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Determinants of Foreign Direct Investment in Spain: A Gravity Model

Alejandro Ayuso Díaz

DIRECTOR

Antonio Gómez Gómez-Plana

Pamplona-Iruña

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INDEX

0 ABSTRACT

Since the Great Recession arrived to Europe in general and in Spain in particular, the economists have focused all their efforts on finding ways for reducing unemployment and increasing output. The case for Spain, as many other Southern European countries, is more difficult since a debt crisis must be added to its current financial crisis. For that reason this paper studies the Spanish *Balance of Payments,* in order to illustrate the problems generated by the accumulation of *Current Account* deficits and how can a surplus help to reduce such an accumulated debt.

However, the reduction of such a debt could be a long-term and hard process so for raising employment right now there is a need to appeal to *Foreign Investors*. *Foreign Direct Investment (FDI* from now onwards) received by Spain and the potential income and employment they can generate will be one of the main issues on this work. In order to analyze that, the first step is to collect data about *FDI* made by Spanish *Multinationals* and about *FDI* made by foreign companies on this country and study what proportion is reinvested on Spanish affiliates and what is distributed as dividends between foreign shareholders.

The last step will consist on creating a *Gravity Model* using a bunch of representative economies with the objective of learning what characteristics of our companies should be fostered in order to increment inward *FDI*.

Key Words: Foreign Direct Investment; Balance of Payments; Multinationals; Dividends; Reinvested earnings; Gravity Model;

1 INTRODUCTION

As a first concept , this paper defines the *Balance of Payments*, which refers to the accounting document reflecting real and financial operations of the economy of a country with the rest of the World on a given period of time (normally a year), usually expressed in the domestic currency. As a review, remember that it is always balanced and what are analyzed are the imbalances of the different accounts. It is divided into two columns, being one the revenues (every payment received by the domestic economy) and expenses (every payment made by the domestic economy) the other. The balance is obtained by subtracting them.

First of all, there is the *Current Account* composed by: *Goods Account*, *Services Account*, *Income Account* and the *Current Transfers*. Then *Capital* and *Financial Accounts* should be also taken into account, concepts that which we might not mislead. The first one includes capital transferences plus de acquisition of non-financial, non-produced assets like patents or licenses, while the other is about the variation of financial assets and liabilities. Here there

are investments, which are the elements of the *Balance of Payments* in which this work focus: There are *Direct Investments, Portfolio Investments, Other Investments* and the Bank of Spain balance which is found on a different category.

Nevertheless, from all Balance of Payments sections, this paper will place more emphasis on *Foreign Direct Investments* (*FDI* hereafter) which refers to investments in companies located abroad which are long term in nature. The objective of such investments is the control of the foreign companies, a control reflected by owning more than 10% of the foreign company.

What this paper is going to do is to analyze Spanish *Current* and *Financial Accounts* for explaining why this country has accumulated such a big debt during the last years. That will be the work's first objective and will be contextualized by an exhaustive analysis of the *Balance of Payments*.

The second objective is to analyze *FDI inflows* (FDI received by domestic companies) to Spain and how they could help this country in the process of raising employment. In order to do so, this document will first define the different sources of information in which *FDI* data is found. Then it will study income generated by *FDI* on this country and how is it distributed, whether in the form of dividends or reinvested on Spain.

The last objective is to discover why do *Foreign Investors* choose Spain for making their investments and what economic characteristics should be fostered in order to appeal to different investors. For achieving this objective, it is necessary to create a *Gravity Model,* using *FDI inflows* to Spain coming from three different representative countries as a source.

All in all, this document contains an analysis of the Spanish *Balance of Payments* on point 2, an study of global information of *FDI* all over the World on point 3, an analysis of Spanish *FDI inflows* and outflows on point 2, a definition of discrepancies between the different sources of information about *FDI* on section 5, a research about the distribution of income generated by *FDI inflows* on Spain included on point 6 and the creation of a *Gravity Model* explaining why do *Foreign Investors* choose Spain as a destination on the last point, the 7 one.

2 SPANISH *BALANCE OF PAYMENTS*

Once the conceptual framework has been defined, it is time to study the Spanish *Balance of Payments* of 2012 and 2013 -Banco de España (2012 and 2013). They both use the SEC 95 methodology but is expected that next years' ones will include a new methodology, the SEC 2010 one.

As a brief summary, this data is clearly influenced by the second Recession lived in Spain starting at 2012. It was a huge confidence crisis translated into a huge raise on the risk

premium. In fact internal and imports demand in Spain fell down a lot and had to be compensated with exports ,something which reduced importantly Spanish need for funding. During the second half of 2013 Spain lived a small recovery that should be consolidated during the next year. *GDP* was reduced by a 1.6% in 2012, while in 2013 it decreased by a 1.2%, confirming that the recovery was not enough. The reduction in the need for funding was huge, an 86.4% and the total quantity became a 0.4% of Spanish *GDP*. However Spain still needed external financing, something that was going to raise Spanish *Public Debt* , which refers to the set of debts Spanish Government has with the rest of the countries and individuals and in 2013 represented a 93,4% of its *GDP* according to Eurostat. On the other hand, 2013 was the first year since 1997 in which Spain showed financing capacity which was 1.5% of *GDP*. In other words for the first time in many years, Spanish *Current Account* (that includes the trade of goods, services, income and transferences between Spain and the Rest of the World) is balanced permitting the country to be able to reduce its *National Debt* which is still huge.

2.1 Current and Capital Accounts

That could happen thanks to the increase on *Capital Account (*which includes the trade of patents, licenses and marks and the capital transferences with the rest of the World) surplus and the important reduction on *Current Account*'s deficit in 2012 (from 3.7% to 1.1% of the *GDP*). During 2013 most of the accounts showed an important improvement, being the *Goods and Services Account* the one showing a better behavior (its surplus increased by 1.9%). Important to say that Spanish exports increased a 4.2% on that 2012 due to an improvement on Spanish Competitive Advantage (due to the Euro depreciation) and a more diversified portfolio of exports (thanks to exports support). In 2013 the increment was a bit lower but also important (3.7%).In this case a further reduction on salaries made this economy even more competitive than in the previous year but there is a need for raising productivity rather than reducing costs in order to escape from the Recession. Imports decreased in a 2.7% in 2012 while in 2013 the reduction was even higher, a 3%. It is a very common characteristic of Recession periods, imports are reduced due to the lower income but exports rise importantly due to their reduction on price. As a curiosity, Spanish exports increased at a higher rhythm than those of Germany, Italy or France. It is clear that every time more and more Spanish companies decide to export since they cannot sell their products there due to the reduction on the internal demand.

After the *Balance of Goods and Services* it comes the *Income Account*. It is referred as the balance of income and expenses generated by productive factors (labor and capital) with the rest of the world. As income they include the salaries received by Spanish people working abroad, the dividends obtained by residents abroad or the interests generated by an investment outside Spain and the current transferences received from the rest of the world. The expenses would be the salaries paid to foreign workers on Spanish companies, the interest paid to *Foreign Investors* (public or private institutions investing outside their frontiers) or the dividends paid to foreigners and the Spanish contribution to EU budget. Spanish historical deficit in the *Income Account* was also reduced in 2012 by 0.6%, ending in a 1.8% of the *GDP* (Gross Domestic Product). In the present *Balance of Payments* (2013) *Income Account* followed a similar trend. Spanish deficit kept on dropping until reaching a 1.5% of *GDP*.

The *Capital Account* includes capital transferences which are the ones meaning either a property transfer of a fix asset or the remission of a passive and the variation of non-financial, non-produced assets. This account has also experienced an important increase on its surplus (20.4%) due to the important increment on the capital transferences of the European Union thanks to the funds received from the FEDER, with the objective of reducing the imbalances between regions that have increased in Spain due to the Recession. A further increment on the *Capital Account* surplus was faced during 2013 (a 18.8% raise) until reaching 0.8% of our *GDP*.

As a final summary of the Current and *Capital Account* in 2013 it is important to say that they both have the same surplus, a 0.8% of *GDP*. In the case of the *Current Account* this happens thanks to the enormous surplus of the Services account (4%) and it is partially compensated by the deficits on Goods, Income and Current Transferences accounts being -1.1%, -1.5% and -0.6% of Spanish *GDP* respectively. The total finance capacity is a 1.5% of 2013 *GDP*.

2.2 Financial Account

Now it is time to focus on what the *Financial Account,* which shows the difference between financial assets sold by a country and the ones acquired by it from the Rest of the World, and the evolution of *FDI*. At first this report defines the concept of *Direct Investment* which is the one in which there is a long-term interest, an important degree of control is exercised and there is significant influence on the Company in which the investment is made. Identification rule considers as a direct investor the one which owns at least a 10% of a company. There are *Direct* and *Indirect Vertical Investments* and also *Horizontal* ones. We must differentiate them since the *Vertical FDI* refers to those that get rid of the costs differentials

during the production process (install the different activities of the process in those countries in which it is cheaper to do so) while *Horizontal* one consists on getting closer to demand by installing factories in countries in order to substitute exports. There are four different types of direct investments:

-*Shares and other ways of participation* including the trading of shares and subscription rights

-*Reinvested profits*. Those that are derived from the normal activity of the company will be included as transactions and those that are not will be included as changes in the value of financial assets and liabilities.

-*Investments on real estate*, that is, the acquisition of property or other real rights over real estate.

- *Financing between related companies* which refers to the lending between matrices and their subsidiaries and between subsidiaries within the same group.

Another way of classification is between *Greenfield* (construction of a new plant or constitution of a new company) and *Brownfield FDI* which refers to outsourcing the production to different countries.

Investments that don't mean control and are short-term ones are called *Portfolio Investments*. This includes shares (valued by their market price at the end of every month), bonds and obligations and monetary instruments. Then, this document should also analyze what is called *Other Investments* and *Financial Derivatives* being the last financial assets that are dependent or derived from an underlying asset

For a better understanding of the Financial Account the main difference between it and the Capital and *Current Account*s must be explained: While the second ones are made using the perspective of a resident (so an export is a revenue since money is received and an import is an expense), the former account however uses a different perspective and an increase on the financial assets, which is a payment to the rest of the world, is written down with positive sign in the assets variation. On the other hand, an increment on financial liabilities, which is money received from the rest of the world, is included with positive sign on liabilities variation. In order to compute the final Balance equilibrium should the variation of financial assets is subtracted to the variation of financial liabilities. (VFL-VFA). As a methodological note, remember that in the section Bank of Spain a negative sign means an increment on the Bank of Spain assets with respect to the Rest of the World and a positive one a reduction.

