional.) As can be seen from table 4, by looking at the conducts of FDI, there is no vertical type of FDI before RIA for Tariff-jumping motives while horizontal FDI will occur both in the cases of tariff-jumping and internalization. Once the countries stipulate the integration agreements FDI patterns will change since RIA eliminates the tariff barrier among the members of the integration agreements.

Table 4: Conducts of FDI before RIA

Modes / **Motives**	**Vertical FDI**	**Horizontal FDI**
Tariff-jumping	Does not take place	Takes place
Internalization	Depends upon nature of product	Takes place

Source: Nimesh Salike (2010).

The two different motives for FDI provide conflicting predictions about the effects of regional integration for intra-regional investment flows.

As regards as tariff jumping FDI, on one hand trade liberalization should reduce reduced investment flow since it makes exporting from home country more appealing than FDI; on the other lower trade barriers increase FDI flows between trading partners by enabling MNEs to operate more efficiently.

As can be seen from table 5 there is no effect on vertical FDI with tariff-jumping motive but already existing horizontal FDI may decrease or there could also be disinvestments.
The net effect on any specific RIA or individual member country would depend on the structure of and motives for agreements already existing.
According to Kokko and Blomstrom (1997) a reasonable generalization would be that those countries having low initial trade restrictions will benefit more from lower trade barriers resulting from intra-regional agreements because they are not likely to host import-substituting FDI projects that could potentially be withdrawn.

Table 5: Conducts of Intra-regional FDI after RIA

Modes / **Motives**	**Vertical FDI**	**Horizontal FDI**
Tariff-jumping	No effect	Decrease
Internalization	Increase	Mixed effects-most likely increase

Source: Nimesh Salike (2010).

Table 6 shows the conduct of Inter-regional FDI taking place after RIA. As can be seen from the table after the conduct of RIA both the tariff-jumping and internalization result in an increase in investment flows in vertical and horizontal modes.

Table 6: Conducts of Inter-regional FDI after RIA

Modes / **Motives**	**Vertical FDI**	**Horizontal FDI**
Tariff- Jumping	Increase	Increase
Internalization	Increase	Increase

Source: Nimesh Salike (2010).

The overall effect of RIA on FDI depends on the intensity and mix of investment coming from both inside and outside the region.

As regards Intra-regional FDI Kokko and Blomstrom (1997) a reasonable generalization is that after a regional integration it should be more attractive to invest in the new larger common market.
Another main determinant of a country's specific response to RIAs is the ex-ante structure of trade and investment flows. The impact on investment decisions may vary across countries and industries due to several reasons.
Countries and industries already linked to their RIA partners before the formal agreements (i.e. due to geographic and historical ties) will face smaller changes than countries and industries with limited initial contacts with other participants in the RIA (Blomstrom and Kokko, 1997).
A conceptual framework illustrating the mechanisms of the impacts of regional economic integration on FDI is presented by UNCTAD (2013). The framework contains four different types of mechanisms to which are associates the effects on intra-regional and extra regional FDI.
Regional Cooperation leads to an increase in investments by opening sectors to investment and by aligning policies for the treatment of investors.
As can be seen from table 7 Regional economic integration stimulates intraregional FDI by eliminating transaction costs (e.g. the elimination of trade barriers among member countries) or by reducing investment restrictions (e.g. liberalization of investment in some industries).
Regional economic integration also stimulates extra regional FDI due to bigger market size (crucial for smaller group of countries), to import-substitution effects (tariff-jumping FDI) or due to coordinated efforts to promote investment at a regional level.
As stated by Kokko and Gustavsson (2004), both the neoclassical and the modern view assume that a process of restructuring is essential to fully capture the potential benefits of integration. The biggest difference among the two theories is related to the concept of optimal integration area.
The neoclassical view assumes that countries having different factor price ratios and industry structures will equally benefit more from regional integration agreement. Instead according to the modern view an integration agreement is expected to bring the strongest benefit to those countries having similar factor price ratio and industry structures, since they can better exploit scale economies.
N. Salike (2010) combines the two concepts of Motives for FDI and Modes for FDI with that of Dunning's and UNCTAD with the purpose of showing the concept of FDI inflow.
Motives for FDI investigate why multinationals decide to invest and to produce abroad instead of producing in the home country and exporting in the foreign markets. They include Tariff-jumping and Internalization.
The argument of Tariff-jumping indicates that the establishment of RIA reduces FDI.

Table 7: Mechanisms of the impacts of regional economic integration on FDI

Mechanisms	Effects on intraregional FDI flows	Effects on FDI inflows from outside the region
Investment liberalization	Stimulates flows from regional investors	Stimulates flows from third country investors not established in the region
Trade and market integration provisions in regional agreements	Enables the reorganization of production on a regional level (included investments and divestments).	Attracts new-third country investment through enlarged markets, including global value chains
Policy harmonization implicit in the implementation agreements	Investment is encouraged through reductions in transaction costs and perceived risk	Stimulates increased inflows if harmonization extends to investment regulations applicable to third-country investors
Broader pan-regional investment projects (e.g. infrastructure or research and development) made possible by regional agreements	It provides increased investment opportunities	It provides increased opportunities

Source: UNCTAD. 2013

The view suggests that trade and capital movements are alternative ways of serving foreign markets; trade barriers can stimulate import-substituting FDI, and general tariff increases can motivate import-substituting FDI flows. With no trade barriers in place MNEs prefer to produce in the domestic market and to serve the foreign market through exports. (see Appendix A).

Modes for FDI are the ways in which multinationals decide to expand their investments (vertical or horizontal.) As stated by Nimesh (2010) from this view can be deducted if trade and FDI are substitutes or complements.

UNCTAD presents three different host country determinants of FDI in the World Investment Report, (1998); Trends and Determinants: Policy Framework for FDI (including factors like economic, political and social stability), Economic determinants (which depends on whether FDI falls in one of the

three categories: market seeking, resource-seeking or efficiency seeking) and Business Facilitation (Investment Promotion, incentives, hassle costs and after-investment services).

Faeth (2010) identifies nine theoretical models of FDI based on the neoclassical trade theory, ownership advantages, aggregate variables, the ownership, location and internalization advantage framework, horizontal and vertical FDI models, the knowledge-capital model, the diversified FDI and risk diversification models and policy variables.

The literature on international trade does not provide empirical support of reliable quantitative estimates of the average effects of FTAs on bilateral trade.
Study results have been mixed and contrasting. Some studies find only a weak effect, other find a strong effect, other find no effect and there are also some studies finding no effects at all. The literature investigating FDI flows within and between ASEAN and MERCOSUR countries is still relatively restricted, despite the growing importance played by these regions.

2.4 Institutional theory and MNE in Emerging markets

Countries worldwide compete strongly for attracting FDI. Developing countries are particularly interested in attracting FDI because it plays a fundamental role in accelerating growth, it improves the general economic development, it gives greater access to international marketing networks, it facilitates the transfer of production technology, skills, innovative capacity, organizational and managerial processes across different locations.
Regulation has a profound impact on FDI, as has been demonstrated by The United Nations Conference on Trade and Development (UNICTAD, 2016). FDI inflows are important because they can help to improve standards of governance in emerging economies (implying a two-way causality between governance standards and FDI). To create a more favorable environment for attracting FDI emerging economies have adopted more liberal trade and investment policies that led to an improvement in the general economic landscape.

Even if FDI already represents a significant source of external finance for developing countries they are taking specific measures to influence the locational choices of foreign direct investors. Since developing countries tend to have high risky business environments they need to mitigate risky factors that could impede the investments by providing incentives to multinational corporations.

Investors always face significant risks when they make investments in foreign countries because they are subject to changes in market prices and opportunities that cannot be exactly predicted before making the investment. But when foreign investors make investments in developing countries they are also subject to further risks regarding the reliability of institutions and governments, enforceability of property rights and general law enforcement. These factors are especially important because they ensure a sound and reliable business environment and a favorable economic landscape that decrease the risk of doing business.

Developing countries often complain that foreign investors tend to take all the benefits and gains and they leave as soon as problems arise. This situation of uncertainty and distrust could be so high to prevent investments from taking place even if both partners could receive potential gains (J.Tobin, S.R. Ackerman, 2005).

Research has demonstrated that the quality of the institutional environment (including strong institutions and investor-friendly regulations) and the investment climate are amongst the most important factors determining the location decisions of foreign investors.

Findings suggest that countries with poor regulations and not offering efficient processes to foreign companies are expected to receive less and lower quality FDI inflows. In a country having a poor and weak investment climate foreign investors may not be able to fully benefit from the business perspectives offered by the market size and the growth potential of that particular country. (P.M Mallampally, K.P Sauvant, 1999).

According to many theorists the institutional based view is the most suitable theory to explain the behavior of multinationals in emerging economies. Even if they are experiencing significant changes their economies still tend to have highly regulated markets. In emerging markets MNEs are welcomed because they can bring new institutional elements not previously present in their local environment. The reason is that the government has greater influence in emerging markets.

Institutional theory helps to explain how the institutional setting and the system in which organizations are located shape their strategies. According to North (1990) institutions establish the rules of the game (that can be either formal or informal) regulating human interactions in the society and organizations, which are one of the players, have to comply with such rules.

The objective of institutions in the economy is to reduce transactions and information costs. Institutions can influence organizations' processes and decision making.

According to R. Hoskisson, L.Eden, C. Lau, M. Wright (2000) the institutional perspective is important to explain the impact on enterprise strategies in emerging economies in the early process of market emergence. As markets start to mature, transaction costs economics and the resource based view gain more importance.

J. Cantwell, J.Dunning et al.2008) provide a framework linking the institutional view of North with the Evolutionary view of Nelson.

According to the eclectic or OLI paradigm there are three different kinds of ownership (O) advantages: those of an asset kind (linked to the physical technology owned by the MNE), those of a transnational kind (related to organizational routines whose purpose is to coordinate dispersed value creating activities) and those of an institutional type (used for the formulation of corporate objectives). All of these three types of advantages are connected together. Institutional advantages in particular include shared best practices and firm-specific component. They include aspects of the institutional environment of the home country that can be moved to host countries shaping their institutional development.

According to J. Cantrell, J. Dunning et al. firms tend to carry the imprint of their home country institutional environment.

According to J. Cantrell, J. Dunning et al. (2008) there are three different kinds of relationships linking MNEs and institutions: the first one, defined as institutional avoidance, is when the external environment is regarded as given by MNEs but they are free to choose among different types of institutional environments. If a MNE face a weak, unaccountable, politically unstable and poorly regulated business environment it will choose an exit strategy unless its investment is resource seeking motivated. The second type of engagement is referred as institutional adaptation in which MNEs adjust their structures and policies according to the environment.

In the last one MNEs engage in a process called institutional co-evolution: the purpose of multinationals in this case is not simply to adjust but also to make formal or informal changes in the local institutions through political action or lobbying the government. Different types of co-evolution include the introduction of new organizational structures or best practices either acquired on a local level or from other part of the organization's network. When MNEs introduce new practices they can also change the underlying values and institutional structures of the host country. They also include efforts by MNEs to bring changes at the supranational level (through the diffusion of home country institutional setting, by making changes within existing supranational bodies or through pro-active institutional entrepreneurship.) MNEs have significant power in modifying the existing institutional

setting. They can either do so through negotiations and political strategies to affect public regulations or through private self-regulation.
These three different types of engagement are not mutually exclusive and certain trends can be detected. Adaptation tends to occur in more stable business environments and in less innovative sectors. In more dynamic environments or in faster moving environments where there are political and institutional reforms a process of co-evolution is more likely to occur.

S.M. Thangavelu and C. Findlay (2011) analyze the impact of RTAs in the determination of FDI flows. They investigate whether membership of a bilateral or regional trade agreement can have a differential impact on FDI flows in the Asia-Pacific region using an *extended gravity model*. More in detail they examine outward FDI flows from OECD countries to other OECD countries and selected non-OECD countries in the ASEAN region.

The authors adopt a country-pair fixed effects model using panel data including 30 OECD source countries and 43 host countries in the period between 1986 and 2007. These countries have been chosen for their attractiveness as inward FDI locations and that are also part of bilateral and regional trading agreements.
The empirical results demonstrate that there is a positive relationship between participation in multilateral agreements and FDI inflows into the Asian Pacific region.

R. Kamaruddin (2009) find that stronger regional economic integration has a significant impact on the inflow of FDI in the region. The study makes use of the *bounds testing* (ARDL) approach to cointegration.
M. S. Ullah, K. Inaba (2014) empirically assess FDI determinants with a particular attention into the FDI effects of BIT, BTA and RTA as well as factors related to institutional quality. A gravity model of
From the econometric results emerge that neither BITs or BTAs represent a strategic instrument for stimulating foreign investment in developing countries in Asia. The role of bilateral instruments in stimulating the inflow of foreign capital is less effective if liberal FDI policies already exist in the host country. Under such circumstances, the quality of the host country's legal and regulatory environment exerts a profound influence on firms' investment decisions. The findings also suggest that a

host country's economic growth, development of human capital, improvement of infrastructure, better law and order situation have a positive influence on a firm's investment decision.