The analysis of the previous accounts said that Spain had in 2013 capacity of finance for the first time in many years, so, as the balance should be balanced, the *Financial Account* must present a negative sign, meaning that Spain holds more financial assets from the rest of the world than financial liabilities, so, for the first time in many years, Spain is a net investor in

other countries. What would probably be found are negative variations of financial liabilities, showing that Spanish public and private entities are reducing their liabilities with *Foreign Investors* that is, reducing their debt levels. It is important to analyze why such a thing has happened but it seems that it is explained by the better access conditions to the financial markets that Spanish entities including banks have experienced during 2013, thanks to the reduction in the Risk Premium. Clearly, the positive result of the Capital and *Current Account*s have reduced importantly the need for financial aids from the Euro System. Anyway, the *Public Debt* Spain has with the rest of the World keeps on rising and it represents a 98.2% of *GDP* in 2014 according to Eurostat and it is expected to reach more than 100% in the future. In other words domestic private and public institutions will owe to the Rest of the World more than what they are able to produce in a year, something very dangerous. When dividing it by institutions is appreciated that the debt of Spanish institutions excluding the Bank of Spain increased until reaching a 84.4% of *GDP*, while the one of the Bank of Spain was reduced importantly and reached a 13.8% of *GDP*, due to the reduction of its liabilities with the Euro System.

The first section to be analyzed is the one of the *Direct Investments* and as a first review we are going to mention the results of the different sections, relative to Spanish *GDP* in 2013 as it has been done with the previous accounts. First it is done excluding Bank of Spain and then analyzing the Bank of Spain operations. Foreign Direct Investments (*FDI*), which is the key topic on this paper, have followed a regular trend since 2008, always fluctuating between -1 and 1% of *GDP*. In 2012 however, they reached a maximum of 2.2%, showing that inflows are higher than outflows in that case. However, the main cause of this anomalous behavior is found on the important disinvestments made in 2012. The variation of financial assets with the rest of the World was negative, meaning that Spanish companies sold their foreign financial assets. In 2013, Spanish outflows recovered a little bit and also inflows increased (although their level was still below the one previous to the crisis), by a 48%.

Most *FDI* made on Spain was made by long-term holding of shares of domestic companies. In addition, *FDI* inflows on immobilized followed an increasing trend, reaching the maximums of the first half of century. It means that the housing sector is recovering. Just for finishing with the analysis of *FDI* inflows to Spain during 2013 this report underlines that most of these *FDI* come from countries of the European Union, which seems logic.

During 2013 Spain invested 19.6 thousands of millions of euros as *FDI* on other countries, contrasting with the disinvestments of the previous year. The sectors in which Spain made

its *FDI* were energy sector, manufacture and financial activities, being most dynamic locations Latin America and the UK.

Now it's time to talk about *Portfolio Investments*, those that don't mean direct control. As this kind of investments require less quantity of funds and don't need to be long-term ones, there are huge fluctuations from one year to another. That's why it is not surprising to see a net investment equal 9.9% of Spanish *GDP* in 2007 and 0% in 2008 when the crisis exploded. Or to observe that in 2012 they were -5.3% of *GDP* and today, in 2013, they are 3.9%..

Portfolio investments made by foreigners on Spain worth 3.1% of 2013 *GDP*, which shows the better access conditions that *Foreign Investors* enjoy nowadays on this country. In the section named Other Investments this year there is a positive balance equal to 3.4% of *GDP*, after the huge negative result of the past period (-14.5%). The last section is about financial derivatives but the balance is not very relevant since it has not represented more than 0.8% of the *GDP* in the last 8 years and nowadays represents a positive 0.3%, which does not modify significantly the final balance.

As a final summary, in 2013 the *Financial Account* presents a surplus equal to 8.7% of Spanish *GDP* excluding the Bank of Spain operations, so the balance of the rest of entities says that they have received more financial investments than the ones they've made (clearly the variation of financial liabilities is higher than the one of financial assets). It is already analyzed why does this happens: *Foreign Investors* are recovering their confidence on Spanish Economy (of course the economic recovery of the Euro zone is also relevant) but Spanish companies are not recovered enough to invest in the Rest of the World.

But, what happens with the Bank of Spain? This year 2013 its balance is negative, equal to -11.2% of *GDP*, meaning that the Bank of Spain is losing Foreign International Reserves. When talking about the Bank of Spain account included on the *Balance of Payments* there is a difference between the variation of stocks, the variation of assets and liabilities against the Euro System and the variation of assets and liabilities with the rest of the World:

Since 1999 and the creation of the *EMU* (European Monetary Union) stocks are defined as liquid assets on foreign currency that national Central Banks carry against residents of countries outside the *EMU,* so assets valued in euros and those maintained against residents of the *EMU* are not included.

Net Assets with the Euro System represent assets maintained by the Bank of Spain against the European Central Bank (ECB) and other central banks of the *European Monetary Union.*

Finally, the Net Assets with the rest of the World is often considered as Other Net Assets and includes the variation of assets and liabilities that do not come from the Euro System and cannot be included as stock.

Finally, there is the section *Statistic Errors or Omissions* which make possible that the *Balance of Payments* is balanced (1.5% of *GDP* is the *Current+Capital Account* balance and -2.5% is the *Financial Account* one) and is equal to 0.9 % of Spanish *GDP*.A positive sign means a revenue not counted in another section of the Balance, while a negative sign represents an expense that has not been taking into account in other sections.

3 INTERNATIONAL FDI PANORAMA

After analyzing Spanish *Balance of Payments* focusing specially on its *Financial Account* and the *FDI* made and received by Spanish companies, is time to take a look at the global situation of *FDI*. In order to do so, this paper will study data given by two different data bases: The *UNCTAD* and the *OECD* which will describe the context in which *FDI flows* to Spain are developed.

3.1 *UNCTAD*: World Investment Report

UNCTAD's Division on Investment and Enterprise takes data from *National Institutes of Statistics* of its member States and publishes every year since 1991 the World Investment Report which shows the latest global trends on *FDI*. Before starting the analysis some of the specifications of that report should be mentioned: Countries are divided into three groups, just for statistical purposes (not according to their degree of development or Geographical location) and they are (i) Developed countries, in which *OECD* ones are included, with the exception of Chile, Mexico, the Republic of Korea and Turkey plus the new EU countries, (ii) *Transition Economies*, those that are changing from a Socialist economy to a market one, including South East Europe countries, the Commonwealth of Independent States and Georgia and finally (iii) Developing economies which are the ones not included before.

As an introduction it could be said that *FDI* follows a positive trend: after a decline in 2012, global *FDI* have raised by a 9% in 2013, according to *UNCTAD* (2014) There is a need to check whether next year it keeps rising in order to admit that this is a context of growing global *FDI* and, in fact, there are expectations of this to happen. In that context, *UNCTAD* highlights the potential of *FDI* in order to achieve the 2020 objectives of sustainable development. There is, as mentioned before, a really positive view of global *FDI*, which have

reached 1.45 trillion dollars in 2013 and are expected to reach 1.6 trillion in 2014, 1.75 in 2015 and 1.85 in 2016. What's more, during the last year *FDI* have increased in developed, developing and transition economies. Global *FDI inflows* reached its maximum in 2007, prior to the Great Recession in which they were really close to 2 trillion dollars. After then, another important peak was reached in 2011 with inflows being higher than 1.5 trillions, a maximum that is expected to be exceeded in 2014, after a new and important decline in 2012 due to EU debt crisis (Greece, Spain, and Portugal).

Historically most of these inflows came to developed economies and have been the ones suffering more fluctuations, so they are the ones expecting to experiment a major increment in future years. Transition economies are the ones with the lowest *FDI inflows* and they are not expected to increase too much. Similar trend will be followed in developing countries, whose percentage of total *FDI inflows* is much more important than the one of transition economies and is the one experiencing the biggest increment in the last 20 years. In fact, and after the Recession, *FDI inflows* to developing countries have reached more than 50% of total inflows, overtaking developed economies which sum just 39% of the total and being the ones receiving more *FDI*. It is clear that *FDI inflows* to developed countries are the ones suffering the most the Global Recession since they have been reduced a 57% with respect to 2007 data.

In the case of *FDI outflows*, developed economies are the absolute leaders with a 60.73% of total outflows, while developing economies, with 454 billion dollars invested represents a 32.18% of the total. Clearly, the latest economic crisis has reduced a lot confidence in developed countries, the ones suffering the Recession the most, that's why they have received much less *FDI* during that period. On the other hand, developing countries are experiencing a very strong and dynamic economic development, so they are the ones receiving the most *FDI inflows*. Nevertheless, developed countries are still the richest ones, so most of the *FDI outflows*, comes from there.

Table 3.1: Total FDI inflows in million dollars by region (2008-2013)

Region	2008	2009	2010	2011	2012	2013
European Union	551 413	363 133	383 703	490 427	216 012	246 207
Africa	59 276	56 043	47 034	48 021	55 180	57 239
East and South-East Asia	245 786	209 371	313 115	333 036	334 206	346 513
West Asia	93 547	71 885	60 868	53 215	48 458	44 282
Latin America and the Caribbean	211 138	150 913	189 513	243 914	255 864	292 081
South-East Europe	7 014	5 333	4 242	5 653	2 593	3 716

Source: UNCTAD (2014) "World Investment Report 2014, Investing In the SDGS: An Action Plan"

As mentioned before, *FDI inflows* received by developing countries follow an increasing trend and Africa is probably the best example since *FDI inflows* received rose by a 4% during 2013. This could happen due to global expectations of a growing middle class in Africa which has attracted investments on consumer oriented industries like food, IT or tourism. Although *FDI inflows* to Africa are following an increasing trend, its figures are still very low as Table 3.1 shows.

FDI inflows to East Asia rose by 2% during 2013 thanks to the dynamic development of China, Taiwan and the Republic of Korea. Chinese *FDI outflows* swelled by a 15%, with a spectacular rhythm and are expected to exceed *FDI inflows* within two or three years. In other words China, the Asiatic giant, is expected to pass from being a net *FDI* recipient to a *FDI* net investor, thanks to its mega deals with developed countries.

The case of South-East Asia is even more stunning: The most recent economic miracles of Singapore or Vietnam could happen thanks to Foreign Direct Investments made by developed countries on the manufacturing sector. Nowadays, these investments are still active and *FDI inflows* to that region have increased by a 7%, thanks to development opportunities and investment on infrastructure given to Myanmar or Laos.

Finally West Asia suffered an important drop in *FDI* flows due to regional tensions and political uncertainty as is the case of Saudi Arabia. In the rest of the regions, *FDI* flows are recovering but they do it at a very slow rhythm, except in the case of the more dynamic Iraq and Kuwait which have register historical maximums after decades of conflict. Anyway, the global *FDI* received by this region have decreased by a 9% during 2013.

After three consecutive years of increments, in 2013 *FDI* received by South America decreased by a 6%. The 2% decrease of *FDI*s received by Brazil is insignificant compared with the 29% drop in Chile and Argentina, due to the lower investments on the mining sector. Flows to Peru suffered another big decrease (a 17%) while in Colombia inflows raised by an 8% thanks to investments on the banking and electric sectors. Nevertheless, the most impressive increment on *FDI* received has happened in Central America and the Caribbean, with *FDI inflows* increasing by a 64%, most of them coming from the acquisition of the remaining shares of GrupoModelo in Mexico by a Belgium corporation.

The case of transitional economies is completely different: *FDI* received has reached a record, after a huge increment of 28% during the last year. However there is an important degree of uncertainty when talking about the future of *FDI* in that kind of countries. In South-East Europe, the transition from a Planned to a market economy has finished with

the privatization of the last State-Owned enterprises. The Commonwealth of Independent States (CIS) has also experienced an important increment on *FDI* flows thanks to its relationship with the Russian Federation. However, the regional and political instability creates uncertain prospects for the future of such regions. Clearly since the collapse of the Soviet Union in 1991this economies have been the ones with fastest *FDI* growth, thanks to the privatization of State-owned enterprises and especially thanks to EU member States investments. Most of these investments were done in the sector of natural resources (mainly gas and minerals), consumer industries and other sectors as they were liberalized.

Now it is time to analyze the context in which Spain participates. A first step will be to analyze what are the regional trends of *FDI* on Spanish economic environment, the European Union. After a sharp decline of *FDI* received by developed countries in 2012, last year saw a remarkable recovery, with a 9% increase. The leader on *FDI inflows* continue to be Germany, while *FDI* to UK or France have declined. Here we find good news for Spain, which became the first European *FDI* recipient during 2013, along with Italy, meaning that international investors have recovered confidence in those countries. Investments received by the USA, the world's largest recipient also increased by a 17%. It is clear that economically, developed countries, especially EU ones are recovering, so economic uncertainty surrounding them is being reduced. That's why during 2013 *FDI inflows* to them have recovered, being the case of Spain the most representative.

If the analysis is made by countries, clearly the United States is the leader on both *FDI* received. The second place in the case of *FDI outflows* is owned by another developed country, Japan, which has invested a total of 136 billions of dollars. However, in the case of *FDI inflows*, all the countries following the USA in the top 5 are developing ones: China, Russia, Hong Kong-China, Brazil and Singapore .These countries are part of the *BRICs*, the most dynamic developing economies which are the ones receiving most of global *FDI* made.

Now it's time to summarize the main investment trends during 2013 according to the sector in which they were made. First of all, is interesting to see how developing countries are becoming less dependent on extractive industries: Historically, most of *FDI* received by Africa and *LDCs* (Least Developed Countries, those countries with the lowest economic performance, most of them were colonies in the past) were related to this kind of companies. However, the share of extracting industry is been reducing importantly, while the share of manufacturing and services industries is growing enormously.

Secondly, it is interesting to analyze the effect of the shale gas revolution which is making the USA receiving more *FDI* from Foreign countries. Additionally, cheap natural gas is

attracting *Foreign Investors* to US manufacturing industries, such as the chemical one: US share on *Greenfield FDI* on that sector has grown from a 6% in 2011to a 25% of the total in 2013.
The case of pharmaceutical companies is another one that should be mentioned. During the last years these kinds of companies have been divesting on developed countries, while investing on developing ones just to obtain high-quality, low-cost generics.
During 2013 private equity funds for companies rose by a 14 % and is expected that private equity *FDI* will keep on rising. These kinds of acquisitions happen mainly and Europe and the USA but the figure is increasing also in Asia.
Finally and closely related with investments it appears international production, which follows an increasing trend: 9% increase on sales, 6% on value added and 5 % on employment. Of course, and due to the Recession, such an increment is more important on developing and transition regions, which register the fastest growth. It is clear that, the more a country produces, the higher is its need for making investments, so that trend in production explains why *FDI inflows* are growing faster on developing countries than in the rest of the world during the last 20 years.

3.2 *OECD:* International Direct Investments Statistics

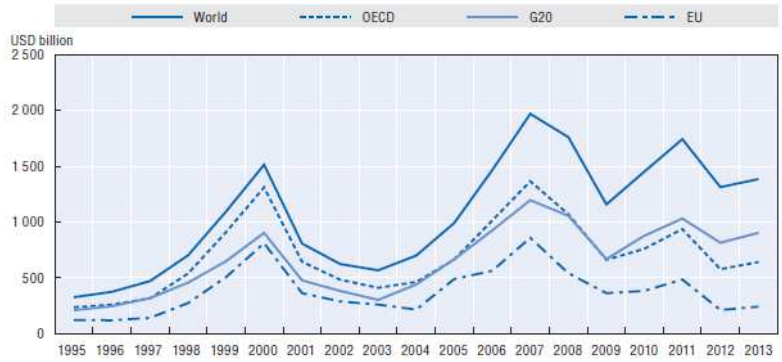
Now is time to compare *UNCTAD*'s data with that of the *OECD*. Their International Direct Investments statistics *OECD* (2014) shows *FDI* data of all *OECD* countries and 8 non *OECD*. It is always curious to compare different statistical sources as they will give different visions of the same information. Clearly it is going to happen when comparing data from two institutions as diverse as *UNCTAD* and *OECD*.
While the former one was optimistic about *FDI* recovery after the crisis, the *OECD* says that 2013 recovery is not enough, since *FDI* total flows have increased by a 4.5% this year, after a decline of 24% registered in 2012. They say that there is still a long way to run for recovering the pre-crisis levels, since nowadays *FDI* flows are 30% below 2007 figures.
OECD claims EU sluggishness, Chinese slowing growth and financial instability of emerging markets as the main causes of what they call *FDI* crisis. They also have a negative perspective of the USA, the leader on both *FDI inflows* and outflows, as it is the second year in a row in which its flows decrease. On the other hand, they had great views of the evolution of *FDI* to Russia (today the circumstances are different after the *Russian Recession*) and the rest of the BRICS (which are not part of the *OECD* but of the G-20), a vision that is shared by *UNCTAD*. In addition, they conclude that this increment on *FDI* flows to *OECD* countries is mainly explained by the increase on intra-company loans since equity transactions have

decreased by a 13% as result of divestments, due to the economic crisis and reflected in negative *FDI inflows* to many countries (Belgium, Finland, Poland…) This shows the huge importance of transactions between *Multinational* companies and their affiliates on the actual international investment panorama. As a final characteristic of *FDI* mentioned in the *OECD* report, is important to say that *FDI inflows* are very concentrated, since 50% of them are received by just 5 countries: the USA, Canada, Russia, Brazil and China, and 3 of these 5 countries are part of the BRICS, the most dynamic emerging economies. Most of the *FDI* received by *OECD* countries comes from another developed *OECD* economies.

In the case of *FDI outflows*, 73% of them during 2013 have been made by *OECD* countries, showing clearly that the more developed and rich economies are the ones making most of the investments. OECED countries are net capital exporters. In this case most of the outflows are explained by equity loans that are recovered after a year of decline, meaning that global stock market situation has improved during 2013 and *OECD* investors have recovered their confidence on it. Additionally, most of that *FDI outflows* go to other *OECD* countries, since these organization is more inclusive than anyone else. Nevertheless and, as mentioned before, the countries receiving a bigger proportion of *FDI* by the *OECD* are China, Brazil and Russia which are not part of such an organization. *OECD*'s Direct Investment's stock is now 10 times the one registered at the end of 1990, showing the impressive boost to globalization and the huge openness to international investment that has taken place during the new Millennium. Now, it is time to take a look at the comparative tables published by the *OECD* for their different member States.

As a final summary of international *FDI* context there are some graphs depicting the evolution of *FDI inflows* during the last decade. We observe the World's inflows decreasing at two periods 2007-2009 and 2011-2012 and after a tiny recovery during 2012, pre crisis levels have not recovered. *OECD* countries have been the ones suffering the crisis the most, while G-20 ones show the biggest recovery, thanks of course to the BRICS. Probably EU drop is not as sharp as *OECD* one, but is the longest one, since the fall started in 2007 and has not lived a (very small) recovery until 2013. In the year 2000 *FDI inflows* received by *OECD* countries accounted more than 80% of total flows and nowadays they represent only a 40%, following a decreasing trend since then. Clearly, experts can not only blame the economic crisis but also the raise of the emerging economies which now receive most of *FDI*.

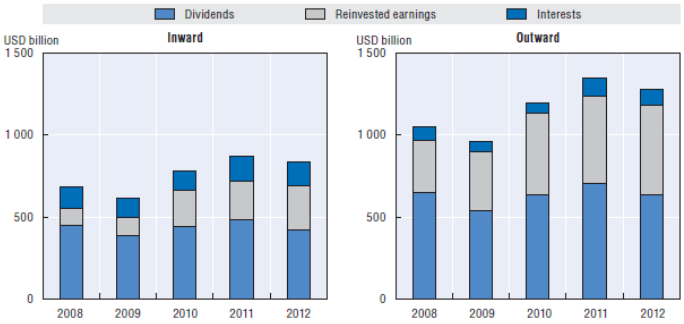
Chart 3.1:Global FDI inflows 1995-2013 in billion dollars.



Source: "OECD (2014)"OECD International Direct Investment Statistics 2014, OECD Publishing"

Another interesting chart for the analysis has to do with the different types of *FDI* that are made by the *OECD* countries:

Chart 3.2: FDI positions by type (2000-2012) in billion dollars



Source: "OECD (2014)"OECD International Direct Investment Statistics 2014, OECD Publishing.