Grigoli (2011) analyses empirically the effect of lower trade barriers and the increased trade on the synchronization of business cycles for MERCOSUR countries (with the exception of Paraguay). *Quarterly panel data* are used. The results are that closer international trade links lead to more linked business cycles amongst countries. Evidence is found that higher commercial integration results in more synchronized business cycles. Results are robust to changes in the time span length and estimation technique.

Frankel J., Stein Ernesto, Wei S.J. (1995), use the gravity model to examine bilateral trade patterns across the world. Their results are that intra-regional trade is higher than it could be explained by natural determinants (the proximity of a pair of countries, their sizes GNP and if they share a common border or a common language).

J. C. Brada, J.A. Mendez (1985) examine six integration schemes and decompose their ability to increase inter-member trade into environmental, policy and system effects. Environmental factors caused the greatest variation in trade creation. They find that integration can benefit both developed and developing countries (for some such as those in Latin America inter-member distances limits its effectiveness).

Seyed Komail Tayyebi, Amir Hortamani (2007) estimate the impact of the trade integration agreements in ASEAN and in the EU to the evolvement of FDI flows in these blocks. They investigate the hypothesis whether trade integration influence FDI flows in the blocks and how important it is for FDI creation and FDI diversion. Panel data method is empirically used to estimate the FDI gravity model by using data on the country members of EU and ASEAN over the period 1992-2003. They found that regional integration in East Asia can have a significant effect on FDI leading to investment creation in both blocks. The deepening of trade integration by the expansion of export market within the two blocks, or by trade liberalization between Asian and European countries can significantly lead to trade creation. Their results are in line with the relevant theoretical literature stating that the impact of a rise in bilateral trade due to the launch of a trade integration agreement on FDI is a positive function of the openness degree of a country.

M. Castilho, S. Zignago (2002) have examined the relationship between foreign direct investment, trade and regional integration in the MERCOSUR. They test various disaggregated gravity equations on trade and FDI flows amongst two specific MERCOSUR members: ARGENTINA and BRAZIL and their partners in the 90's. The results of their analysis is that there is an ambiguous effect of

integration on investment flows, a positive and strong relation in the case of Brazil and a weaker or almost nonexistent relation in the case of Argentina.

E. O. Nwsou, A. Orji, N. Urama, J. I. Amuka (2013) investigate the role of regional integration in attracting FDI. They use panel data in the analysis and their findings show that FDI from the rest of the world is determined by macroeconomic fundamentals like market size (GDP) and exchange rate, while inter-ASEAN FDI is not significantly related to macroeconomic fundamentals but it is also influenced by previous investments in the region. This implies that investments in ASEAN is motivated by economic integration.

M. G. Plummer, D. Cheong (2008) analyze the recent trends in FDI to and among ASEAN countries comparing FDI patterns before and after the Asian crisis to characterize and assess the region's strategies to liberalize and facilitate investment. Their findings are the FDI flows to ASEAN countries have suffered after the ASEAN financial crisis but they have picked up starting from 2005. They conduct an econometric analysis on the determinants of FDI to detect ASEAN specific changes in FDI.

M. G. Plummer, D. Cheong (2008) () investigate the potential impact of the FTAA and the EU MERCOSUR agreement on FDI flows to MERCOSUR using a gravity model. They conclude that regional integration agreements induce higher FDI inflows to host member countries. Thus MERCOSUR countries should expect an increase in FDI inflows as a result of the agreements.

N. W. Ismail, P. Smith, M. Kugler (2009) analyze the role of AFTA in increasing ASEAN countries' attractiveness for FDI from member and non-members countries. The study covers the time period, 1995-2003. A gravity model is used, based on cross section and panel data analysis.

The results of the study indicate that ASEAN countries invest in each other less than they invested in the new ASEAN members.

M. Cherif, C. Dreger (2015) compare the MENA countries to the better performing regions in Latin America and Southeast Asia. Their findings are that: agglomeration effects are weaker for the MENA region and that the impact of the RTA is significant. However, RTAs do not in general increase the attractiveness of the region for foreign investors because the effect interacts with business-friendly regulations. A crucial factor is represented by financial deepening in the host country in combination with the institutional framework. Furthermore, institutional conditions are only relevant if analysed in combination with the macroeconomic determinants.

G. Bittencourt, R. Domingo N. Reig L. (2006) analyze the relationship between foreign direct investment (FDI) and the development of regional integration agreements (RIA). A gravity model is used. Additional variables to those generally considered in the gravity models of FDI determinants (related to the external sector and to the relative size of economies that are involved in each bilateral relationship) are used. An analysis of "winners" and "losers" is provided, disaggregated at country level in order to take into account the possible effects of agreements on each MERCOSUR country in the framework of the FTAA and the MERCOSUR-EU agreement. The form that FDI among countries takes allows us to profile winners and losers as regards FDI flows in the framework of regional integration agreements. FDI increase could be associated with the external creation of FDI, and we find bilateral FDI flows are more elastic as regards foreign trade. If the FTAA and MERCOSUR-EU agreements increased trade flows –which is a distinct possibility- those flows would have a positive impact on FDI flows, and predominant forms of expansion would be the open/resource seeking form. In this framework, Brazil would be the only "winner" inside the bloc and Argentina would probably be the "loser".

H. G. Rammal, R. Zurbruegg (2006) investigate how changes in the quality of government regulatory effectiveness and governance practices influence the direction of outward FDI flows between five ASEAN countries: Malaysia, Philippines, Singapore and Thailand. The study makes use of a panel data set containing information on FDI flows from home to host countries. Their findings are that a deterioration in the effectiveness and enforcement of investment regulations (price controls and excessive regulation in foreign trade) have a negative effect on intra ASEAN FDI.

3 An overview of the regional Integration Agreements in Developing Countries

3.1 The development of BITs

By looking at the development of institutions on historical perspective new formal institutions have been created after the end of the First World War with the purpose of making easier for businesses to increase and expand their economic activities and to be able to better capture returns coming from emerging technologies (including the development of modern capital markets and patent legislation).

The period between the two wars was characterized by higher tariffs and cartelization and as a result, new supranational institutions were established.

These institutions included the Bretton Woods institutions (IMF and the World Bank), the system of fixed exchange rates and the agreement on Tariffs and Trade (GATT).

In the 1980´s and 1980´s the nationalism of developing countries increased and due to the uncertainties that this phenomenon created, several rounds of negotiations were carried out, called Uruguay round of negotiations.

These negotiations led to the formation of new supranational agreements with the establishment of the WTO in 1995. Such agreements included provisions on the protection of intellectual property rights and investor protection (TRIPs and TRIMs) and other agreements (such as bilateral investment treaties called BITs, and regional integration agreements) with the purpose of decreasing investor uncertainties.

Since the enforceability of property rights is regarded as one of the most important factors for doing business, to overcome the problem of low enforceability of property rights, developing countries have signed and entered into BITs (bilateral investment treaties) that guarantee certain standards of treatment for foreign investors. Today BITs are the most used means to regulate investment in developing countries under international law.

The overall purpose of BIT is to provide a reliable legal environment for foreign investors, to implement mechanisms for dispute resolution and to facilitate the entrance and exit of funds. BITs protect against the expropriation of property rights. In particular BITs sustain and promote FDI through a series of strategies such as the guarantee to have a high standard of treatment, legal protection of investment through international law and access to international dispute resolution (UNICTAD, 1998).

The growing number of these treaties is a sign that FDI plays a fundamental role in development countries' economy but also that investors are in general skeptical about the quality of domestic institutions and the enforceability of law in the host country. Thus developing countries need to facilitate and induce it. One of the ways in which it is possible to reduce the level of risk is by ensuring the enforcement of property rights. Developing countries are willing to accept restrictions on their sovereignty hoping that a guarantee of an adequate level of protection against political and legal risks for foreign investors will rise FDI. They represent a solution to the weaknesses of international law about investments of multinationals in developing countries since the current customary law was ratified on the basis of trade and investments performed by developed countries without taking into account

the weaknesses of the institutional environment of developing countries. BITs have evolved over time and one of the most important changes has been the introduction of treaty provisions transferring investor host country disputes from local courts to international arbitration. (Jennifer Tobin, Ackermann, 2005).

Initially, the international law on commerce and investments focused on a series of friendship and commerce and Navigation Treaties (FCNs) providing foreign investors with the status of most favored nation treatment in the foreign country signed mainly by developed countries. The national treatment means that foreign investors have the right to set up any type of business in the host country that also domestic investors are entitled to.

In 1967, the OECD tried to implement a multilateral agreement of foreign investment protection named the OECD Draft Convention on the Protection of Foreign Property. The convention proposed to introduce an international minimum standard of protection for foreign investment but it was rejected by developing countries because they wanted FDI to remain under domestic control with disputes being handled by domestic courts.

BITs were first signed amongst African and Western European Countries. The first BIT was signed in 1959 amongst Germany and Pakistan and it entered into force in 1962. At the end of the 1970s also Asian countries started to become members of BITs, later followed by eastern European countries. Today BITs usually include national and most favored nation treatment as their predecessors, the FCNs, to foreign investors in the host country.

The number of BITs signed has increased rapidly since the 1990s. In 1990 the number of BITs signed was equal to 385 compared to 2,265 in 2003. At the end of 2004, the number of countries involved in bilateral treaties was 176 (UNICTAD, 2015). At the beginning, bilateral treaties were signed amongst developed countries and developing countries. Developing countries did not sign agreements between each other. This trend has changed over the past years when developing countries have also started to sign agreements between each other. Developing countries use BITs to send signals to foreign investors that they have a protective, strong investment environment or as a commitment that foreign investments are ensured through the enforcement of these treaties. But in addition to attracting FDI developing countries hope that BITs will have also peripheral benefits (entering into a BIT may imply the need to enter into other treaties covering other areas).

As pointed out by J. Tobin, S.R. Ackerman (2005), when countries enter into these treaties they incur costs. Developed countries could be in advantage position from a profit perspective compared to

developing ones. When multinationals acquire stronger bargaining power as a result of a BIT agreement foreign investors could be in a disadvantage position. Even if in theory BITs are supposed to provide the same playing field for both domestic investors and foreign ones the latter could end up in an advantaged position. The reason is that foreign investors are entitled to make recourse to international arbitration if they perceive that there has not been a fair treatment of their property while domestic investors can only appeal to the local property rights enforcement system. In case domestic investors try to define themselves as foreign only to gain access to the system they prefer, could be a sign that they do not perceive local courts as effective and trustworthy as international arbitration.

Developing countries are worried about the loss of sovereignty, of losing control on their internal economic activity because these treaties often imply restrictions on employment policies and development policies, posing additional challenges to national industries.

Reasons, why developing countries to choose to enter into treaties, vary.

According to Abbott, Kahler (2000) countries having a high amount of natural resources of interest to foreign investors are less willing to enter into bilateral treaties because they can gain more in bargaining with them. Instead, countries less rich in natural resources are more favorable in entering into these treatments.

But countries competing for the same type of investment have to replicate the policies adopted by countries with whom they compete to avoid being in a disadvantage position.

According to the literature on international trade foreign investors have significant power in the host country in influencing political decisions Thus if there are not BITs agreement in place, foreign investors can bring or push to introduce new reforms benefiting the whole economy of the host countries and ultimately also domestic investors.

If the host country has signed a BITs agreement instead, foreign investors will not push for obtaining property rights reforms and enforcement in developing countries. In this case, the BIT agreement would benefit foreign investors but it could have harmful effects on the reliability of the business environment for domestic investors.

From 1995 to 2000 FDI inflows have increased at an average rate of 17% for low-middle income countries. These inflows have continued to increase both absolutely and as a share of global inflows. FDI inflows towards developing countries have increased from the US $158 billion in 2002 to $ 172 billion in 2003. Their share of world FDI increased by 8 percentage points to 31 p in 2003 (difficult to assess causality).

It represents the most important source of external finance for developing countries, exceeding the sum of commercial bank loans and portfolio flows over most of the years. It also represents a more stable source of financing with respect to other sources.

When in the 1980's the establishment of a European Single Market was proposed many discussions began to emerge about the potential benefits brought to the region and to the individual member states.

Those in favor stated that the European Integration had already been beneficial to the region but that a deeper integration process was necessary in order to capture the full benefits of this integration project. Even if formal tariff barriers between EC countries had already been eliminated during the Treaty of Rome (1957), there was still high protection in the regional market in favor of domestic producers resulting in excessive market power. The consequence was higher price level and lower output volume than under normal competition.