The majority of *Foreign Direct Investments* made and received by these countries are in form of equity rather than in debt. In other words, developed countries prefer to buy stock (or other ways of participation) of foreign companies rather than giving them credits or loans, just for financing them and obtaining benefits. Clearly, this kind of *FDI* is more unstable, but it yields higher benefits.

The chart reinforces the idea that most *FDI* received and made by *OECD* countries are made on the services sector, although their number has stabilized during the last years. The second one is the manufacturing sector, which has experienced a minor increment compared with *FDI* on services. Then, it comes *FDI* on primary sector and the last sector receiving *FDI* is the one of energy (electricity, water and oil) and construction, being the last one the sector

in which *FDI* has not changed anything (clearly, after the housing crisis, *FDI* flows to construction have not increased).

As a final step, this report studies the distribution of FDI by sectors, being the services one the leader with 60% of *FDI* received in 2012 and 65% of the ones made during the same year. Following that sector it comes the manufacturing one with 23% of investments received and 21% of the ones made. Obviously, the services sector is the one employing more people all around the world and is the most important *GDP* generating sector, while the manufacturing one requires huge investments on buildings, equipment and so on.

4 SPAIN: Inward FDI

Now it is time to analyze Spanish data about *FDI* (before, what was studied was international data) and the report will look at three different sources: (ICEX 2013), data from the ministry of economics (DataInvex) and data from the INE.

4.1 A review to different Databases

4.1.1 ICEX: Invest in Spain

This report was made by the Ministry of Industry using 2010 data about *FDI* received by Spain.

As a summary, Spain received *FDI inflows* in 2009 equal to 14,694 millions of euros, which means an important reduction with respect to the previous year data (62% lower), clearly 2009 was the worst year for investing in Spain due to the Great Recession, although Spanish Government wants to justify this drop by remembering the strong increments of the past periods. As a curiosity, during 2009 the main investor in Spain was United Arab Emirates, due to an acquisition of a significant share in CEPSA which worth 3319 million euros. Then they come France, the UK, the USA and the Nederland's.

From the total flows received is important to focus on *Greenfield* investments since they are the ones that suppose the creation of a new company. 392 *Greenfield* projects were started on Spain during 2009, meaning a reduction of the 31.9% with respect to the previous period, a decrease which is less accused than the total *FDI* flows reduction. These projects were going to employ 49,500 people, being France, Germany and the United States the principal investors in those projects.

The most important sector for *Greenfield* investment is still textile one, meaning that Spain hasn't developed its industrial tissue. Is important to mention that the most important foreign companies making *Greenfield FDI* on Spain were *AuchanGoup* (French with 21

projects), *Banco Pichincha* (Ecuador, 10 projects), *LID*L (German, 9 projects) or *BanqueCentrailePopulaire* (Morrocco with 8 projects). Clearly, cultural tights influence importantly decisions about where to locate *FDI*.

Finally, in terms of stock, the one registered at the end of 2008 was equal to 341.819 million euros, 72.8% coming from equity and the rest from external finance of group companies. During 2008, Spain was the seventh country in the world receiving more *FDI*, evidencing the strong potential that Spanish companies had.

The manufacturing sector was the leader on *FDI* received during 2008 thanks to oil sector (28.3% of *FDI* received). The following sector is the Telecommunications one, thanks to the wireless telecommunications (10.8% of *FDI* received).

The next step is to focus on methodological aspects and concepts introduced by this dataset (clearly, data is not very relevant since it is too old fashioned). ICEX classifies *FDI* into three groups: New investments (constitution of new societies), expanding existing investments (capital increase) and acquisitions which represented a 55% of *FDI* received during 2009. Capital increase represented a 42%, while the New investments were just a 3% of all *FDI* received during that period.

Finally, this report talks about Spanish *FDI stock*, that is, the value of the share of capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprise.*FDI stock* shows the accumulated value of *FDI* received by Spain which increased during 2009. When determining the origin country for these investments we can use two criteria: The principle of immediate investor and the ultimate origin investment, being the last one referred to the residence of the real proprietor of the investments, while the first refers to the first foreign matrix. Attending to immediate investor criteria, The Nederland's are the main investors in our country, while attending to the ultimate origin investment one, the leader is the UK.

4.1.2 DATAINVEX: Ministry of Economics

While the ministry of industry made a report analyzing the evolution of *FDI inflows* received by Spain during 2009, the Ministry of Economics gives here a much more actual and accurate information about *FDI* received by Spanish companies.

When dealing with this database what it is found is that data is absolutely actualized and includes information about *FDI* made to Spain during the first quarter of 2014: During that period Spain received a total of 1,939,271.56 thousands of euros in the form of *FDI* and it is probably the worst first semester in many years. Hopefully, there is still time to recover and

overcome data from 2012 (14,541 millions of euros) and 2013 (16,325 millions of euros) just to continue the recovery of *FDI* received and the confidence from external investors.

In order to better understand this data, there is a need to explain how DATAINVEX database works. When searching for *FDI* information, there are many criteria to look for:

Then, there is information distributed according to the immediate investor, which could be part of the *OECD*, Europe, EU-27, EU-15, North America, Latin America, Rest of America, Asia and Australia and Africa. Another section that this report incorporates refers to *FDI* made by fiscal paradises, a subgroup that has never been included in *OECD* reports and that considers data of *FDI* coming from countries like Andorra, Bahamas, Jamaica, Hong-Kong, Singapore, San Marino etc. Information of *FDI* according to ultimate investor follows the same structure.

Following with the analysis about DataInvex database, it also informs about how *FDI inflows* are distributed among the different Spanish Autonomous communities, being the Community of Madrid the leader in that aspect; with more than half of the total (clearly is the administrative capital city, so most of *Multinational*s allocate their affiliates there). Needless to say that gross investment flows are the total *FDI* received during one period, which increment the capital stock in a country, while net investment flows are the gross ones minus the depreciation (the reposition of spent capital) or equivalently, the net increment of capital stock. For that reason, although during 2012 Spain had positive *FDI inflows*, capital stock was reduced 3,157,314. 50 thousands of Euros, so depreciation of capital was higher than *FDI* received. That's why during the first quarter of 2014 data is positive, since depreciation was very small and net *FDI inflows* were 1,732,819.28 thousands of euros.

A further step is taking when analysing *FDI* received by *Destiny Sector*, which is the sector in which the Spanish company receiving the investment operates. Here there are 99 different sectors to choose. For example the first sector refers to agriculture, cattle rising, hunting and others and it includes plenty of sub sectors according to the different types of agriculture or hunting practices done

This Database also informs about *FDI inflows* according to the kind of company receiving them; they could be Companies having foreign stock (ETVE) AND Companies not having foreign stock.

Finally there is the possibility to choose different kinds of *FDI*: When talking about flows there are Gross investment flows and net investment flows and if when talking about *FDI stock* it shows Employment, sales, investment position and results. Everything measured in thousands of euros except from employment. In addition, it shows three different kinds of

reports: **historic** with data about different years, **comparative** which compare one period with the previous one and **graphs.** There is also an option to choose advanced reports with different combinations of criteria. As a final advice, information is divided into years and we can find quarterly data by clicking on the selected year.

4.1.3 INE

This part of the work consists mainly on comparing different databases and their characteristics and information included by them. Now it is time to analyse INE databases about foreign affiliates on Spain and about property rents.

INE means on Spanish National Statistics Institute and is the official database of the Spanish Government with thousands of statistics about many different topics: Population, society, environment, geography, science and technology, agriculture, industry and energy, services and international data. Of course, this report is going to focus its efforts on analyzing economic databases and they contain information about Companies, economic and financial accounts, international trade and fiscal information.

Just for a better understanding of *FDI* information this paper will focus first on foreign affiliates operating on Spain, so first it will study Companies data. In this case, data is not as updated as the one of DataInvex, since there are publications only from 2008 to 2011. Here there are 4 different kinds of data; about the number of affiliates, the most important variables, the principal indicators and the main investor countries.

In the case of the number of foreign affiliates operating on Spain, there is information about their number by activity branches, by number of people employed, by autonomous community, by the country of the matrix country and two final combined statistics; Number of foreign affiliates by activity sector and size and number of foreign affiliates by activity sector and geographical location of the matrix. There are also differences with respect to ICEX in the division of foreign affiliates by country of origin. Here there are 26 different possible countries that can be: From Europe, the Eurozone, America, Asia and Africa and Australia, being the European Union and specially the Eurozone, the main leaders

While the Ministry of Economics' database (DataInvex) included 99 sectors, INE base have information about 26 different activity branches divided on Industry (12 branches) Trade with 6 branches and Services (8 branches). Here it says that there were 8.986 foreign affiliates operating on Spain, which corresponds to a 45% of total companies making their activity on our country. There are important statistical discrepancies if when comparing this data with the one of ICEX (remember that this report wanted to sell a very optimistic view o *FDI*

received by Spain) since it said that in 2010 there were almost 11.000 foreign affiliates operating on our country.

In the case of the number of people employed there are different intervals: Less than 10 employees, from 10 to 19, from 20 to 49, 50 to 99, from 100 to 249, from 250 to 499, from 500 to 999 and finally of more than 1.000 employees. The biggest number of foreign affiliates located on Spain employs less than 10 persons (a total of 3,493 companies) meaning that firms of this country are mostly small ones.

The second point on this statistical base refers to the principal variables and INE displays the information in the same way as it does with the number of affiliate. Here there is data about sales, number of people employed, production, value added, staff costs, external services, gross investment on material assets and operating income and expenditures of the foreign affiliates operating on Spain. As a curiosity ,this report finds that the total operating income of all the foreign affiliates operating on Spain is equal to **435,099,210** euros while the expenditures are lower **421,332,563** euros, so they obtain benefits .

In the case of the principal indicators the only way to find them is according to the activity sector and number of people employed. Indicators displayed on this database are the productivity and the mean salary (in euros) and the rates of added value and staff costs. Impressively, this work notices that companies of less than 10 employees are the ones with higher average salary **44,671** euros but the ones with fewer staff costs rate **19.6%.** It is not as impressive as it seems, clearly they have few employees so each can earn a high salary but total staff costs are very small.

Lastly, INE displays some Excel spreadsheets with the main investing countries on Spain by activity branches and activity sectors, being for example Italy the main investor on Spanish industry and France the leader on trade and services.

4.2 Activity of Multinationals in Spain

The previous paragraphs can be used as an overview of the different sources where users can find information about FDI inflows to Spain. This new section will analyse actual data about the activity of Multinationals in that country and how could they help to increment employment.

Table 4.1: Number of people employed by Multinationals on Spain by origin country in 2011

Investing country	Employees
Germany	169557
France	308047
United Arab Emirates	4590
United Kingdom	99206
United States	163661

Source: OECD Statistics

Table 4.1 studies employment generated by different *Multinational*s on Spain. The ultimate data found on the *OECD* Statistics corresponds to 2011 so it is not actual one, but it will be useful for studying the broad picture: *Multinational*s employed a total of 1,265,210 people in Spain during to 2011. Although this figure has followed an irregular trend, the number of people employed by *Multinational* Companies in Spain has increased since 2008, despite the decrease in total employment suffered during the same period. This means that, although Spanish companies are destroying employment, *Multinational* ones are creating, so Spain should try to attract more Foreign Companies in order to solve, at least partially, its problem with unemployment.

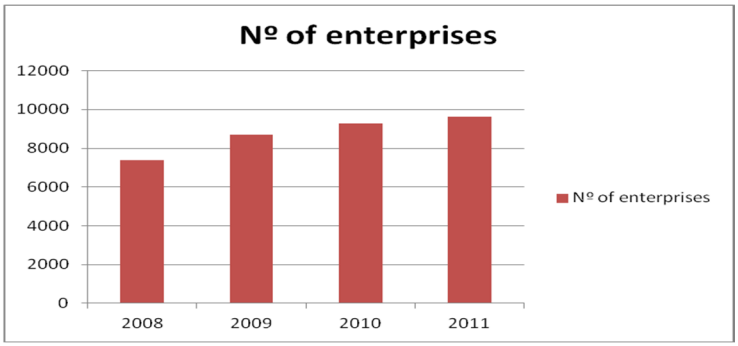
If the study is made attending to the origin country of the parent company it is found that French *Multinational*s are the ones creating more employment on Spain. Germany and the United States come next, but is interesting to see that a 77.57% of jobs created by *Multinational*s on Spain come from the EU-27 countries. The country needs to maintain its good commercial relations with that countries and their *Multinational*s and improve the relations with foreign ones (specially the *Multinational*s from the BRICS, which are now expanding internationally) in order to increment Spanish employment.

When dividing the previous figure by sectors of activity 63.8% of those employed by *Multinationals* on Spain work on the services sector and a 36.2% on the manufacturing one. Clearly Spain, as all developed countries obtains most of its employment from the services sector, but in the case of employment coming from *Multinational*s, manufacturing sector has a more important position than in the case of total employment, meaning that *Multinational*s still care about Spanish manufacturing sector.

Quite related with employment is turnover and here it is appreciated that *Multinational*s contract more people than the one they fire, so their effect on Spanish employment is very positive. A total of 426,726 people lost their employment due to *Multinational*s.

In this case it is interesting to see that the percentage unemployed by *Multinational*s on the manufacturing sector is more important than the one of people employed by such a sector (42.5% unemployed vs 36.2% employed), meaning that *Multinational*s are placing fewer attention to manufacturing sector in Spain and are focusing on more on the services one.

Chart 4.1: Number of enterprises created by Multinationals on Spain (2008-2011)



Source: OECD Statistics

Finally it is required to analyze the effect of *Multinational*s attending to the number of enterprises created by this kind of companies. In 2011 there are 9608 enterprises funded by *Multinational* corporations, a number, which is following an increasing trend since 2008 in spite of the economic crisis (although the number is every time increasing at a lower rhythm).In other words, the number of enterprises created by *Multinational*s have slowed its growth due to the crisis but at least they continue opening factories rather than closing them. Surprisingly it is not France the country opening more enterprises but Germany (1432 France vs 1567 Germany) This clearly means that Germany creates more enterprises but employs a lower number of workers, probably because German companies are more efficient and employs more capital than workers, while French ones are opposite.

Anyway their numbers are very close with France creating more enterprises in the manufacturing sector (probably in the car industry with Citroen, Renalut, Peugeot etc…) and Germany leading the number of enterprises on the services one.

5 DISCREPANCIES WHEN ACCOUNTING FOR FDI

Most of the countries have just one database or report to analyse *FDI* data. However, in Spain there are two, the *Foreign Investment Register* elaborated by the ministry of Industry, Tourism and Trade and the *Balance of Payments* created by the Bank of Spain. This fact can make the analysis much more complex, since there are discrepancies between both of them. That's why it is interesting to include this chapter on that work, just to explain why these

discrepancies happen and help people to a better understanding of these two databases. For example, the *Balance of payments* gives a more accurate treatment to *FDI* with a better coverage: For example the *Balance of Payments* includes plenty of categories of *FDI* as described previously, while the registry only includes shares and participations on equity, without taking into account neither financial lending nor investment on real state. In such a case the Registry gives much less accurate information. Additionally, the *Balance of Payments* divides *FDI* between institutional sectors, previously described, something that makes this report much more intuitive and easy to understand. Finally, the *Balance of Payments* just includes the net variations on assets and liabilities, while the Registry gives in this case more complete information since it includes net and gross data.

Another interesting aspect for the comparison refers to the sources of information used in order to elaborate them: While the Register only use the declarations of resident and non-resident investors, the *Balance of Payments* includes data from the Bank of Spain, the INE and EUROSTAT and the Centre of Balances.

The moment in which the information is taken is another interesting issue: most *FDI* registered by the *Balance of Payments* are accounted in the moment in which they are paid (except few exceptions in which they are included when the operations happen). However, in the case of the Register, *FDI* are accounted when they happen, no matter they are paid or not (Accruals)

Nevertheless, not everything is differences between these two sources of information, since both use two criteria when assigning *FDI* by sector and by country: The principle of ultimate investor and the principle of first counterpart.

The last aspect to analyse in such a comparison is the period of publication. *FDI* flows information included in the *Balance of Payments* is published every month, while data about *FDI stock* is included quarterly. Every year there is a long report (the *Balance of Payments* analysed before) explaining the results and additional considerations. The monthly historical series start on 1990 and can be found on the Bank of Spain webpage. However, data included on the Direct Investments Register is published quarterly and the historical time series are annual and start on 1993.

All these methodological differences explain the discrepancies between data published by those two institutions which are not always small: Generally, *FDI* flows published in the *Balance of Payments* are bigger in quantity than the ones published by the Register (with some exceptions). Such a difference is even more important when talking about *FDI* received by Spain since the *Balance of Payments* include *FDI* on real state, while the RIE (Register of

Foreign Investments) does not. The fact that the *Balance of Payments* only publishes net data also explain s some periodical discrepancies.

The period in which data is registered also generates discrepancies between both sources: If data is recorded annually, there is not a big problem since, although they use different criteria (payment vs accrual), almost the same data is included. However if it is recorded monthly or quarterly there are going to be important differences since one source will collect data in a period different than the other.

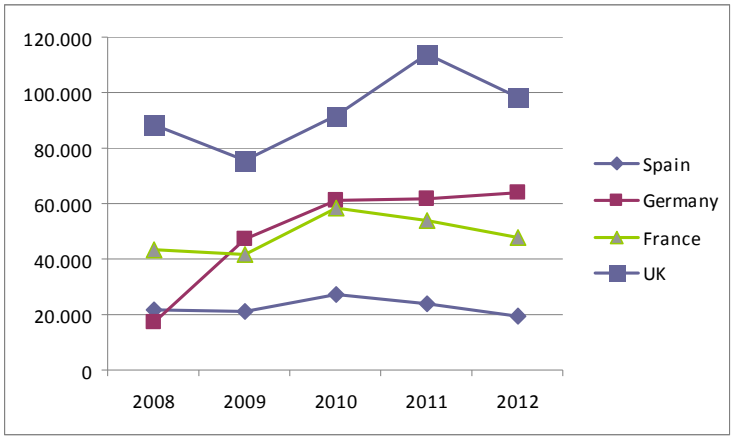
6 REINVESTED PROFITS AND DISTRIBUTED DIVIDENDS

This work has already described *FDI* flows and stock to Spain, with a huge emphasis on the quantity of *FDI* received by residents from Foreign *Multinational*s. All this *FDI* generate a strong positive effect over the Spanish economy, but the effect is not always the same; It is going to depend on what will *Multinational*s do with those profits generated by the investments. In this case companies have two options: or reinvest those profits on their affiliate or distribute them to its shareholders in the form of dividends. Clearly, the first option will generate much more employment and positive synergies to the local economy than the first one.

Eurostat database includes accurate data about how *Multinational*s get rid of the profits generated by their *FDI* on Spain. The objective is to determine first how much profits do *FDI* on Spain generate to the *Multinational*s and then study what proportion is reinvested and what is distributed to shareholders. In order to facilitate the understanding of this study and to make it easier to extract conclusions, this work will assume that the main shareholders of foreign *Multinational*s reside on the origin country of the company. In other words, the assumption is that most distributed dividends go to the home country of the *Multinational.*

First of all the analysis is going to focus on income generated by *FDI*. In the case of Spain it is always positive since 2008 in which the series start and, in fact, it maintains a constant rhythm. In 2008 *FDI inflows* on Spain generated income worth 22.933 million euros and despite the crisis the figure is more or less similar, although lower, 20.176 million euros in 2012. Although these figures are positive, they are still very far away from the richest European countries, with French affiliates generating 52.699 million of euros or German ones 70.060 million during 2012. Germany is precisely the country experiencing the most important increment during the crisis. Anyway, the leader on that aspect, the EU country generating more equity thanks to *FDI* is the United Kingdom with a total of 98.927 million of euros in 2012, following an increasing trend since 2008.

Chart 6.1: Evolution of Net FDI income on equity on Spain, Germany France and the UK (2008-2012) in millions of euros.