Quantitative restrictions represented the main constraint to trade particularly in Europe. Tariffs continued to remain high in the early 1960s but they started to decrease substantially since then and in 2000 at the onset of the Uruguay Round they were equal to an average of 4.2% in Europe and 4% in the US.

The Cecchini Report (1988) outlined the main benefits of the European Single Market including enhanced competition and improved chances of exploiting scale economies.

It estimated gains between 4% and 6% of GDP in each EC-12 countries mainly due to higher competition, to the exploitation of economies of scale and to the role played by FDI in the restructuring process. In the restructuring process the structure of the Industry shifts from one in which there are *"national champions*" in each country towards one in which there are few "*survived regional champions"*.

The following section examines trade agreements that were stipulated among developing countries in Latin America and Asia: the MERCOSUR and ASEAN agreements.

3.2 The ASEAN region

ASEAN (*Associations of South East Asia Nations*) is a political and economic organization of ten South-East Asian nations. It has been created on 8 August 1967 by Indonesia, Malaysia, the Philippines, Singapore and Thailand. Later on also Brunei, Cambodia, Laos, Myanmar and Vietnam have entered into the organization.

The ASEAN declaration has established the objectives of ASEAN that include acceleration of economic growth, the promotion of social progress and socio-cultural evolution among its members, alongside protection of regional stability, the provision of mechanisms for member countries to solve differences in a peaceful way (ASEAN Report, 2014).

The process of external and internal economic integration has been further consolidated with the establishment of the ASEAN Free Trade Area (AFTA) in 1993.

In 2003 Member Countries agreed to establish the ASEAN community within 2020 which includes three main pillars: the formation of AEC, the ASEAN Security Community and the ASEAN Socio-Cultural Community.

At the end of 2015, the ASEAN Economic Community (AEC) has been launched. The purpose of AEC is to make ASEAN a single market and production base guaranteeing the free flow of goods, services, investment, labor and capital.

The aim of AEC is also to integrate the ASEAN region into the global economy (through an integrated market and a supply chain network), by making it a competitive economic region (through specific competition policy, enforceability of intellectual property rights, infrastructure development, equitable economic development, reduction of disparity within the region, integration into the global economy).

The intra-ASEAN agreement the has influenced more FDI is the ASEAN Trade in Goods Agreement (ATIGA). The purpose of ATIGA is to decrease custom duties in the ASEAN region to a level between 0% and 5% on most goods by 2010.

The ASEAN Framework Agreement on Services (AFAS) is the "legal framework" enabling member countries to lower restrictions. The agreement that will have the biggest impact on FDI in the long term is the ASEAN Comprehensive Investment Agreement (ACIA). If implemented this agreement will give strong protection to foreign investors from outside and within the ASEAN region. ASEAN has implemented outward/oriented trade and FDI policies since the 1980s. The liberalization of FDI inflows in the manufacturing sector, imports of capital goods, the investments in industrial and social infrastructure (ports, roads, railways, electricity, information and communication technology) resulted in the general improvement of the business climate.

ASEAN member countries have experienced an increase in foreign direct investment (FDI) inflows. The ASEAN region has been the largest recipient of FDI compared to GDP, in the Asian Pacific region. Between 1952 and 2012, Singapore accounted for more than half of total FDI to the whole

region (52%), Thailand is ranked second with 13% of share. It is followed by Indonesia (11%), Malaysia (10%), Vietnam (8%), Philippines (3%).

Domestic reforms to liberalize trade and FDI regimes under the General Agreement on Tariffs and Trade (GATT) and the Asia-Pacific Economic Cooperation (APEC) also played a crucial role.

The availability of FDI-supporting infrastructure (ports, roads, railways, electricity, ICT and water), high quality-low cost skilled labor and more business friendly environments have improved the attractiveness of ASEAN member countries by providing a good investment climate for MNCs.

According to the ASEAN Briefing Report (2014), developing countries in South East Asia receive much more economic benefits when they increase allowable foreign ownership leading to higher FDI inflows.

MNEs undertaking market seeking FDI are attracted by the market size and growth opportunities offered by the ASEAN region (consisting of 625 million people in 2012, 25% higher than the EU). In 2013 the regional economy was worth $2.4 trillion in 2013. The size and the economic potential of the market is encouraging MNCs to penetrate and to further expand in the region.

Strong regional macroeconomic factors have also played a significant role in attracting investments in the region. In 2013 regional economic growth was equal to 5.1%, higher than the world average (equal to 3%.)

MNCs and also ASEAN companies based in countries with higher wage costs prefer to move production in ASEAN countries like the Philippines and Indonesia with lower wage costs. There are high expectations for the AEC and the implementation of the single market and single production base.

Corporate perceptions about the ASEAN Economic Community (AEC) are very positive, corporations from both other ASEAN countries and from foreign countries are implementing new investments or are further expanding in multiple locations within the ASEAN region to benefit from the single market and production base of an integrating ASEAN, to improve their regional presence and to optimize production capacity. Their goals are to boost and improve their regional footprint, to improve their competitiveness, to expand their market reach and to further extend their regional production networks (see figure 2). (ASEAN Investment Report 2013-2014).

Some member states dominate as the main recipients of regional investments in 2013. Intra-ASEAN investment in Indonesia, Thailand, Vietnam rose substantially mainly in the manufacturing sector.

In 2013 China was the fifth largest investor in the region accounting for 7% of all FDI to the ASEAN region ($8643.5). The high level of Chinese outward FDI to ASEAN is due to several factors such as the push of Chinese firms to internationalize, the influence of the ASEAN-China FTA, the support

of the Chinese government, geo-cultural proximity and affinity, the improved investment environment and opportunities in the ASEAN region. Another crucial role is played by Chinese banks such as China Development Bank, and the EXIM Bank of China that provide financing facilities to enterprises.

Even if FDI plays an increasingly and predominant role in the promotion of economic growth in the ASEAN region foreign ownership is restricted in many of these regions: Malaysia, The Philippines and Thailand are the most restrictive countries in terms of foreign equity ownership while Cambodia and Singapore enable 100% foreign ownership in the majority of the sectors. Business services, telecommunications and transport were the most restricted sectors in the ASEAN region, while manufacturing sectors were on average the most liberalized. (ASEAN Briefing, 2014).

Another important step is to better integrate the ASEAN region within the rest of ASIA and the rest of the world, while at the same time maintaining ASEAN centrality. The significant expansion of trade and FDI inflows experienced by ASEAN countries starting from the 1980s has been accompanied by the integration of East Asia's supply chains. FDI has played a crucial role in the formation of supply chains and production networks in East Asia. As part of their industrialization strategies ASEAN member countries have implemented policies enabling and encouraging FDI inflows from developed countries. Many advanced ASEAN member states like Singapore, Malaysia, Philippines and Thailand can now participate actively in supply chains. Instead Indonesia and less advanced member countries of ASEAN have started to join supply chains in more recent years (Kaway et Naknoi, 2015). By integrating within the East Asia's supply chains and production networks, ASEAN is now a fundamental production base for multinational corporations (MNCs) from the EU, Japan, US and also from emerging Asian firms.

Thus countries like Singapore, Malaysia, Thailand, the Philippines have been able to integrate in the East Asia's production networks and supply chains and to expand intra/regional and intra/industry trade. Less developed countries within the region like Cambodia, Lao's People's Democratic Republic, Myanmar and Vietnam are now starting to liberalize their trade and FDI regimes in order to join the region's supply chains.

3.3 The MERCOSUR region

The Common Market of the South America (MERCOSUR) was established in 1991 by the Treaty of Asuncion. It is an economic and political agreement between Argentina, Brazil, Paraguay (which is currently suspended from the treaty) and Uruguay.

In 2012 Venezuela entered into the treaty becoming the fifth full member gaining complete access to the common market and also full voting rights.

MERCOSUR is the result of a series of previous regional treaties and efforts to capture the advantages of having an integrated region, on the basis of the success obtained by other regional economic integration agreements worldwide.

It has evolved from the Latin American Free Trade Association (LAFTA) established in 1960 to the Latin American Integration Association (LAIA) in 1980. The Integration and Economic Cooperation Program, between Brazil and Argentina, was established in 1986 followed by the Brazil-Argentina Integration, Cooperation and Development Treaty in 1988 and the Economic Cooperation agreement no. 14 of 1990 (which can be regarded as one of the real cornerstones of MERCOSUR).

The integration process has followed a gradual process from the creation of a free trade area, to the development of a customs union, a contractual agreement and a structured international organization. The first step implied the establishment of a free trade area with free movement of goods and the elimination of internal tariffs among member countries. The second step implied the creation of a customs union, with the mandatory introduction of a common external tariff. The many exceptions granted for its implementation has led MERCOSUR to be named an imperfect customs union.

The third phase implied the establishment of a common market characterized by the free movement of labor and capital. (United Nations, 2003).

The Ouro Preto Protocol (POP), issued in 1994, defined the institutional structure of the bloc and the key decision-making of its governing bodies. The protocol transformed the bloc into an international organization, giving it the status of international legal personality under public international law. It gave the bloc the authorization to negotiate and to enter into agreements with third countries, group of countries and other international organizations. From an institutional perspective, it is an intergovernmental organization, developed from a contractual type arrangement into an international structure. One of its most distinctive features is that even if it is an international organization it does not have any supranational authority and its members still have sovereignty. This implies that the participation of all member countries is necessary to negotiate and to enter into treaties. New agreements signed by MERCOSUR are not automatically enforceable in the territory of its member states since they need the national level consensus of each member country.

Its principal institutions include: The Council of the Common Market (CMC), the Common Market Group (MCG) the MERCOSUR Trade Commission (MTC), the Joint Parliamentary Commission,

(JPC), the Economic and Social Consultative Forum (ESCF) and the MERCOSUR Administrative Secretariat (MAS) (United Nations, 2003).

Today it is the most comprehensive initiative of regional integration implemented in Latin America. In 2012 it included almost 72% of the South American territory, (12.8 million km2, three time the area of the European Union), 70% of the South American population (275 million inhabitants) and 77% of South America's GDP corresponding to US 3.18 trillion over a total of 4.13 trillion Brazil is the largest economy in the region. In 2012 it had a GDP of US 2.2 trillion. (World Bank, 2012).

It represents the fourth largest trading bloc in the world, after the European Union (EU), the North American Free Trade Agreement (NAFTA) and the Association of South East Asia Nations (ASEAN). (Ministry of Foreign Affairs Brazil, 2006).

MERCOSUR has also five associate members: Chile, Bolivia, Colombia (which is currently under assessment to obtain full membership), Ecuador and Peru. Guyana and Suriname have obtained the status of associate members in 2013. These countries do not have full voting rights and they do not have full access to the common market as other MERCOSUR's members. They benefit from tariff reductions but they are not obliged to charge the common external tariff as the other MERCOSUR members. (Ministry of Foreign Affairs Brazil, 2006).

The block can be defined as a customs union in the process of consolidation whose main objectives include the reduction of obstacles to regional trade, the reduction of tariffs and income inequalities and the adoption of a common tariff policy towards third countries (by the Common External Tariff, CET). (Ministry of Foreign Affairs Brazil, 2006).

All countries in South America have connections with MERCOSUR, both as full members or as associate members.

The main pillars contained in the treaty are the elimination of all tariffs applied on intra- MERCOSUR trade by the end of 1994 and the adoption by all member countries of a common external tariff on imported goods from countries outside the bloc. Member countries started to decrease tariffs already in 1991 and in 1997 around 90% of intra bloc trade was tariff free.

Thanks to the measures adopted Intra-bloc trade has experienced a significant increase and now represents more or less 15% of MERCOSUR's global trade amount. Intra bloc trade has multiplied by more ten times from US 5.1 billion in 1991 to US 58.2 billion in 2012 and almost all tariffs applied for trade within bloc members has been decreased.

On the trade and commercial aspect MERCOSUR has been successful since the bloc now represents an important space for making investments and it is the biggest recipient of FDI in the region.

In 2012 MERCOSUR received 47.6% of the total FDI flow directed towards South America, Central America and Mexico (UNCTAD).

But it does not have exclusively trade objectives. Its integration agenda is much broader because it also includes measures to develop more efficient infrastructures, telecommunications and technology in the region. An important step towards the fulfillment of these objectives has been achieved in 2005 with the approval of the Structural Convergence Fund for MERCOSUR (FOCEM). Its purpose is to finance projects to improve the quality of infrastructures in the region, the institutional setting, to increase the level of competitiveness (Ministry of Foreign Affairs, Brazil, 2016).

According to leading experts, MERCOSUR has been paralyzed in recent years. The main issue at stake is whether the focus should remain on regional trade or if also political affairs should be among its key priorities. In 2008 a regional customs union has been created, called the Union of South American Nations (UNASUR), that put under question the utility of MERCOSUR.

In 2012 Paraguay has been suspended from the block adding concerns about the future of MERCOSUR.

MERCOSUR does not allow its member countries to establish FTAs with other non-member countries. MERCOSUR member countries are thus excluded from the Andean Community of Nations (CAN), a small trade bloc which comprises Bolivia, Colombia, Ecuador and Peru. CAN and MERCOSUR leaders signed an agreement to set up a third agreement denominated UNASUR, in May 2008. UNASUR contains provisions regarding trade, security and also political issues, similar the European Union.

On the international level, MERCOSUR is held responsible for the failure of the Free Trade Agreement of the Americas (FTAA). The main purpose of the FTAA was to create a link between North America and Latin America from a trade perspective. Members of MERCOSUR and also Venezuela did not want to enter into the agreement fearing that it could bring more inequality in the region. The blockage of the FTAA agreement linked with the low interest displayed in trading with the United States has led the US government to regard MERCOSUR as an obstacle for the expansion of trade in Latin America.

According to some observers, the future of the bloc could be at risk due to its internal problems, the higher level of protectionism and the controversy related to Venezuela membership.

4 Data and Methodology

The research question under examination is investigated through a *meta-analysis* (sometimes also defined as *research synthesis* or *research review*), which is the most suited methodology to adopt. A meta-analysis is a set of methodological and statistical tools that aid in the production of an integrative literature review.

The reason why a meta-analysis is the most suited methodology is that the available empirical literature exploring the impact of entering into a BITs or FTAs on FDI inflows provide different and conflicting results. The explanation could be that results of individual studies are influenced by specific features like the study setting, the sample under investigation, the timing when the research has been conducted, the locations or it may be influenced by biases introduced the researcher itself.
The quantitative procedure used in the meta-analysis is the way to address and overcome the challenges stemming from the presence of multiple answers to a given research question.
As stated by Cooper & Hedges, (1994) the term is also used to refer to a statistical method that combines estimates of a treatment's effects on some response measure to evaluate the degree of consistency of these estimates across different studies. It is literally the screening of past analyses providing a quantitative and empirical history of research on a particular phenomenon.
In this case, it is useful to detect general trends and the underlying principles by examining relevant empirical studies through a meta-analysis. Meta-analysis is the statistical analysis of a collection of analysis results from individual studies in order to integrate all their findings and to interpret the results (on the basis of the main theoretical arguments). In this way the risk of relying on a single empirical study is avoided.
According to M.W. Lipsey, D.B.Wilson (2001) the meta-analysis imposes a useful discipline on the process of summarizing research findings because it is a structured research technique requiring each step to be well documented and it provides an organized way of handling information from a large number of study findings. The main advantages of using a *meta-analysis* compared to a traditional qualitative approach of narrative reviews are that a meta-analysis enables to integrate results from previous research in a more differentiated and sophisticated manner (it minimizes bias and random errors in the analysis), it enables to find effects or relationship that cannot be detected using other approaches. The traditional method enables reviewers to build an integrated narrative summary of the main results, including a count of the number of studies that have produced or have failed to

produce statistically significant results. But the traditional method has several limitations: it only uses a limited sample of studies, it ignores which study characteristics have been considered, or how the different study methods have been used can explain different findings, it is too reliant on *statistical significance* and it does not take into account the *effect size magnitude*. Thus narrative reviewers can infer wrong conclusions about a determined phenomenon.
By contrast, a meta-analysis allows to combine the effects and to evaluate the statistical significance of the combined effect and it provides a mathematically rigorous mechanism for this objective.
Rosenthal and Di Matteo (2001) state that the advantage of a meta-analysis is that it enables to arrive at conclusions that are more accurate and more credible with respect to those presented in primary studies or in non-quantitative, narrative reviews.

The term *meta-analysis*, was first coined by Glass (1976) to describe a systematic quantitative alternative to narrative literature reviews that enhances the scientific rigor of the review process. According to Glass (1976) a meta-analysis is: "the analysis of the analyses. It represents a rigorous alternative to the casual, narrative discussions of research studies which typify our attempts to make sense of the rapidly growing research literature".
The primary goal of the review is to detect consistent patterns of results across studies in order to advance the theoretical knowledge about the topic under examination. If executed in the right manner a meta-analysis helps to assess how limitations in the available evidence influence the strength and generalizability of the research evidence.

Statistical significance is the least interesting thing about the results. You should describe the results in terms of measures of magnitude –not just, does a treatment affect people, but how much does it affect them. -Gene V. Glass

The primary product of a research inquiry is one or more measures of effect size, not P values. -Jacob Cohen

As can be inferred from the previous statements the building block of a meta-analysis is the measure of treatment effectiveness or effect size. It focuses on how much difference something makes (the magnitude of an effect) and not on whether or not the difference was statistically significant. Study results are assessed in terms of the actual magnitude of the observed relationship, change or group

difference, rather than the p-value of a specific statistical test, encouraging the use of a more scientific approach to the interpretation of quantitative results (C.T. Fitz-Gibbon, 1985).
The concept was further developed by Glass McGraw & Smith (1981) defining meta-analysis "as a quantitative method for synthesizing research results in terms of their effect size, of how much difference they make, rather than in terms of whether or not the effects are statistically significant".

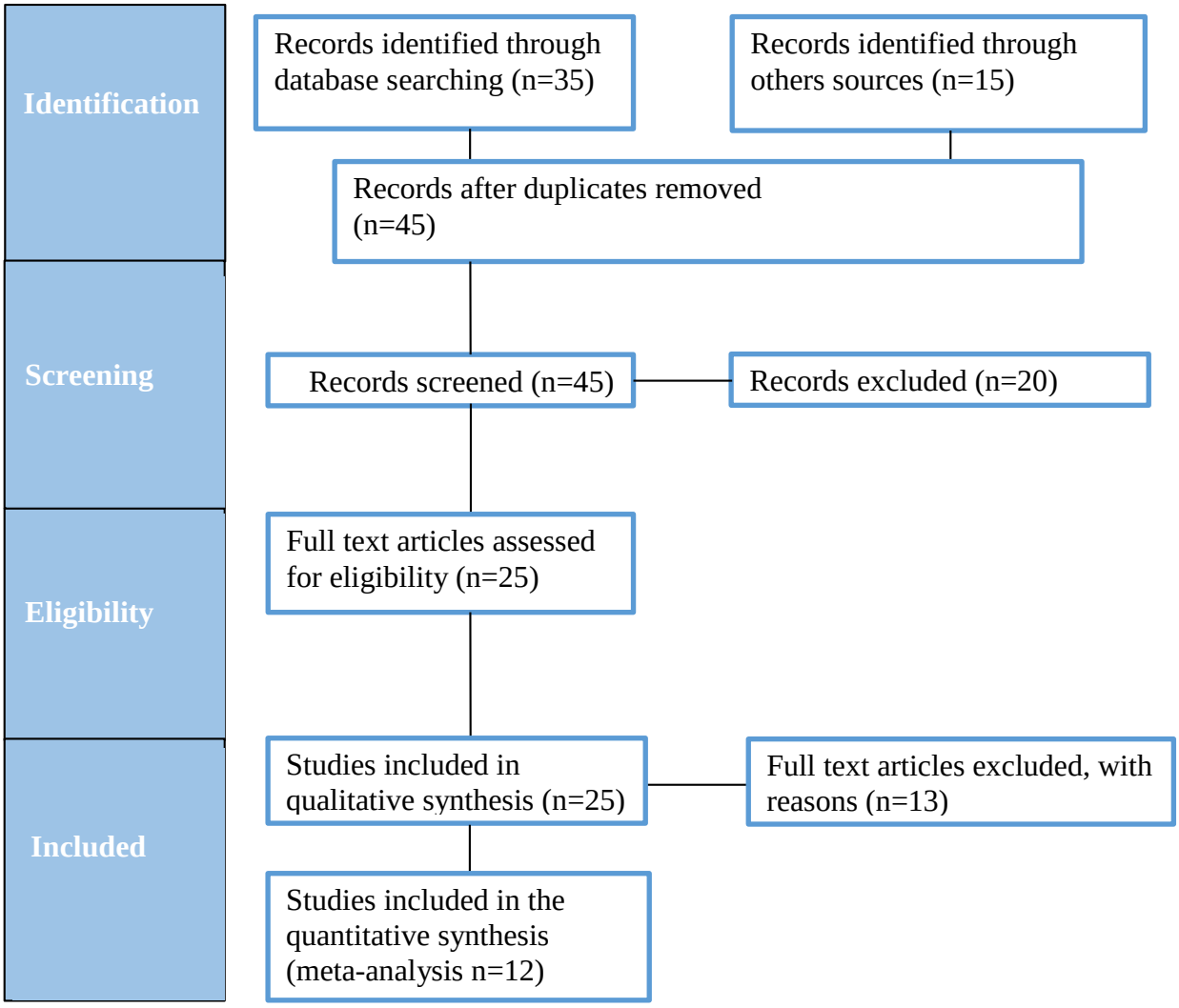
Biar Johnson, M. H. Boynton (2008) outline the basic process and statistics of a meta-analysis. The process consists of four main steps. The first step consists in defining the problem at stake and providing an overview of the main theoretical arguments. The independent and dependent variables of interest should be defined. All variables need to be coded in a clear and precise way. They may consist of continuous variables with values existing along ratios, interval, ordinal scales or categorical variables.
A large quantity of literature has been consulted and screened for this thesis including working papers, reference books, Technical Reports (yearly, quarterly, monthly) published on Trade Journal, academic journal or by looking at the references of studies and analysis already included.
In order to get a representative set of journal articles, several economic literature databases have been consulted and relevant studies have been collected by searching on online search engines like Google Scholar or through the university library database using the following combination of keywords in the title: FDI, FTAs MERCOSUR, ASEAN.
Statistical databases like UNICTAD, World Bank, OECD have been used to obtain relevant data about trade and FDI statistics.
It is important in this initial step choosing the right inclusion criteria and to select the most relevant samples of studies to be able to assess the quality of these studies.
In order to be included in the meta-analysis a study should meet the following Inclusion criteria: the study is quantitative and it is available in electronic form, the language of publication is English, it is available for free, FDI represents the dependent variable in the empirical model while FTAs or BITs are one of the explanatory variables included in the specification, not necessarily the variable of main interest in the study.
Titles, abstracts and the empirical analysis of the identified literature were scanned.
Only those studies containing empirical analysis and sufficient statistical information have been included in the meta analysis to permit calculation or estimation of an appropriate effect size statistic

or other desired summary information for effects or relationships involving key variables (information about the t-statistic or the standard error or the degrees of freedom of the sample size).
Thus the literature that did not respect the established inclusion criteria has been excluded.
The final sample consists of 12 working papers and funded research projects published in academic journals (e.g. Journal of International Economics, ASEAN Financial and Economic Review, Journal of Economic Integration, International Business Review, Journal of Economic Structures) and in the National Bureau of Economic Research. Books are also used as references for conducting the methodology.
The studies examined use data collected in the period between 1970s and 2010.
The thesis makes use of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, the PRISMA checklist, which is defined as an evidence-based minimum set of items for reporting in systematic reviews and meta-analysis. The identification and selection of study reports are reported through the PRISMA flow diagram including the screen of the identified studies, the full examination of studies that are potentially relevant and the application of eligibility and inclusion criteria to identify the relevant studies (see Appendix A for a detailed description of the process).
As can be seen from figure 1 through the online database search (including the university online library, Google scholar), by typing keywords and 35 studies have been identified while 15 studies have been identified through other sources. When duplicates are removed remains 45 studies. These 45 studies are then screened and 20 of them are eliminated because they are not relevant for answering the research question under examination. The 25 studies judged suitable for further examination are included in the qualitative synthesis but only 12 studies meeting all the inclusion criteria are included in the quantitative met- analysis.
The second step consists in gathering, screening and classifying the relevant studies on the basis of the method used and the effect size for each individual study should be calculated together with the associated standard error.
In the third step, all study outcomes are combined by averaging the effect sizes to find the mean effect size. Each effect size is usually weighted by the inverse of its variance. This step enables to give greater weight to more reliable studies results based on larger study samples. If different studies share the same effect size than they should differ only by an unsystematic sampling error.
The test statistic Q is used to evaluate this hypothesis with an appropriate X^2, $K-1$ degrees of freedom.
Each r is transformed into the Fisher Z transformation or r in order to normalize the distribution

Variability among effects sizes indicates that there is high likelihood that a moderator variable could account for the variability in the effects sizes. These differences in the different research findings are explained by understanding which moderator variables are able to explain these differences. Moderator variables are those variables that may explain inconsistencies across study results. The standard deviation of the effect sizes should be examined, plot them, look for outliers and focusing on findings moderator variables.

The final step consists in the interpretation and illustration of what has been found in the investigation.