Source: Eurostat.EU Direct Investments- Main indicators

When looking at the proportions this report can observe that from all the income generated by *FDI* on Spain, 18,452 millions of euros were distributed as dividends, which represent an 85.78% of the total. In other words, a 14.22% (3,058 million euros) of income generated by *FDI* was reinvested on Spain on 2008. Nevertheless, the good thing is that in 2012 the proportion has been reduced and has dropped a 69.12% of the total *FDI* (13,499 millions of euros), leaving the reinvested profits (6,031 millions) to reach a 30.88% of income generated by *FDI*. It seems that the crisis has not reduced confidence investors had on Spain and after 2008 they have started to reinvest profits on Spanish affiliates rather than distributing them between their shareholders. That's a signal of the good performance of Spanish affiliates during these years of trouble. Something similar happens on Germany in which a 57.73% of income generated by *FDI* is distributed as dividends while a 42.27% is reinvested on the country, a figure that follows an increasing trend (since in 2009 the proportion of Reinvested earnings was equal to 33.44% of total income). Clearly the global Recession has reinforced the image of Germany between the investors. Anyway, let's look at the rest of our European partners: For example, France presents different proportions, with a 87.65% of the benefits distributed between its shareholders and just a 12.35% reinvested on the French affiliates. The figure changed due to the crisis since in 2008 a 17.85% of the benefits were reinvested on France, so, it is clear that the Recession has also affected the confidence investors had on that country. Data in Italy shows a similar evolution (79.67% of benefits generated by *Multinationals* are distributed as dividends between their shareholders) and it is probably the country losing more confidence due to the crisis, since during 2008 only a 51.11% of the

benefits were redistributed as dividends while a 48.89% were reinvested on Italy. Even a more interesting comparison can be done with Portugal, a country in which *Multinational*s have generated net negative profits since the start of the crisis during 2008. Maybe this poor performance explains why Spanish *multinational*s have closed so many affiliates on that country during 2012. Finally, the United Kingdom, the EU country receiving more *FDI* has also suffered the crisis, although British affiliates have not performed as bad, since income generated by them has increased during the last six years. Additionally, during 2008 a 54.68% of benefits were reinvested into the country (a very acceptable figure), while in 2012 just a 24.31% was reinvested, a clear sign of the fewer confidence *Multinationals* have on their British affiliates.

Table 6.1: Reinvested earnings (in millions of Euros) by Multinationals on Spanish, French, German and British affiliates (2008-2012)

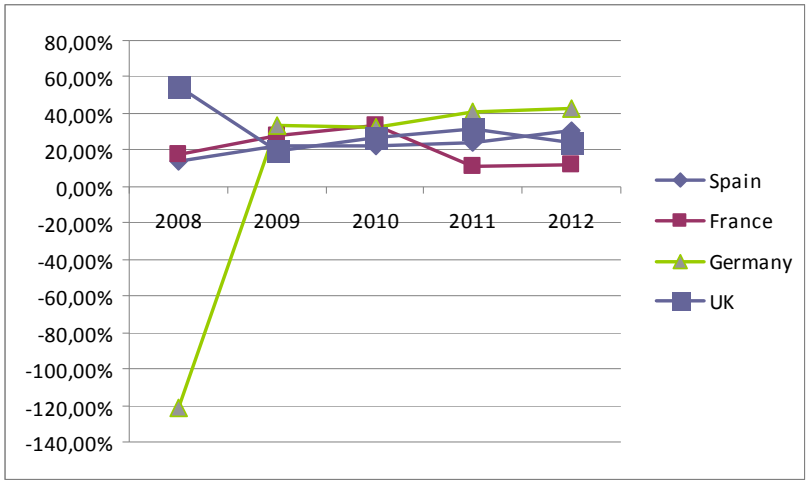
Country	2008	2009	2010	2011	2012
Spain	3,058	4,731	5,991	5,878	6,031
France	7,709	11,691	19,656	5,805	5,924
Germany	-21,011	15,774	19,962	25,161	27,080
UK	48,215	14,308	24,480	35,304	23,851

Source: Eurostat.EU Direct Investments- Main indicators

Here, Eurostat gives accurate data about the quantity of money reinvested by different foreign *Multinational*s on their affiliates, being Germany the country whose affiliates receive more Reinvested earnings, surprising the UK after a huge increment during *Recession* time. Nevertheless what we are interested in is proportions not absolute data.

Finally, as a conclusion it could be said that German affiliates have been the ones showing the best performance among the studied ones because since 2008 the percentage of Reinvested earnings received by them has grown in an important way, becoming the leader on that aspect. The percentage of Reinvested earnings have decreased on both France (probably the country whose affiliates have performing worst during the *Recession*) and the UK and increased surprisingly on Spain (although not very much) whose affiliates have performed quite well in a depressed environment. Such increment on Reinvested earnings on this country could be a key for increasing employment on the future. Anyway, Spanish figures are still far away from the pre crisis levels, since in 2007 a 48.88% of total income generated by FDI on that country was reinvested on it.

Chart 6.2: Percentage of Reinvested earnings on Spanish, French, Germany and British affiliates (2008-2012)



Source: Eurostat.EU Direct Investments- Main indicators

7 EMPIRICAL ANALYSIS: A GRAVITY MODEL FOR FDI INFLOWS IN SPAIN

The last point to work on will consist on creating a *Gravity Model* for trying to explain the pattern of *FDI* between different countries.

As all of you probably know, the *Gravity model* in Economics is inspired by Newton's *Law of Universal Gravity*, which shows that the attraction between two bodies depends positively on their masses and negatively on the distance between both of them.

It was applied in Economics for the first time during the 60s and during more than 40 years, various experts have investigated about it. The objective of this kind of models was deriving the pattern of trade between different countries by using the theories shown by Isaac Newton in 1687: According to this, trade flows between two countries i and j are equal to the product of their sizes divided by the distance between them.

$$FDI_{ij} = GDP_I * GDP_J / D_{IJ} \quad (7.1)$$

The model represented by Equation 6.1 refers to the Gravity Model applied to Trade. The size of the countries is measured according to economic terms and experts use *GDP* as the best indicator for economic size. In other words, commercial flows between two different countries increases when countries' *GDP*s raises and is lower when the distance between both of them is high. That's obvious and has been demonstrated by many experts: The bigger is a country, that is, the higher is its *GDP*, the most they produce and trade with other countries, while the more distant are two countries, and the more expensive is to transport

the merchandise, the lower are the commercial flows between them. Anyway, there are many other factors influencing trade between two countries which are not included on the model such as barriers to trade, cultural tights, historical reasons, the barrier effect or the existence of non-tradable goods.

What will be done firstly is to apply such a model to the central topic of this work, *Foreign Direct Investments*. It is going to try to show whether *FDI* flows depend on the size of the countries and the distance between them. The first hypothesis we want to test says that the higher is the *GDP* of a country, the bigger are their companies and the most will them invest on the rest of the world. Similarly, the bigger are the companies in a country, the most *Foreign Investments* will they require. However, *FDI* can be also used to substitute trade, so the higher is the distance between two countries, the more expensive become to trade, so the more favourable is to make *FDI*. In other words, this first approach for a *Gravity Model* applied to *FDI* dictates that *FDI* flows between two countries are going to depend positively on the distance between two countries and also on the size between them:

$$FDI_{ij} = GDP_I * GDP_J * D_{IJ} \quad (7.2)$$

The second step is to try to check whether Equation 6.2 can be demonstrated empirically: Taking first two neighbour countries as they are France and Spain and then compare the results with two countries which are more far away but share cultural tights like are USA and Spain. Additionally, this model will also take Spain and a country which is close to the USA but has a *GDP* similar to the one of France. In this case we will select Brazil

Firstly, there is a need to define what does distance between two countries mean and how to measure it: It means Miles or kilometres between economic centres (or capitol cities) of two different countries, by using their respective latitudes and longitudes as references. In order to obtain the required data this paper will look for the distance between Madrid and Paris and between Madrid and Washington DC, the US capitol city. According to www.distanciasentreciudades.com between Madrid and Paris there are 1,054.08 kilometres and between Madrid and Washington DC there are 6,095.95 kilometres. Finally, there are 7,745.37 Kilometres between Madrid and Brasilia, so the distance between these two countries is similar to the one between Spain and USA.

The second step is to measure the *GDP* of the three countries on different years:

Table 7.1: Evolution of GDP in Spain, France, USA and Brazil (2005-2013) in millions of euros

Country	2005	2006	2007	2008	2009	2010	2011	2012	2013
Spain	909.298 €	985.547 €	1.053.161 €	1.087.788 €	1.046.894 €	1.045.620 €	1.046.327 €	1.029.002 €	1.022.988 €
France	1.718.047 €	1.798.115 €	1.886.792 €	1.933.195 €	1.885.762 €	1.936.720 €	2.001.398 €	2.032.297 €	2.059.852 €
USA	10.526.003 €	11.036.875 €	10.565.706 €	10.008.363 €	10.336.894 €	11.283.322 €	11.159.339 €	12.643.680 €	12.649.424 €
Brazil	708.040 €	867.484 €	997.240 €	1.123.546 €	1.164.786 €	1.614.978 €	1.778.512 €	1.748.438 €	1.688.698 €

Source: Datosmacro

As you can observe here, Brazilian *GDP* has increased impressively during the new century and nowadays it is close to French *GDP* (although Brazil is a much more populated country, so its *GDP* per capita is much lower).

According to the model *FDI* flows between Spain and France should be lower than between Spain and Brazil as both countries are very close and for them is better to trade than to invest. Additionally, they should be much lower than between Spain and the USA since this country is much bigger than France. For such a purpose this paper is going to take data from Eurostat 2013 which is the more updated source:

Spain received 250 million Euros of *FDI* from Brazil, which is more than three times lower than in the previous year (Eurostat data showed that in 2012 FI flows were 835 millions) and it can be explained by recent events, since Brazil have just entered on Recession. From France there is not updated information but according to Eurostat 2012 *FDI* to Spain was equal to 2,241 million Euros (remember that *OECD* gave data in dollars) and finally *FDI* received by Spanish companies from US *Multinationals* have decreased to half and in 2013 were equal to 2,206 million Euros.

With this information two different conclusions are reached: Maybe distance affects *FDI* flows in a negative way and not in a positive one as reflected on Equation 7.2, or maybe there are many other factors affecting *FDI* flows that were not taken into account. After reading some papers, including Shatz (2001), a clear conclusion is reached: Distance can affect *FDI* in two different ways; it could increment coordination costs since the more distance, the more expensive becomes to visit the foreign affiliate, but it also increments transport costs so it is better to invest than to export to that market. Anyway, empirical data and experts'

opinion shows that long distances between countries, reduce *FDI* flows between them so in this model, distance will definitely affect *FDI* flows in a negative way, so for the moment Equation 6.1 will be considered as valid.