Figure 1. Prisma 2009 Flow Diagram



Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta- *A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/. Journal.pmed1000097

These results should be compared to the expectations that have motivated the review and also to the main limits of the review.

Table 8: Main steps in the meta-analysis process.

Steps	Task
Step 1	Formulation of the research question Literature search and screening
Step 2	Data extraction Analysis of the data
Step 3	Calculation of the average effect size
Step 4	Result interpretation

Source: Biar Johnson, M. H. Boynton (2008)

4.1 Research limitations

The main limitations of the thesis are connected to the type of methodology used, a meta-analysis. Meta analyses are often criticized for having several flows. M.W. Lipsey, D.B.Wilson (2001) list the main disadvantages of using a meta-analysis. A common criticism of a meta-analysis is that since its purpose is to reduce results into a single value through the average effect size, with confidence bounds, it is likely to lead to results that are seriously wrong.

A major source of disadvantage is related to the mix of studies included. Studies included in a meta -analysis are not perfect and a meta-analysis if often criticized for including both high quality and low quality studies. This type of criticism is known as *"garbage in and garbage out"*. If the meta analysis includes many low quality studies, the errors in the primary studies will be transmitted also in the meta analysis where they will be more difficult to identify.

There are two different approaches solving this issue. The first one is to use strict inclusion criteria (including only the best evidence) taking into account the limitations that may affect the analysis regarding the limited availability of studies. According to Slavin (1995), a possible solution is to include only the highest quality studies in the analysis while studies with methodological flaws should be excluded. This approach is called *best evidence synthesis.* The inclusion criteria to select the studies should also include criteria based on the quality of the studies but there is not an official definition of what confer methodological quality. Thus a decision about which studies to include in the meta

analysis is subjective and people will always have different opinions on the appropriateness of combining and merging results across different studies.

The other approach consists of keeping all the studies in the analysis regarding methodological variation across studies like an empirical matter that should be investigated as part of the meta-analysis. This approach implies the adoption of broader methodological criteria and then the extent to which methodological characteristics are connected to study findings is investigated (random or nonrandom assignment in treatment studies) as part of the statistical analysis.

Another issue is the mixing of studies with different methodological approaches and qualities in the meta-analysis. This critique is called "*combining Apples and Oranges"* and it arises when study findings having different methodologies and using different types to measure results are combined and analyzed together and the summary effect ignores differences across studies.

The mean effects sized and other summary statistics produced by meta-analysis are not meaningful if they are aggregated and created over incommensurable study findings. The problem arises when a different type of study findings must be aggregated together to calculate the average effect size. The statistical test for homogeneity should be used to determine if a grouping of effect sizes from different studies show more variation than it should be expected from sampling error alone. The trend of modern meta-analysis is to look at the variance of effect sized of distributions, rather than at the means of such distributions. The primary task is to identify sources of differences in study findings rather than just aggregating results together in a mean average.

One of the strengths of a meta-analysis is to provide a statistical and mathematical synthesis of all the studies under investigation. But if these studies represent a biased sample of all the available studies, the average effect computed through the meta analysis will also be affected by bias. A meta-analysis may be affected by biases and flaws contained in the original study or it could also introduce new sources of bias.

In particular, studies presenting positive effects of the phenomenon under investigation are more likely to be published than the ones showing negative or no effects. This criticism of a meta-analysis is called t*he file drawer problem,* meaning that studies showing significantly positive results are more likely to be published compared to studies showing no statistical significance. Thus many statistical non-significant studies will be unnoticed by the meta-analyst.

Meta-analysis can be so complicated to conduct that mistakes by reviewers are common and often inevitable. However, according to M. Borestein, L. Hedges many of the criticisms against meta-analysis concern how the method is applied by researchers. Many criticisms (such as that is not possible

to summarize a body of data into a single number and ignoring dispersion of effect sizes) depend on misunderstandings and on the way in which meta-analysis is used rather than on problems with the methodology itself. Even if some flaws (like publication bias) remain relevant when conducting a meta-analysis, such flaws are also present in traditional narrative reviews but in the latter case they can be ignored more easily since narrative reviews do not have a clear structure.
Another limitation of the thesis is that the search is restricted to English-language articles published online. This could limit the spectrum of the search and important studies conducted in different languages or not published online may have been ignored or left out.

5 ANALYSIS

The purpose of this section is to investigate if the formation of regional integration agreements has positively influenced FDI inflows in the emerging markets economy using a meta-analysis as a methodological tool.
In a meta-analysis the dataset is made up by a matrix where the studies are contained in the rows and the columns represents the effect-size index calculated in each study and its sampling variance.
From this data is then possible to carry out a statistical analysis having three main purposes: to calculate an average effect size and its confidence interval.
Studies to assess the impact of regional integration agreements on Foreign Direct Investment have been conducted using different techniques and methodologies. The majority of studies analyzing trade agreements adopts a quantitative approach and use econometric techniques. The most used model is the *gravity model,* which is particularly suitable in explaining bilateral trade flows between economies.

The studies examined have adopted *the gravity model,* introduced in the 60's, has been widely used in international trade research for the last 40 years for its empirical robustness in explaining trade flows, for its high explanatory power and for its theoretical base. Many authors have analyzed and attempted to provide a theoretical justification for the model.

The application of the model has its theoretical foundations from the earliest trade theories such as the Ricardian framework to the Heksher-Ohlin model to the new trade theories and knowledge capital model, developed by Markusen in 1984.

Tinbergen (1962) and Pöyhönen (1963) were the first to use a gravity equation to analyze international trade flows. Since then it has been the most used method to investigate whether bilateral or regional trade agreements can have a differential impact on FDI flows.

The gravity equation is usually used to explain cross-sectional variation in country pairs' trade flows taking into account variables like: countries' incomes, bilateral distance, dummy variables (for common languages, common land borders, the presence and absence of FTAs).

According to Tinbergen (1962) FDI can be estimated by the following general gravity equation:

$$E_{ij}=\alpha_0 Y_i\, Y_j D_{ij}$$

where Eij represents exports of country *i* to country *j*, Y*i* is the GDP of country *i*, Y_j is the GDP of country *j* and D_{ij} is the distance between countries *i* and *j*. In the basic approach, the gravity model implies that bilateral FDI stocks (FDI from country i to country j) are affected positively by the product of the GDP of both countries and in a negative way by the distance among them. The initial construction of the gravity model is affected by omitted variable bias. Thus other country and country pair specific variables have been added to the initial model (such as common language, colonial link, dummy variables for the different FTAs and BITs across countries). Most of the gravity models include as descriptive variables not only the GDP of the host and the source country (the market size) and the distance between the two countries but also other variables that identify the specific feature a country (e.g the degree of trade openness, privatizations and political risk.

Some authors studying the effects of regional integration make use of the following descriptive variables: exchange rate variability (ERV), tariff barriers and non-tariff barriers (NTBs).

Early studies estimating the effects of FTAs on FDI through the gravity model used a cross section analysis without taking properly into account the time perspective. More recent studies, however, make use of panel data to compute the gravity equation. In Panel data features of both cross sectional and time series analysis are combined.

$$Y_t=\beta_0 + \beta_1 X_{it} + \beta_2 Z_{it} + u_{it}$$

with members i=1, N and time periods $t=1$[1],…..N. In almost all the studies examined the authors make use of panel estimates instead of cross sectional estimates. The challenges connected to the use of panel data are that data collection is more daunting and it takes more time to collect the data. This could lead to potential missing observations.

Country features in the Random Effect Model are also included to detect and control for heterogeneity. Over the years the econometric techniques used in the model have been changed and improved. Usually, the set of variables to be included in the descriptive model is chosen on the basis of the specific theoretical framework adopted in the study. The inclusion of these theoretical frameworks into econometric models is a tough task.

Some of the studies under examination estimate FDI by adopting the log of FDI flows, instead of the level, as the dependent variable.

$$log\ X_{i,j} = A + \alpha_1 log Y_t + \alpha_2 log Y_j + \alpha_3 log N_i + \alpha_4 log N_j + \alpha_5 log D_{ij} + log\ mij$$

where log Xi,j represent the logarithm of FDI outflows from source country i to host country *j*, *A* is a constant, Y_i, Y_j represent the GDP in the exporting and importing countries, N_i, N_j represent the population in the importing and exporting countries, D_{ij} measure the distance between countries *j* and *j*, $e_{i,j}$ is the lognormal error term.

Meta Regression models are used to examine if the differences in the results between and within studies can be related to the characteristics of such studies. The main objective of the research is to test the magnitude of the weighted mean effect size, by testing that the null hypothesis of no effect. and the variance (heterogeneity) of effect sizes through Tau-squared and Q test.

There is large consensus amongst methodologists that it is necessary to report effect sizes with the associated confidence intervals and that classical statistical hypothesis tests should not be used anymore.

5.1 Coding of the studies

The dataset in a meta-analysis is a matrix where the rows are the studies and the columns are the moderator variables, the effect size index calculated for each study and its sampling variance. Starting

[1]if T=1 than the data set will be cross sectional while if N=1 the dataset is time series.

from these data is possible to carry out statistical analyses having the following objectives: calculating the average effect size and its confidence interval, to assess the heterogeneity of the effect sizes around the average and to look for moderator variables that are able to explain such heterogeneity. Thus statistical methods are used to investigate study results. (J.S. Meca, F. M. Martinez, 2010). In the coding protocol, a distinction should be made between the part encoding information about study characteristics (study descriptors) and the part encoding information about the empirical findings (effect sizes) of the study. This distinction is similar to one of independent and dependent variables. Study findings represented in the form of effects sizes value are the dependent variables while study features like methods, measures, construct, context etc…represent the independent variable (those factors that may influence the magnitude of the findings). It is important to differentiate results of the studies stemming from variation in the phenomenon of interest from those stemming from differences in the methodology and procedure used. Usually, a distinction is made between study-level information and effect size information. The study-level information is related to aspects of a study that are referred to a particular quantitative relationship or study finding that a meta-analyst wants to code. Study level information instead needs to be coded only once for each study and does not change for different variables (M. W. Lipsey, D.B. Wilson, 2001).

5.2 The Fixed Effect model

When conducting a meta-analysis is possible to choose between two different approaches: a random effect model and a fixed effect model. The choice of which model to adopt depend on how the variability of findings across different studies is perceived.

In the fixed effect model it is assumed that all studies examined are drawn from a common population. This implies that all factors affecting the effect size are identical in all the study populations and the effect size is the same across the whole study population. Thus the reason why the observed effect size varies among different studies is due to the random error inherent in each study. Thus the observed effect in study 1, T1 is determined by a common effect μ plus the within-study error ε_1.

Usually, given an observed effect T_i:

$$T_i = \mu + e_i$$

A random effect model assumes that each observed effect size differs from the population mean by subject level sampling error and a value representing additional sources of variability, which are assumed to be randomly distributed. This leads to larger confidence intervals than in the fixed effects model.
Thus the variance associated with each effect size has two components: one which is related to subject-level sampling error and the other one linked to random effect variance. The sum of these two variance components, v1 is the total variance linked to the distribution of effect size values and is described by:

$v1: vo+v_1$

where v0 is an estimate of the random or between studies variance component and v_1 is the estimate of the variance linked to subject-level sampling error. The challenge of the random effect model is to get a good estimate of the random effects variance component (M.L. Lipsey, D. B. Wilson, 2001).
In random effects model the results can be generalized to a wider population of studies (J.S. Meca, F. M. Martinez, 2010). A fixed effect model assumes homogeneity. If heterogeneity is high is important to look for moderators giving theoretical insights about what is going on. Moderator analysis is important because it can lead to theoretical advances.

Under the fixed effect model the null hypothesis that is tested is that there is zero effect in each study while under the random effect model the null hypothesis that is tested is that the mean effect is zero. As stated by M. Borestein, L.Hedges, H. Rothstein (2007) the model better fitting the distribution of effect sizes should be chosen, taking also into consideration the relevant sources of error.
If all studies under examination are equal and if the objective is to calculate the common effect size only for the identified population, not generalizing across other populations a fixed model should be used.
A random effect model should be used instead when it is very unlikely to have a common effect size and when the purpose of the study is to generalize across different scenarios.
It is possible to test a fixed versus a random effect model through a heterogeneity test. The standard assumption behind the homogeneity tests is that the observed variance is both due to a variance related to the true variation in population correlation and to a variance related to the sampling error. Since the estimated variance in population correlation is corrected for sampling error, it represents the

amount of variability in the observed variance beyond the amount that is expected from sampling error alone (Viechtbauer, 2007: 30).