Once the model is redefined, it is time to analyze *FDI* flows evolution in terms of the new equation:

For example, between 2009 and 2010, the years in which Brazil experienced the biggest *GDP* increment in the last decade (a 7.5%), Brazilian *FDI* to Spain worth 1,606.6 millions of dollars, much bigger than the ones of 2012, meaning that *GDP* increments give raise to *FDI outflows*. Similarly, the US higher *GDP* increment during that decade took place between 2011 and 2012 (2.8%) and during that year *FDI* flows from USA to Spain increased importantly, a 26%.

All in all, for adding dummy variables to the model, there is a need to make it linear. In other words a linear econometric model will be created its validity and estimators will be found through OLS estimation thanks to Gretl informatics program:

$$FDI_{ij} = \beta_0 + \beta_1 GDP_i + \beta_2 GDP_j + B_3 D_{ij} \quad (7.3)$$

This is our previous model transformed into a multiple regression model. Clearly B_1 and B_2 are expected to be positive, since the biggest the *GDP* of both countries is, the higher will *FDI* flows be, while B_3 is expected to be negative, since empirical data has demonstrated that the more distant are two countries, the lower *FDI* flows are there between them. However Gretl give us the first correction to Equation 7.4: We cannot include a constant and distance (remember it is always constant) between countries as regressor, since there will be perfect multicolinearity. That's why we are going to eliminate the constant:

$$FDI_{ij} = \beta_1 GDP_i + \beta_2 GDP_j + B_3 D_{ij} \quad (7.4)$$

The second problem these model presents is that there might be some additional variables that have not been taken into account. In order to solve this, the model would incorporate them in the form of *Dummy Variables*, that is, variables which can only take two values: 1 in the case of "yes" and 0 in the case of "no". Nevertheless, there are problems with such variables: Rodríguez and Pallas (2002) says which factors have been determinants of *FDI* in our country and which have not, according to 1993-2002 data and they conclude that the differential between labour costs and productivity is the main cause of *FDI* in our country. For that reason the model could include a Dummy reflecting this with a 0 if Spanish labour costs were higher than French, Brazilian or US ones and 1 otherwise. However since 2004

all the values where the same so it was impossible to incorporate such a variable to the study. That's why instead of a Dummy, we are creating a differential between French, Brazilian and US labour costs with the Spanish and it will be a new regressor:

$$FDI_{ij} = \beta_1 GDP_i + \beta_2 GDP_j + B_3 D_{ij} + \beta_4 CostDifferentials_{ij} \quad (7.5)$$

What is expected in this case is that B_4 is positive for France and the USA (which have higher labour costs than our country) since the higher differential will mean lower Spanish costs with respect to them, something which will increment their investments on this country. It is also expected that B_4 takes a negative value for Brazil (with lower labour costs) as the higher differential will mean higher Spanish costs and lower Brazilian *FDI* in our country.

Another important variable affecting *FDI* flows is the existence of trade barriers. Many experts argue that these barriers affect negatively *FDI*, while others argument they affect it in a positive way, since in order to jump such barriers, many companies decide to create affiliates on foreign countries. It is a controversial aspect, but the assumption will be that the existence of trade barriers will affect in a negative way the *FDI* flows between countries. That's one of the conclusions extracted on Brincogne and Lopez Forero (20xx) ,in which it says that exports and *FDI* act generally as a complementary (there are substitute and complementary effects, but the second ones are more predominant, especially between *OECD* and non-*OECD* countries) .In other words, factors affecting positively exports between countries will also increment *FDI* flows between them. Once more, the model could include the existence of trade barriers between countries as a *Dummy Variable* which will take value 1 if there are trade barriers (let's say if countries are not part of a common market) and 0 if there are not trade barriers (if countries are part of a common market). Nevertheless, the existence of trade barriers between this countries is always the same (France will always have a 0 and USA and Brazil a 1 in our study) so it makes no sense to incorporate them to the study.

Other factors like sharing common language or having colonial links also matter, so they could also act as Dummy variables. *CulturalLinksij* will take the value 1 if countries have some cultural relation (either common language or colonial links) and 0 if not. However, in this case neither France nor Brazil nor the USA shares cultural links with Spain. In fact they share but they are not strong enough to consider them as economically relevant: when talking about the United States there are cultural links since Florida, Alabama, New Mexico, Texas, Washington, Oregon or Alaska were Spanish colonies and they still speak Spanish in many parts of the country. However, empirical data shows that this small links do not affect *FDI*

flows between Spain and the USA since the main US Spanish speaking partner is Mexico. That's why the model would assign the USA a value equal to 0. Similarly, Brazil was ruled by the Spaniards at some point in the 17h century (since Spain annexed Portugal), but nothing remains from that period and the most important Brazilian partner is Portugal, so the model will also assign Brazil a value equal to 0. Finally Spain does not maintain any cultural relation with France and both nations were enemies during many years although nowadays they are allies. Since all the countries will take a value equal to 0 the model will not consider such a dummy variable so there is a need to think about another one.

Lastly, the model could incorporate a new variable in the analysis in order to improve it and make it more accurate. It is clear that international exchange markets are huge ones, surely the bigger ones in the World and their changes and fluctuations affect all economic transactions between countries. Obviously, the case of *FDI* is not an exception: If a Brazilian or US company wants to invest on Spain, it will need to make it in Euros, the Spanish currency, so they are going to sell their Reales or Dollars and buy euros. For that reason, the price of the euro at the moment of deciding whether to make the investment or not is crucial for taking the decision; If the euro is very expensive related to the Dollar or Brazilian currency, investors are not expected to invest Spain but in other ones. That's why the model will include this variable as *Exchangerateij,* and intuition says that it will affect in a negative way US and Brazilian *FDI* on Spain (The more expensive is the euro related to the rest of the currencies, the lower investments are going to be made) and it won't affect French ones since we both share a currency.

$$FDI_{ij} = \beta_1 GDP_i + \beta_2 GDP_j + B_3 D_{ij} + \beta_4 CostsDiferentials_{ij} + \beta_5 ExchangeRate_{ij}$$

(7.6)

The next step is to build an Excel database in order to create a model in Gretl. The database will show the evolution of *GDP* of each country since 2004, the distance between them and *FDI* flows between such countries. In order to introduce *FDI* information in that database we are going to use Eurostat flows because they are expressed in Euros, the currency we are interested in, while *OECD* one is expressed in dollars.

What will be first done is to check the validity of the model looking at its R squared. Firstly the model analyses the case of France without adding any *Dummy Variable* and obtains an R^2equal to 0.19579, meaning that 19.579% of changes on *FDI* from France to Spain are explained by the original model. It is not a very good percentage, so the model should be improved by including dummy variables.

Table of Results 7.1: Equation 7.4 for France

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*
GDP_Spain	0,00889194	0,00101727	1,0271	0,35148
GDP_France	0,00484354	0,00831425	2,2864	0,07097
Distance__France	-16,2539	1,74806	0,9288	0,39563
	R-Squared		0,19579	

Nevertheless the validity of the model for explaining Brazilian *FDI* on Spain is higher than the previous one with an R^2 equal to 0.562552 (56.25% of Brazilian *FDI* on Spain are explained by variations of Brazilian *GDP*), although it is not high enough to consider our model as a valid one (it should be at least 0.8).

Table of results 7.2: Equation 7.4 for Brazil

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*
GDP_Spain	0,00238104	0,00318823	0,7468	0,48878
GDP_Brazil	0,000425235	0,000474927	0,8954	0,41162
Distance__Brazi	-0,29629	0,351605	-0,8427	0,43785
	R-Squared		0,562552	

Finally, this model will explain *FDI* made by American *Multinationals* on Spain. It obtains its higher degree of validity when explaining US *FDI* on Spain, with an R square of 0.573996 (57.3996% of changes on US *FDI* on Spain are explained by it) but it is still not enough to qualify it as a valid model.

Table of Results 7.3: Equation 7.4 for USA

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*	
GDP_Spain	-0,00653	0,00769421	-0,8487	0,42412	
GDP_USA	0,00182392	0,000593897	3,0711	0,01804	**
Distance_USA	-1,96443	1,41872	-1,3847	0,20869	
	R-Squared		0,573996		

Let's now include our additional regressors starting by costs differentials.

After including that new variable what is found is that the validity of the model increases substantially, so working costs differential between countries is a good variable explaining

FDI flows. However, the model still only explains 72.1061% of changes on *FDI* flows between Spain and France, so it is not still a valid model (although it is close to 80%)

Table of Results 7.4: Equation 7.5 for France

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*	
GDP_Spain	-0,024396	0,0213841	-1,1408	0,30561	
GDP_France	0,0275984	0,0139058	1,9847	0,10396	
Distance_France	-63,2682	19,394	-3,2623	0,02239	**
Differential_Fr	5,01925	1,76613	2,8420	0,03616	**
	R-Squared		0,721061		

These are the results for Brazil: The model is slightly valid since R-square is higher than 0.8 (82.6577% of changes on Brazilian *FDI* to Spain are explained by our model). The addition of *Costdifferentialsij* as a variable has improved importantly the validity of the model, so it is a good variable for the model. Anyway, the coefficients still have a high p-value and they cannot be accepted as valid.

Table of Results 7.5: Equation 7.5 for Brazil

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*
GDP_Spain	0,00155203	0,00691061	0,2246	0,83673
GDP_Brazil	0,000627078	0,00281787	0,2225	0,83819
Distance__Brazi	-0,280782	1,96948	-0,1426	0,89567
Diferencial_Bra	0,0485329	1,06778	0,0455	0,96660
	R-Squared		0,826577	

Let's now check the model for the United States FDI outflows on Spain: In the end, the model is valid for explaining US *FDI* on Spain since R-square is equal to 0.887209, so 88.7209% of the variations on *FDI* received by Spain from the USA are explained by it (higher than 0.8). That's a good model although not perfect.