Homogeneity can be assumed if the estimated variance is equal to 0. This implies that the observed variance can be described only by the sampling error (Whitener, 1990: 316; Aguinis, 2001: 572). But when the estimation of the variance in population correlation is greater than zero there are three possible situations: the residual variance is described by true variability, the residual variance is described by artificial variability that has not yet been taken into account and the residual variance can be described by a combination of the former two (Lipsey and Wilson, 2001: 116-118). Heterogeneity needs to be assumed if there is true residual variability. In this case a moderator analysis can be applied to illustrate heterogeneity in findings, which allows for additional testing of details in the examined research field (Rosenthal and DiMatteo, 2001).

A moderator variable has to be understood as a variable that "affects the direction and/or the strength of the relationship between an independent or predictor variable and a dependent or criterion variable" (Baron and Kenny, 1986: 1174).

A Q statistic can be performed to test the hypothesis that all the effect sizes are the same across studies (assumption of homogeneity). It tests the robustness of fixed effects results.
Heterogeneity is defined as "variability between the studies due to differences in study samples, interventions, outcomes, methodology (research design, measures, quality etc). It is manifested in the study effects that are more different from each other than it should be expected from random error alone.
If all the studies have the same underlying population correlation than the test statistic Q follows a chi-square distribution with k-1 degrees of freedom.

[2]

$$Q = \sum w_{ij}\left(ES_{ij} - \overline{ES}_{fixed}\right)^2 \sim \chi^2_{I-1}$$

[2] which must be tested against df k-1/. Q gives the total variance and *df* I-1gives the expected variance, thus the difference, Q-I-1 represents the excess variance.

The null hypothesis to be tested is that there is no heterogeneity[3]:

A significant Q statistic is a sign for heterogeneity. The Q statistic should not be used to justify the choice between the fixed or the random model. The reason is that like any significant test, the Q statistic is overly sensitive when many studies are analyzed and a null finding does not imply there is no variation among studies using a p value less than 0,05. This implies that when a large number of studies is analyzed it will be more likely to reject the null hypothesis meaning that there is heterogeneity.

In the case heterogeneous is found, the meta-analyst concludes that the relationship between the variables is not universal but it is dependent on some moderating effects.

If heterogeneity is not found, it is possible to make a generalized statement about the relationship under examination. Variables accounting for heterogeneity are called Z variables.

This thesis makes use of the Fixed Effect Model. The basic assumption is that all the studies in the analysis share the same true effect size and the summary effect is used as an estimate of the common effect size. Thus the main goal is to compute the summary effect and the associated p value. The effect size is assumed to be consistent across studies. The observed effect size varies across studies study to a random error contained in each study. If sample size in each study is infinite than the random error would be equal to zero and the observed effect will be equal to the true effect. Obviously, this is not the case because the sample size contained in each study is not infinite, there is sampling error and the observed effect is different from the true effect.

The summary effect is taken as an estimate of the common effect size and the null hypothesis to be tested is that the common effect is zero.

Under the Fixed Effect model, the observed dispersion is assumed to reflect the sampling error and study weights are given with the purpose of minimizing the within-study error.

Hypothesis 1: Foreign investment inflows will be positively associated with Bilateral Investment Treaties.

H0: ES[4]=0

[3] The null hypothesis for testing heterogeneity is the following: *Ho: ES1= ES2 =ES3*

[4] Where ES represents the mean effect size

5.3 Effect size index from each study

To allow for comparisons across different studies an effect size statistic is calculated for each independent study. The most important point of a meta-analysis is to capture study results on a *metric*, common to each study. There is a large sample of potential effect sizes capturing the link between two variables and for each pair of variables, there is at least one effect size form. The negative effect of this strategy is that it loses the original units of the studies' scales, but the *effect size* still provides an estimate of the degree of association, making possible comparisons across studies. It is particularly useful since statistical significance does not provide an accurate measure of the magnitude of the effect of interest (Kline, 2004).

According to M. Borenstein, L. V. Hedges, J. Higgins, H. Rothstein (2009), the selection of the effect size index should be based on the following three criteria: it should be possible to compare the effect sizes across different studies (effect sizes should not be influenced by specific aspects of study design changing from study to study), it should be possible to calculate the effect sizes from the information that is available in the examined studies, effect sizes should possess good technical properties. The effect size should be meaningful (it should be possible to interpret the effect size).

It is the task of the reviewer is to identify the type of effect size most suited to capture variation in the topic and for which it is possible to calculate and elaborate accurate weights. Rosenthal and Di Matteo (2001) define the effect size as the "Chief Coins of the Meta Analytic Realm".
There are two main families of effect sizes, the *r* family, and the *d* family.
The most commonly used effect size of the r-family is the Pearson's product-moment correlation r. It examines the linear relationship between two continuous variables (Lipsey and Wilson, 2001: 63). The r-family also include the biserial correlation (to investigate the relationship between a continuous and a ranked variable), the point-biserial correlation (to investigate the relationship between a continuous and a dichotomous variable), the rank-biserial correlation (to investigate the relationship between a ranked and a dichotomous variable), phi (when both variables are dichotomous) and rho (when both variables are in ranked form). The effect size r can be computed from *t* statistics and from F statistics with 1 df in the numerator.

While the r-family examines the magnitude and the direction of a linear relationship between two variables the d-family investigates the standardized difference between two means (Lipsey and Wilson, 2001: 48). Thus the independent variable for measurements of the d-family is dichotomous.

There are three different methods of experimental effects representing the d-family of effect sizes: Cohen's d, Hedges' g and Glass's.

Taking into account the nature of the dependent and independent variables analyzed in the study it is preferred to use the r effect size statistic, where r is *the partial correlation coefficient (PCC),* a measure of association between variables, while controlling or adjusting the effects of one of more additional variables. The reason is that the dependent variable to be examined, FDI inflows, is represented by a continuous variable while the independent variable of interest, membership of a FTA or BIT agreement is represented by a dummy variable. The studies taken into account analyze the impact of regional integration by using a 0/1 dummy. The dummy variable is used both in works that only investigate the effect on FDI of a specific RIA and in those where different types of RIAs are analyzed at the same time.

Following Green (1993), if information about the t statistic and the degree of freedom is provided in the study the following formula is used to compute the partial correlation between y and $x_{1:}$

$$r_{yx_1} = \sqrt{\left(t_{x_1}^2\right) / \left(t_{x_1}^2 + df\right)}$$

where r_{yx1} is the ES calculated from individual studies and t represents the t statistic provided in each study. All inferential statistics (F tests, t-tests) can be converted either into d or into r effect type (see Appendix A).

The Pearson's correlation can vary in magnitude between -1 and 1, with -1 indicating a perfect negative linear correlation, 1 indicating a perfect positive linear relation and 0 indicating no linear association among the variables.

In order to interpret meta-analysis result and the magnitude of effect sizes, Cohen (1977) established a framework that has become a widely used convention. According to this framework standardized mean effect sizes fall into the following ranges: Small ($r < 0.1$), Medium ($r = 0.30$) and large ($r > 0.50$).

The interpretation of the effect size depends on the research question and it varies by context.

Table 10: Potential two variables effect sizes, dependent on the intersection of the variables in question.

Nature of first variable			
Nature of second variable	**Continuous**	**Ordinal**	**Categorical**
Continuous	• Pearson correlation (r) • Standardized regression slopes (β) • Unstandardized regression slopes	• Biserial correlation	• Point biserial correlation • Standardized mean difference (d) • Unstandardized mean effect size
Ordinal		• Spearman correlation (or rho) • Tetrachoric correlation	• Rank biserial correlation
Categorical			• Phi coefficient • Odds ratio (OR) • Risk ratio (RR) • Risk difference

Source: Johnson, Blair T. Dr. and Boynton, Marcella H. Dr., "Cumulating Evidence about the Social Animal: Meta-Analysis in Social- Personality Psychology" (2008). CHIP Documents. Paper 31.

"The terms 'small,' 'medium,' and 'large' are relative, not only to each other, but also to the area of behavioral science, the specific content and research method employed in any particular investigation...In the face of this relativity, there is a certain risk inherent in offering conventional operational definitions for these terms for use in power analysis in as diverse a field of inquiry as behavioral science. This risk is accepted on the basis that there is more to gain than to lose by providing a common conventional frame of reference that should be used only when there is no better basis for estimating the ES index is available." Cohen

According to Hedges (1992) the lack of data is one of the more common problems when conducting a meta-analysis. This is a significant problem that can severely impact the quality of a meta-analysis because the omission of relevant effect sizes leads to both higher sampling errors (implying less accurate calculations of population parameters) and to higher non-sampling errors (because the effect sizes contained in the meta analysis do not properly represent the population parameters, due to the omission).

Table 11: Cohen guidelines for interpreting the Effect size

Effect size	r
Small	0.10
Medium	0.30
Large	0.50

Cohen, 1977

Thus omitting relevant effect sizes adversely affect the precision and generalizability of population effect size estimates. Considering that precision and generalizability of population effect-size estimates are the primary purposes of a meta-analysis, the exclusion of relevant effect sizes represent a serious shortcoming.

Missing effect size can occur because the researcher did not put enough effort to check and select all the relevant studies. This is a missing effect size that can be easily corrected by screening more accurately among the relevant literature through search databases, search engines. Missing effects can also occur because some studies results do not get published or reported and it is not possible to find them through the available literature. This problem can be solved either by trying to contact directly the individual or the organization that has conducted the study to get the needed data or by trying to estimate analytically from the data already available.

Another case is when even if studies results are available they are not reported in a metric that can be converted to the one used to integrate findings amongst studies or because insufficient information is available to calculate effect sizes.

In many cases authors do not report correlation matrices and this represents a problem for conducting a meta-analysis. Some researchers have argued that beta coefficient can be used as effect size metrics but meta-analysts agree that they should not be used as substitutes for correlation coefficients in meta-analyses.

If only beta coefficients are reported and if it is not possible to get correlation coefficients the studies are not usually reported in the meta-analysis. However according to R. Peterson, S, P. Brown (2005), it is possible to obtain a close approximation to *r* if there is information about the beta coefficient. They have conducted a study analyzing more than 1,700 beta coefficients and corresponding correlation coefficients available from published studies. Their conclusion is that it is possible to calculate

correlations coefficients *r* having knowledge of the relevant Bs. In this situation the missing effect size can be obtained by exploiting the relationship between *B* and *r*.

They start their analysis from the model proposed by Neter, Wasserman & Kutner (1990) stating that in general the relationship among β_1 and r_{y1} is a function of the magnitudes and signs of correlations that involve the remaining predictor variables.

Given a regression model with two predictor variables the mathematical relationship between β and r is expressed by the following equation:

$$\beta_1 = (r_{y1} - r_{12}r_{y2})(1 - r^2_{12})$$ [5]

The previous equation can be converted into the following equation:

$$r_{y1} = \beta_1 + r_{12}\,(r_{y2} - \beta_1 r_{12})$$ [6]

R. Peterson, S, P. Brown (2005), estimate the following formula to examine the relationship between β and r:

$$r = 0.98\beta + 0.5\lambda$$ [7]

The objective of this indicator variable is to emphasize that nonnegative β values are lower than the associated r values when compared with the magnitude of the difference between corresponding β and r values. Thus this formula can be used when beta coefficients are reported but correlations coefficients (for relationships relevant for a meta-analysis) are not reported.

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[5] where y is the dependent variable and the subscripts 1 and 2 are the predictor variables.

[6] The limiting cases are the following: if r_{12} is equal to 0 (this implies no correlation between the two predictor variables), r_{y1} equals β_1. If r_{12} equals 1.0, r_{y1} equals r_{y2}. If r_{12} equals -1.0, r_{y1} is equal to $-r_{y2}$.

[7] where λ represents an indicator variable =1 when β is nonnegative and 0 when β is negative.

The advantage of this approach is that it enables to reduce sampling error (because a larger number of effect sizes is examined) and less non-sampling error (due to the inclusion of a larger number of studies and researches).

5.3 The Mean effect size

Thus the only source of sampling error is within studies, e. Since the effect sizes for each single study should be reported into a common measure, an important step is *averaging the effect sizes* that summarizes the overall effect magnitude of the meta-analysis studied. But the effect sizes obtained from each single study differ among themselves regarding their precision since they are calculated from sample sizes that are different. Effect sizes obtained from larger samples are more accurate than those obtained from smaller samples. In a fixed effect model all studies are sampled from a population with effect size u, there is only one source of sampling error *e* within studies. Thus statistical methods in meta-analysis have to take into account the accuracy of each effect size by *weighting them* as a function of their precision. A weight quantifies the magnitude that the effect size will have on the overall pooled effect sizes. Studies having the larger sample sizes and smaller variance should have more impact on the average effect size.

Hedges & Holkin (1985) have demonstrated that the optimal weights are based on the standard error or the effect size. The standard error is the standard deviation of the sampling distribution. Since a larger standard error corresponds to a less precise effect size value, the actual weights are computed by taking the inverse of the variance weight, which is a more precise measure minimizing the variance of the combined effect.

The inverse variance weight, for each effect size ij, can be estimated by the following formula:

$$Wi = 1/ V_i$$ [8].

Thus the mean effect size is calculated through the following formula:

[8] Where the variance is calculated through the following formula: $Vr = (1-r^2)^2/ n-1$

$$\overline{ES}_{fixed} = \left(\sum w_{ij} ES_{ij}\right) / \left(\sum w_{ij}\right)$$ [9]

The sum of *W* is 94,428 while the sum of *W ES* is 96,471. From these numbers the summary effect and its related statistics can be calculated. The estimated mean effect size is equal to 0.87. The variance of the mean effect size is equal to the reciprocal of the sum of the weights and it can be estimated through the following formula:

$$v_\bullet = \frac{1}{\sum_{i=1}^{k} w_i}$$

The estimated variance of the mean effect size is equal to 0.0001.

The standard error of the mean effect size corresponds to the square root of the variance:

$$SE(\bar{T}_\bullet) = \sqrt{v_\bullet}$$ [10]

The estimated standard error of the mean effect size is equal to 0.01.

There are two different types of approaches to data analysis. The first one is based on the significance testing where a null hypothesis is set (that the average effect size is zero), and attempts are made to disprove such hypothesis. The other one is based on the effect size estimation where the magnitude of the effect size is computed. Both approaches express the same values that are presented in different ways. They are consistent with respect to each other.

In the first case to perform the significance test a Z value to test the null hypothesis that the common true effect is zero can be calculated through the following formula:

$$Z = \frac{M}{SE_M}.$$

[9] where ESij is the individual ES for i equal to 1 and j equal to 1. ESij is the individual ES for i equal to 1 and j equal to 1.

[10] where T is the mean effect size

The computed Z value is equal to 89. The observed valued of Z is then compared through the criterion α. If α is set at 0.05, then a p-value lower than 0.05 (a Z value beyond ±1.96) is statistically significant. If the p value is less than or equal to α, then the null hypothesis is rejected in favor of the alternative hypothesis. If the p value is greater than α, then the null hypothesis is not rejected

For a one-tailed test the p value can be estimated through:

$$p = 1 - \Phi(\pm|Z|)$$ [11]

For a two-tailed test it can be estimated through:

$$p = 2\left[1 - \left(\Phi(|Z|)\right)\right]$$

The other approach consists in reporting the effect size (that reflects the magnitude of the effect) and its associated confidence interval. In this case the estimated effect size is equal to 0.87.

The confidence intervals for the mean effect size can be calculated using the standard error and the two tailed critical value of the normal distribution (for a 0.05 significance level and an associated confidence interval of 95% it corresponds to 1.96). As can be seen the upper and lower limits are calculated by taking the average effect size and adding or subtracting its standard error (SE) multiplied by 1.96.

The following formula is used to calculate the Lower and Upper Limit of the confidence intervals.

$$Lower\ Limit = \bar{T}_\bullet - 1.96 * SE(\bar{T}_\bullet)$$

$$Upper\ Limit = \bar{T}_\bullet + 1.96 * SE(\bar{T}_\bullet)$$

[11] where φ is the standard normal cumulative distribution function.

The estimated Lower Limit is equal to 0.8504, while the estimated Upper Limit is equal to 0.89. Since the Z value lies within the confidence interval the null hypothesis that the average effect size is zero cannot be rejected

The likelihood that the results will be statistically significant is influenced by the following factors: the effect size (as M increases, Z increases and the likelihood of having statistical significance increases), the precision of the estimate (when the precision increases and SE decreases, the likelihood of having statistical significance increases), the criterion for significance (α).
Thus using fixed effect weights the summary estimate of the correlation is 0.87 with a 95% confidence interval of 0.8504 and 0.89.

In this chapter the meta analysis has been conducted by examining 12 different studies on the effects of entering into ASEAN or MERCOSUR agreement on FDI. By using the fixed effect model the effect size and the variance for each study are computed. Than the weighted mean of such effect sizes is calculated. The estimated weighted mean is 0.87. The null hypothesis that the mean effect size is equal to zero cannot be rejected. The null hypothesis that ES=0 is not rejected because the estimated effect size lies inside the confidence interval which are equal to 0.8504 and 0.89.
Thus the estimated average effect size is expected to be zero.

Table 12: Statistics for each individual study. Fixed Effect.

Study name	N. of observations	Effect size (ES)	Variance (V)	WT (weight for each study)	ES*WT
S. K. Tayyebi A. Hortamani (2007)	2304	0.54508	0.0002	5000	2725,4
E. O. Nwosu, A. Orji, N. Urama, J. Amuka (2013).	113	0.573206	0,004	250	143,3015
N. W. Ismail, P. Smith, M. Kugler (2009)	1265	0.52842	0.0004	2500	1321,05
J. C. Brada, Jose A. Mendez (1985)	774	0.69012	0.0003	3333.33	23000
A. Lopez, E. Orlicki (2005).	14291	0.51862	0.00004	25000	1296
M. G. Plummer, D. Cheong (2007)	11658	0.5735	0.00004	25000	14337
G. Bittencourt R. Domingo N. Reig L. (2006).	10209	0.598	0.00003	3333.33	1993
J. Tobin, S.R.-Ackerman (May 2005).	63	0.5392	0,08	12.5	6.74
D. w. Velde, D. Bezemer (July 2004)	1521	0.9018	0.00002	50000	45090
S. M. Thangavelu, C. Findlay (2011).	9917	0.92732	0.00003	3333.33	3091
S. L. Baier, J. H. Bergstrand (2003)	1266	0,6877	0,0002	5000	3438,5
M. S. Ullah, K. Inaba (2014).	2633	0,7842	0,00006	16,6666	13,07
Sum				94428	96471

6 CONCLUSION

6.1 Discussion

The main research question investigated by this thesis is whether entering into the ASEAN or MERCOSUR agreement affects FDI in these regions. The hypothesis that entering into a regional integration agreement leads to an increase in FDI is investigated through a meta-analysis. A meta-analysis is the application of statistic techniques to analyze and synthesize all the relevant studies on the topic by limiting bias, reducing random errors in the review process.

The building block of a meta-analysis is the evaluation of the effect size for each study while it does not take into account the statistical significance of the variable under examination.

A meta-analysis is the most suited methodology to investigate this topic because, despite the large quantity of literature available on the effects of investment treaties on FDI, specific studies investigating the effects of ASEAN and MERCOSUR agreements on FDI are more limited. Results for these specific regions differ and are often contrasting across empirical studies. Thus there is still a lack of empirical evidence that entering into these regional integration agreements actually leads to an increase in FDI. In the meta analysis the effects of the single studies are combined together to test the statistical significance of the summary effect.

The meta analysis examines 12 studies from the available empirical literature. From the analysis performed it emerges that ASEAN and MERCOSUR treaties do not have any effects on FDI in these specific countries. The null hypothesis that the mean effect size is zero cannot be rejected because the estimated mean effect size lies within the confidence interval. Thus entering into ASEAN or MERCOSUR agreement does not seem to have a positive impact on FDI in these regions.

From a theoretical point of view, the results support some theories about international trade: example, the Tariff-jumping which states that the establishment of RIA leads to a reduction in FDI.

The theory suggests that trade and capital movements are alternative ways of serving foreign markets; trade barriers induce import-substituting FDI, and general tariff increases can stimulate import-substituting FDI flows. When there are no trade barriers in place MNEs prefer to produce in the domestic market and to serve the foreign market through exports.

As stated by Kokko and Blomstrom (1997) countries having low initial trade restrictions will benefit more from lower trade barriers resulting from intra-regional agreements because they are not likely to host import-substituting FDI projects that could potentially be withdrawn.

The institutional perspective is useful to explain the impact of enterprise strategies in emerging economies in the early process of market emergence. According to this theory, there are three different kinds of relationships linking MNEs and institutions: institutional avoidance *(*where the external environment is regarded as given by MNEs), institutional adaptation (in which MNEs adjust their structures and policies according to the environment) and institutional co-evolution *(th*e purpose of multinationals, in this case, is not simply to adjust but also to make formal or informal changes in the local institutions through political action or lobbying the government.

Co-evolution implies the introduction of new organizational structures and best practices (acquired on a local level or from another part of the organization's network). MNEs have the required power to shape and modify the existing institutional setting. They can do so through negotiations and political strategies to affect public regulations or through private self-regulation

But the results are not in line with the view of Kindleberger (1966) stating that *trade creation* resulting from regional integration agreements is able to stimulate *intra-regional FDI* due to changes in the regional production structure. This potential effect on intra-regional FDI is called "investment or FDI creation".

This thesis makes a contribution in the field of international business and international trade theory by adding important evidence about the effects of entering into the ASEAN and MERCOSUR agreement on FDI.

6.2 Implications

According to the results obtained in the thesis, MERCOSUR and ASEAN treaties do not have a positive impact on FDI.

These results are important from a policy perspective because in order to enter into bilateral and multilateral agreements developing countries including the ASEAN and MERCOSUR region have started to liberalize their national policies to offer a more stable and reliable *regulatory framework* for foreign direct investors. Developing countries entering into bilateral or free trade agreements are expected to make regulatory changes that should make their business environment more attractive from an investment point of view.

Measures that have been adopted include more permissive and open rules about foreign entry and foreign ownership, better treatments to foreign firms and a general improvement in the function of markets

These countries are also adopting measures facilitating business like investment promotion, financial and fiscal investment incentives, after-investment services (that encourage reinvestment by existing investors), and measures that in general reduce the cost of doing business.

FDI inflows are regarded as important to improve standards of governance in emerging economies and to contribute creating a more stable and attractive business environment.

The role played by institutions to attract FDI will be even more critical in the future especially for emerging markets. The challenge that these countries face today is to detect an effective set of factors determining FDI location and to be able to match those determinants with effective FDI strategies.

Many policy-driver factors to attract FDI such as the availability of human capital, the quality of infrastructure, economic and political stability can be influenced only in the medium to long term. However, other factors equally important for a country's investment climate such as the quality of its laws and regulations and the efficacy of its bureaucracy can be influenced in the short term at a low cost to governments (World Bank, 2011).

The ability of developing countries to implement specific policies aimed at reinforcing national innovation systems and at spreading technology will be essential to attract international corporations. The agenda of ASEAN and MERCOSUR regions is already focused on the creation and adoption of more liberal trade and investment policies to improve the general economic landscape and to obtain a more favorable environment for attracting FDI.

6.3 Limitations

When evaluating the results of this thesis its main limitations should be taken into account.

The main limitations of the thesis are related to the type of methodology used, a meta-analysis, which is often criticized for having several flaws. The most common criticism of the meta analysis is that one number cannot be used to summarize an entire research topic.

Other criticisms are related to the problem of garbage in, garbage out, publication bias, the file drawer problem and "mixing apples with oranges". But many of these flaws are based on a misunderstanding of meta-analysis or reflect problems on the way in which meta-analysis is implemented by researchers rather than on problems with the method itself. Even if some flaws represent a real problem for conducting meta-analysis, they also represent a problem for narrative traditional reviews.

Another limitation is related to the set of chosen inclusion criteria for the studies to be examined: only relevant studies conducted in English language and freely available online have been selected. This means that important studies conducted in other languages or not freely accessible through online databases and libraries may have been left out.

Another limitation of the thesis is that it adopts a Fixed Effect Model because the main objective is to calculate the common mean effect size and the confidence intervals for the summary effect for the identified population and not to generalize for other populations. It also assumes that all the studies examined are functionally identical and that the dispersion in the observed effect sizes is attributable only to the sampling error. But some researchers have argued that the fixed effect model is valid even without making the assumption that each study has a common true effect size because it only computes the weighted average without implying that all the studies calculate the same thing.

But since most of the studies investigating the effects of FTAs on FDI have been conducted by researchers operating independently, they present different research designs and methods that may impact the final results. In cases like this, the random effect model may be more suitable than the fixed effect model. The random effect model also enables to generalize to a different range of scenarios. The random effect model assumes that the dispersion in the observed effect reflects real differences in effect sizes across different studies and weights are more balanced under the random effect model.

Another limitation of the thesis is that it only focuses on two specific treaties the MERCOSUR and ASEAN, excluding studies conducted on other treaties in the Latin America and Asian region.

A future line of research may focus on meta analyses estimated through a broader research question, including studies analyzing not only MERCOSUR and ASEAN treaties but also other treaties stipulated worldwide to investigate the overall effect of FTAs or BITs on FDI. These meta analyses may yield different results due the bigger sample size of studies examined. It could also be interesting to examine how the impact of BITs and FTAs on FDI changes across different regions of the world.