Table of Results 7.6: Equation 7.5 for USA

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*	
GDP_Spain	0,0230922	0,0111564	2,0699	0,08390	*
GDP_USA	0,00330379	0,000637147	5,1853	0,00204	***
Distance_USA	-2,36199	0,976463	-2,4189	0,05194	*
Differencial_US	-1,70824	0,567766	-3,0087	0,02374	**
	R-Squared		0,887209		

This analysis will finish by adding the last relevant variable for the study, $Exchangerate_{ij}$ and check whether the model improves substantially or not.

For the case of France it seems that the model has worsened, so it is clearly not a good factor explaining French *FDI* on Spain, probably because since 2001 both countries share a currency, the Euro. Spanish GDP affects negatively French outflows to that country; the model will then extract conclusions about such a result. Salaries differential increases a lot French FDI on Spain and the appreciation of Spanish currency decreases importantly FDI inflows to Spain coming from France.

Table of Results 7.7: Equation 7.6 for France

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*	
Exchange_rate_F	-66689,8	20442,8	-3,2623	0,02239	**
GDP_Spain	-0,024396	0,0213841	-1,1408	0,30561	
GDP_France	0,0275984	0,0139058	1,9847	0,10396	
Differential_Fr	5,01925	1,76613	2,8420	0,03616	**
	R-Squared		0,692491		

For the case of Brazil, the model does not improve very much as it passes from explaining 82% of Brazilian *FDI* on our country to explaining an 84.25%. *GDP* affects in a positive way as first hypothesis expected and distance reduces Brazilian desires to invest on Spain as expected. The salaries differential also affects Brazilian *FDI* on Spain positively as they invest on Spain due to its technology as Brazilian labor force is much cheaper, so the higher Spanish salaries, the more qualified workers are related to Brazilian ones, the more Brazilian *FDI* on that country. What seems estrange is that the more expensive is the Euro related with Brazilian currency, the more *FDI* do Brazilian companies make on Spain.

Table of Results 7.8: Equation 7.6 for Brazil

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*
GDP_Spain	0,00431716	0,0101351	0,4260	0,71160
GDP_Brazil	0,000596049	0,00328912	0,1812	0,87290
Distance__Brazi	-0,937568	2,72183	-0,3445	0,76335
Diferencial_Bra	0,119256	1,25593	0,0950	0,93301
Exchange_rate_B	581,177	1290,23	0,4504	0,69651
	R-Squared		0,842550	

Finally, let's see what happens for the case of the USA: The model improves a little bit (it was difficult to improve it much more) and now it explains almost 95% of *FDI* made on Spain.

All in all, a conclusion found after analyzing these results is that $Exchangerate_{ij}$ improves the model but not very much. Maybe exchange rate fluctuations between currencies is much more important when talking about portfolio and other short term investments than when analyzing FDI flows.

What is also found on the results is that US and Spanish *GDP* affects *FDI* on a positive way, so the higher is their *GDP*, the more *FDI* will US companies make on Spain. However, and surprisingly, here it says that distance affects positively *FDI*. In addition, the higher is the salaries differential between Spain and the USA, the more *FDI* will they make on Spain as they valuate its cheap labor force when deciding to create companies there. Last, but not least, the most important variable affecting US *FDI* on Spain is the exchange rate and it affects in an impressively negative way their investments: An appreciation of the Euro with respect to the dollar will make it more expensive to invest on the Euro zone and will decrease enormously US *FDI* on Spain. Hopefully, the Euro is depreciating right now, so it could mean a raise on *FDI* received by our country from the USA.

Table of Results 7.9: Equation 7.6 for USA

	Coeficient	*Standard. Dev*	*T-Statistic*	*P Value*	
GDP_USA	0,00104482	0,00101727	1,0271	0,35148	
GDP_Spain	0,0190095	0,00831425	2,2864	0,07097	*
Distance_USA	1,62358	1,74806	0,9288	0,39563	
Differencial_US	0,0470844	0,816138	0,0577	0,95623	
Exchange_rate_U	-30173,6	12081,4	-2,4975	0,05466	*
	R-Squared		0,949815		

8 CONCLUSSIONS

The analysis of the Spanish Balance of Payments was this paper's first objective and it explains the Current deficit accumulated by this country during the last decade: The 21st Century started on Spain with a huge period of growth. Such an excellent economic period (fostered by low interest rates that created a housing bubble) and some policies created some inflation on Spain, making its products more expensive than the ones of other European counterparts, like Germany. This inflation provoked an increment on Spanish workers'

salaries, which made Spanish goods less competitive. That's why Spanish exports decreased and, at the same time, imports increased importantly due to strong energetic dependence suffered historically by that country and also because of the higher income levels enjoyed by Spanish citizens. As a consequence, Spain started to accumulate *Current Account* deficits, which raised importantly its need for funding.

After the Euro Crisis burst in 2009, some economic policies became mandatory for Spain, including measures for reducing Spanish salaries in order to reduce the price of Spanish products. Such measures, along with the strong decrease on Spanish imports due to the Recession, alleviated the Current deficit which was gradually reduced during 2011 and 2012. During 2013 Spain enjoyed financing capacity for the first time in many years (in other words it enjoyed a *Current Account* surplus) that permitted Spain to pay their debtors. For continuing paying their debts they should accumulate *Current Account* surpluses, nevertheless it seems that in 2014, once imports have recovered after the Recession, it will have another deficit, meaning an increment of Spanish need for funding and debts. If this country wants to grow and have funds to pay their debts, it needs to become more competitive on the International panorama and reducing salaries is not the best solution (just a transitory one) since in the future, other countries like Morocco or Rumania would be able to sell the same products as Spain but at a much lower cost. What should be done is to try to increment the quality of exports (especially high-tech ones) by modernizing the industrial sector and investing more on Research and Development. Of course it is a long-term policy that won't have results on the near future.

This paper's second objective had to do with the topic of *Foreign Direct Investments* and how could they reduce unemployment on Spain and there very important lessons have been found: the positive synergies generated by *FDI* are much higher whenever companies reinvest profits on their affiliates rather than when they distribute them among their shareholders. For the case of Spain, *Foreign Companies* generate a positive income, which has maintained constant despite the crisis and also generate much more employment than the one they destroy. That's a good signal since *Foreign Investors* find many advantages on Spain at the time of investing, like for example the lower salaries of workers compared with those of other EU countries. Nevertheless income and employment generated by *FDI* on Spain could be much higher if *Foreign Multinational*s reinvested a bigger proportion of their profits on their Spanish affiliates (although the proportion has doubled during the Recession years) and clearly they don't do so because they don't find a need to do it. In other words, when most of the biggest *Multinational*s invest on Spain they do it looking for cost advantages,

rather than for innovative or technological reasons, so these *FDI* require less reinvestment and permit companies to distribute more dividends. That's another clue that leads to the same conclusion as before: Spanish industrial capacities are just based on cost advantages and they should try to modernize them in order to incorporate technological advantages. As an example, Germany benefits from an efficient Industrial sector in which more than half of *FDI* Profits are reinvested on German affiliates, permitting the country to increment impressively income and employment during the Recession.

Regarding the third objective a clear conclusion appears since data would be different depending on where you find it, just remember discrepancies between international sources (*OECD* and *UNCTAD*) and national ones (Ministry of Economics, Ministry of Industry, or INE). That's why researches should not rely on just one source, but need to study carefully each of them and select the information they consider more relevant.

Of course the previous conclusions are general ones and in order to attain the fourth and last objective (look for the characteristics to foster in order to attract different kind of investors), an econometric model must be created. In this case this report has chosen USA, France and Brazil as potential investors, but the model can be applied to any country; it will help to understand why this kind of countries invest on Spain and what should this country should try to do in order to receive more income from them:

For the case of France it is appreciable that the exchange rate stability is a variable affecting importantly their investment decisions and the most expensive is a currency, the lower investments are made by French *Multinational*s on that country. What is remarkable in that case is that both countries share a common currency, the Euro and that's probably one of the main reasons explaining that France is one of the principal investors on Spain. It is also observable that the higher Spanish *GDP*, the lower investments are made by France on Spain, so what they value for investing in that country is workers' wages that are much lower when *GDP* falls. Cost differentials variable confirms this suspects as it shows each increment on French labor costs related to Spanish ones, leads to an increment of 5 units of French *FDI* received by Spain. If Spain wants to attract French investors in the short run they should keep reducing Spanish salaries.

The case for Brazil is different: The bigger are both Brazilian and Spanish economies, the higher *FDI* will Spain receive from Brazil (so we expect them to fall in the near future as Brazil has fallen into a Recession). The results of the model also tell that distance affects negatively Brazilian investments on Spain and that cost differentials between both countries foster *FDI*. In other words, the higher are Spanish labor costs compared to Brazilian ones,

the higher will be Brazilian *FDI* on this country. That leads to an interesting conclusion since Brazilian investors look for good quality capital when investing on Spain (remember, higher labor costs means more efficient capital) so Spain should support technological innovation in order to attract Brazilian investors. Another conclusion extracted from the study to Brazil is that the more expensive is the Euro in terms of Brazilian currency, the most they invest on Spain. This conclusion was unexpected at first, but it makes sense since *FDI* are long-term investments so if the Euro is expensive, they will prefer to have long-term benefits in the form of Euros rather than in the form of Real. In this case, the immediate future Euro depreciation after the start of the European Quantitative Easing will affect negatively Brazilian investments on Spain. All the previous stuff suggest that in the near future, Brazil won't be an important investor on Spain due to Brazilian Recession, Euro depreciation and the lack of priority given by Spanish Political parties to technological investment.

Lastly, the case for the USA is probably the key one for Spanish near future as it is the fastest growing country of the list and American investors should be attracted for raising Spanish output and employment. First of all both countries size affects positively *FDI* flows as was expected and the more expensive is the Euro in terms of Dollars, the lower American *FDI* will be received by Spain. In this case, distance affects positively US *FDI* made on Spain, so they invest on that country with the objective of substituting exports which are very expensive to transport. Finally cost differentials matter, but not very much, since the lower Spanish labor costs relative to US ones, the higher will American *FDI* on that country be in the future. Anyway, the figure in this case is not very big, so it is not the most relevant measure they should take in order to appeal to US *Multinational*s. The Euro depreciation will be probably Spanish best ally when attracting American investors in such a case. In addition, they must try to focus on the production of goods that are more expensive to transport in order to increment US *FDI*, as transport costs are one of the main reasons chosen by American *Multinational*s when investing on Spain.

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