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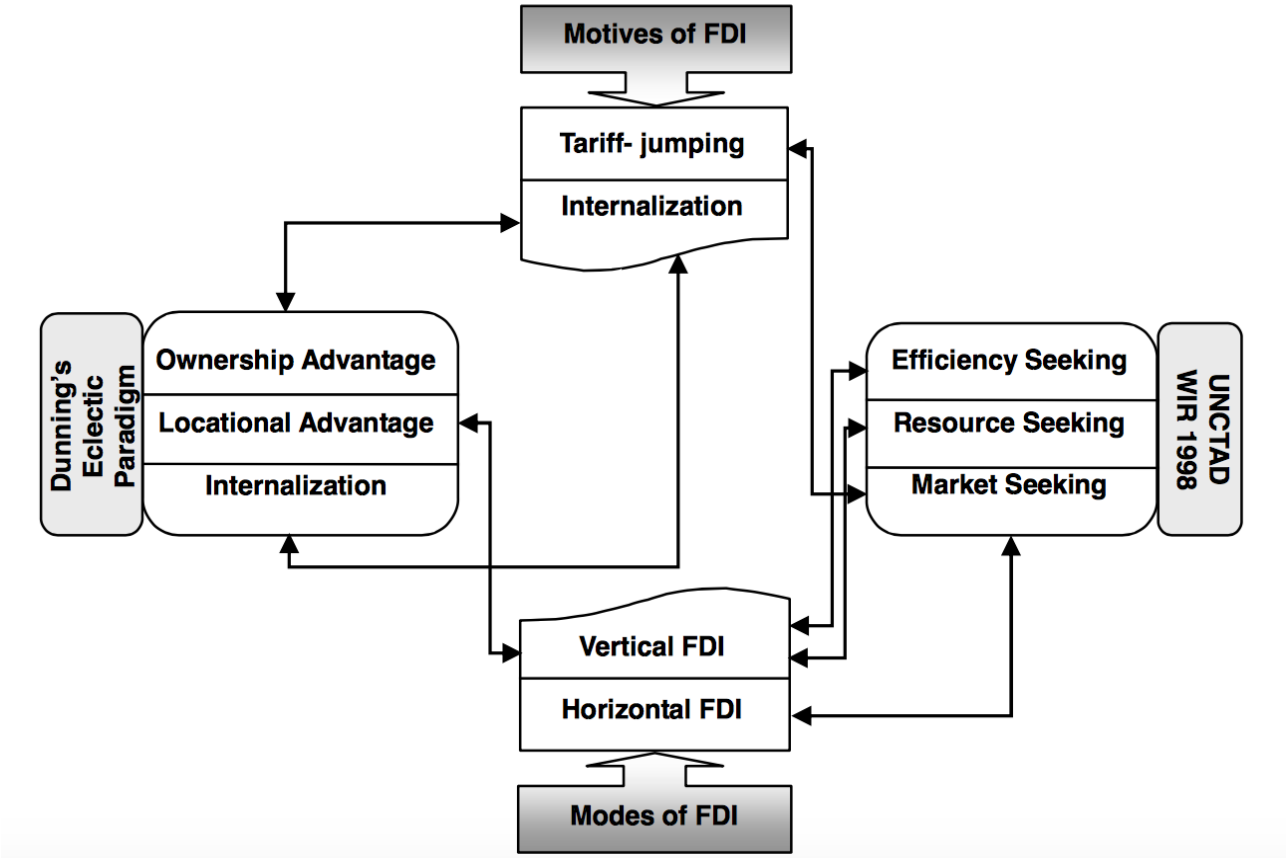
APPENDIX A: Figure 1. Generalization of Motives and Modes for FDI.



Source: Nimesh Salike (16 June 2010). Effect of regional integration agreement on FDI: A theoretical perspective. Asian Development Bank Insitute (ADBI) Tokyo, Japan.

APPENDIX B. Table 13. Coding of the Studies

	Section of meta-analysis report			
Consideration	**Introduction (step 1)**	**Method (step 2)**	**Results (step 3)**	**Discussion (step 4)**
1 Objectives	Define the research phenomenon in question and conceptualize factors that relate to variance in that phenomenon. Make predictions about the phenomenon.	Retrieve all studies that match the criteria of the review, code them on meaningful dimensions, put study results on a single common metric (if necessary).	Discover meaningful patterns in study outcomes. Test the hypothesis, do explanatory analysis as necessary.	To interpret the findings in relation to the goals of the review and to previous knowledge of the research phenomenon.
2 Key methods	Reading of key past literatures. setting goals for the review that determine the methods to be followed and the study dimensions to be considered.	Search for literature using available digital and analog strategies. Systematically code features of each study and its setting. Select ES type and calculate for each study.	Select analyses to model the ESs and to detect potential outliers among them. Use graphical displays as relevant.	Estimate the new contribution of the results in knowledge about the phenomenon. Weigh strengths and weaknesses of the evidence and the methods used to
3 Any reader may ask	Should I care about this problem? What problem are they considering anyway? Does it have interesting well-developed hypotheses	How comprehensive was the search? Are interesting study dimensions coded? Do I underestimated the ES?	What is the overall trend of the phenomena? Do the outcomes vary more than expected by sampling error? Are the hypothesis supported?	Does it tell an interesting and convincing story? Does it provide novel insights into the phenomenon?
4 Other experts may ask	Is the review to broad? Too narrow? Is this review relevant to the research I performed or maybe planning? Have the analysts reached interesting and testable predictions?	Could search strategies have been performed better? Are studies selected fairly? Are there important biases in the methods? Is the effect size chosen the best to examine study patterns in relation to the meta analysis goal?	Do the studies seem like appropriate samples of this phenomenon? Do outliers influence the results?	Do I agree with the review's conclusions? Do biases in the methods change interpretation or leave unanswered questions? Are there important future directions that appear valuable to pursue?
5 Meta-analytic experts might ask:	Are the variables in question well defined?	Is the sample of studies representative or exhaustive? Is it possible to integrate all the studies? Is the ES type well matched to each study design?	Are ESs independent? Are meta-analytic models well specified: Is variability in ESs modeled? Are all moderator variables analyzed?	Do the conclusions of the meta analysis match in results? Are statistical and methodological limitations clearly stated?

Source: Blair T. Johnson, Dr. Marcella H. Boynton Dr. Cumulating Evidence about the Social Animal: Meta-Analysis in Social Personality Psychology (2008). Paper 31.

Appendix C: Table 14. Study level information.

Study	Research question	Explanatory variables	Findings
1 S. K. Tayyebi A. Hortamani (2007)	It investigates to which extent trade integration affects FDI flows in the ASEAN3and the EU15 2304 observations on 102 cross sectional individuals of ASEAN3 and EU15. 1992-2003	GDP, exchange rate, price effect, trade integration.	Regional integration in East Asia can have a significant effect on FDI, implying investment creation in both blocks.
2 E. O. Nwosu, A. Orji, N. Urama, J. Amuka (2013).	The paper investigates the role of regional integration in attracting FDI. FDI is split into inter and Intra-ASEAN to check if both are determined by the same factors. Secondary time series data are used in the analysis panel data model	market size (GDP), other macroeconomic factors including interest rate, exchange rate, inflation rate and volume of trade.	The findings indicate that FDI from the rest of the world is determined by: market size (GDP), exchange rate while inter-ASEAN FDI is not related to macroeconomic fundamentals but depends on previous investment in the region
3 N. W. Ismail, P. Smith, M. Kugler. (2009)	The paper highlights the role of AFTA in increasing ASEAN countries attractiveness for FDI from member and non-members. Two effects are considered: the effects of REI on intra-regional FDI flows and on extra-regional FDI flows. Gravity model is employed in the analysis, based on cross section and panel data analysis.	*GDP* (proxy for market size), *GDP per capita* (proxy for the level of development), t*he sum of export and import ratio to GDP* for the host country, *the distance* between capital cities of source country i and host country j (proxy for transaction costs), dummy variable to control for two countries sharing common language, dummy variable to control for two countries sharing *common borde*r, dummy variable with value of 1 if one of the two countries are ASEAN, dummy variable of 1 if source country is ASEAN	Factors like market size, income per capita for both source and host countries are positively related with FDI As regards intra-ASEAN FDI, ASEAN countries invest in each other less than they invested in the new ASEAN members.
4 J. C. Brada, Jose A. Mendez (1985)	Six integration schemes are examined and their ability to increase inter-member trade is decomposed into environmental, policy and system effects. A Gravity model is used. Data for 1970, 1973, 1976	*Population* in the exporting and importing countries, distance between countries *i* and *j*,	Environmental factor caused the greatest variation in trade creation. Effective integration is possible both for developed and developing countries. For countries in Latin America inter-member distances may limit the benefits of integration.

Study	Research question	Explanatory variables	Findings
A. Lopez, E. Orlicki (2005).	Impact of the FTAA and the EU-MERCOSUR agreement on FDI flows to MERCOSUR using a gravity model.	RIA (a set of different country dummy variables), GDP, ICRG (a variable that capture the political and institutional environment in host countries), Privatizations (the amount involved in privatizations made in the host country at period t), INFLATION (is the annual inflation rate of the host country at period t, to control for macroeconomic stability).	Regional integration agreements induce higher FDI inflows to host member countries. MERCOSUR should expect increases in FDI inflows. But when forecasting the magnitude, origins and nature of additional FDI inflows the impact may vary depending on the nature of the regional agreement.
6 M. G. Plummer, D. Cheong (2007)	The paper empirically investigates whether or not ASEAN integration has had any effect on FDI flows. They use a knowledge capital model approach	GDP (which measures country size by taking the sum of the home and host countries' GDP), a similarity index, a variable to capture differences in relative factor endowments.	FDI and trade are becoming symmetric over time, which is encouraging for the future of economic cooperation
7 G. Bittencourt R. Domingo N. Reig L. (2006).	Additional variables are used A gravity model is used.	GDP host (the log of the real GDP of the host country), GDP source (log of the real GDP of the source country), EXPMARS (log of the joint GDP of the source country plus all the countries that are RIA partners of the source county), RIA (the set of different country dummy variables), a variable capturing the political and institutional environment in host countries, amount of privatizations in the host country, the inflation rate in the host country, an index of similarities between countries, Bilateral Investment Treaties	Host country GDP does not have a significant coefficient and internal market size and dynamics are the most significant variables in FDI determinant studies. Positive relationship between FDI flows and trade openness,
8 J. Tobin, S.R.-Ackerman (May 2005).	The aim of the study is to understand how foreign investors and host countries efforts to limit risk affect the domestic business environment.	BITs, Political risk, Market size, Natural Resources, Inflation, Other variables.	They conclude that the relationship between BITs and FDI is weak. BITs by themselves appear to have little impact on FDI. There is a complex interaction between the level of political risk, BITs and FDI.
9 D. w. Velde, D. Bezemer (July 2004)	Relationship between regional integration and FDI in developing countries. They estimate a model explaining the real stock of UK and US FDI in developing countries, covering 68 UK and 97 (US) developing countries over 1980-2001 and identify the effects of specific investment related provisions on FDI.	real GDP of country j, GDP per capita of country *i*, distance of country *j* from the largest market in the region.	

Study	Research question	Explanatory variables	Findings
10 S. M. Thangavelu, C. Findlay (2011).	It examines whether membership in a bilateral or regional trade agreement has a differential impact on FDI flows in the ASEAN region. An extended gravity model is used in the analysis. Panel data including 30 OECD countries and 13 non-OECD countries are used, from 1986 to 2007.	Log of host and source country GDP, dummy variables to estimate if the host and-or the source country are in a bilateral or multilateral trade agreement	Positive relationship between participation in a multilateral agreement and FDI inflows in the ASEAN region.
11 M. S. Ullah, K. Inaba (2014).	It empirically assesses the role of liberalization of capital inflow, in particular the effects of BIT, BTA, RTA on FDI. FDI data of eight Asian countries—Hong Kong, Taiwan, Re- public of Korea, Singapore, Malaysia, the Philippines, Indonesia, and Thailand.	real GDP of source and host country, GDP per capita of source and host country, geographic distance, human development, openness of the country, bilateral trade agreement between country i and country j, dummy variable accounting for intra-ASEAN FDI, index of law and order of host country, index of corruption host country, index of internal conflict.	Neither BITs nor BTAs represent a strategic instrument for inducing FDI in developing countries in Asia. If liberal FDI policies already exist in the host countries entering into bilateral agreements does not affect the inflow of foreign capital.
12 H. g. Rammal, R. Zurbruegg (2006)	It estimates the impact of changes in the quality of government regulatory effectiveness and governance practices on the direction of outward FDI flows between five ASEAN economies. Annual figures for five ASEAN countries between 1996 and 2002. Fixed effects regression Panel data	home and host values for inflation, home and host GDP, host country regulation quality, host country economic activity.	Deterioration in the effectiveness of and enforcement of investment regulations have an adverse effect on intra ASEAN FDI.