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Title of the Bachelor´s Thesis:

Foreign Direct Investment in the Czech Republic and the effects of fiscal and monetary policies.

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D e c l a r a t i o n o f A u t h e n t i c i t y

I hereby declare that the Bachelor´s Thesis presented herein is my own work, or fully and specifically acknowledged wherever adapted from other sources. This work has not been published or submitted elsewhere for the requirement of a degree programme.

Prague, May 1, 2016 Signature

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Abstract:

This thesis set out to analyze the trend of inward Foreign direct investment (FDI) flow into the Czech Republic and find out the main factors that attract Foreign direct investment into the Czech Republic. It also looked into the effects of monetary and fiscal policies of Czech Republic on FDI. The methodology used include factor analysis using examples, correlation analysis and regression analysis which came up with an equation relating FDI to interest rate. As for the important factor that influence FDI inflow, the thesis came to the conclusion that there is not a single factor on its own that determines the inflow of FDI into the Czech economy rather a collection of factors. These factors include: skilled workforce; reliable infrastructure; cost competitiveness; high education level and the strategic location in that order of importance. Finally, recommendations are based on the findings.

Key words:

Foreign Direct Investment, Multinational enterprises, Monetary policy, fiscal policy, Czech Republic

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Foreign Direct Investment in the Czech Republic and the effects of fiscal and monetary policies.

1. Introduction

It is important for foreign investors who wants to invest in a country to consider a number of factors before deciding to invest or not to invest in another country. The are a number of factors that plays key role in this decision and one factor that is also important to consider is the Foreign Direct Investment (FDI) by other investors or rather the FDI inflow and outflow into and out of a country. Most of the times, the general assumption is that if a government of a certain country such as Czech Republic offers incentives to investors, the incentives attracts foreign investors and consequently FDI is attracted into the country and vice versa, though there are exceptions to this general school of thought. On the other hand, the central bank of a country through its monetary tools (especially interest rates) can affect FDI. Foreign Investors will always invest in an economy where the interest rates are lower (mostly if they use debt instruments from local banks to fund their operations). Economist have always recorded the inflows and outflows of investment in each countries and they use the data for various purposes. In this thesis, the FDI data of Czech Republic will be used to analyze trends and patterns and try and explain them.

1.1 Problem statement

To understand the patterns and trends in Foreign Direct Investments into and out of Czech Republic, a systematic trend analysis needs to be carried out. The problem statement for this thesis is:

To find out the pattern of FDI inflows in the Czech Republic and relate the trends/patterns to various relevant fiscal and monetary policies have affected the flows since 1993 to 2015.

The main aim of this thesis is to look into the trend of Foreign Direct Investment (FDI) inflows into Czech Republic since 1993 and main factors that influence the inward FDI; the trend before and after the 2007/8 financial crisis; the trend before and after Czech Republic joining the European Union. It also looks at the influence of Czech National bank's intervention through monetary and relevant fiscal policies on Foreign Direct investment. Then recommendations and suggestions will be put forward based on the factors analysis and a relationship equation of the linear regression analysis. The thesis comprises both the theoretical and the practical part using secondary data sources and previous studies on Czech Republic's FDI.

1.2 Methodology

Relevant theoretical background had to be studied for the in-depth analysis to be carried out in order to highlight the patterns and trends of foreign direct investment in Czech Republic.

The secondary data on Foreign Direct Investment inflows, outflows, restrictiveness and relevant fiscal and monetary policy instruments such as the interest rate was obtained from the Czech Statistical Office, Czech National Bank, Organization for Economic Co-operation and Development (OECD) and Eurostat. The data from the above named data sources was then analyzed thoroughly to come up with trends. Relevant Fiscal and monetary policies since 1993 was analyzed and a comparison was made with the patterns of foreign direct investment to see how the two have developed over the years. A regression equation was obtained, based on the historical data, that can be used to focus future FDI based on the interest rate.

A thorough trend and correlation analysis has been done of the trends of foreign direct investment and the relevant fiscal and monetary policies to come up with a parallel of the two. Based on these comparison various recommendations came up that can be used by the Czech policy makers if it would like to attract more foreign direct investment or limit the same.

This thesis is classified into four main parts. The first part is the theoretical part that involves description of terms and a brief overview of the concepts behind the terminologies. The second part comprises of detailed description of Foreign Direct Investment lifecycle, how foreign direct investment is measured and the various methodologies involved in measuring FDI; also the factors influencing FDI in Czech Republic. This is then followed by the analysis of the trends and patterns of Foreign Direct Investment and relevant fiscal and monetary policy changes (mainly the average annual interest rate and the tax rates) and successful examples of foreign direct investment in the Czech Republic. The last part constitute the recommendations based on findings and conclusions made from the trend and factors analysis.

2. Theoretical Background.

This chapter is dedicated to the definition of main terms and to present the empirical theoretical background of various concepts that will touched on while analyzing the various trends and patterns of foreign direct investment.

2.1 Foreign Direct Investment definition

The benchmark definition of foreign direct investment is: *Equity investment by a non-resident in an enterprise with an intention of establishing permanent interest in the enterprise that is in a different open economy (country) than the country of the investor*. (OECD, 2008, p. 17).

Foreign Direct Investment first benchmark definition was adopted in 1983 by the OECD and the definition included all the parameters of FDI. (OECD, 2008, p. 12) the definition of FDI has always been changed and defined differently to catch up with the changing dynamics of the parameters of FDI thanks to technology and globalization of capital and financial markets.

There is a difference between countries on what constitute the definition of FDI, some include financial assets such as stocks while others exclude short term financial assets for example stocks and shares in a company. (OECD, 2008, p. 12)

According to Macroeconomic principles, Foreign Direct investment (FDI) is always reflected on the financial accounts section of balance of payments report of a country. This means that we always study foreign direct investment through balance of payments. Foreign Direct Investments occurs in open economies. Where an "open economy" is defined as: economy that interact with other economies. (Mankiw, 2012, p. 376)

Parameters of FDI tells us more about investment activities which could be in form of equity and related loans and income from invested capital. (ČNB, 2014, p. 1)

2.2 Life cycle of Foreign Direct Investment.

Companies can enter a foreign market through two main ways.

1. Exporting
2. Foreign Direct investment.

In Exporting a company from one country sends its goods to another country where the goods are sold in that countries local market. This method is simple, low risk and but sometimes it could be expensive and further more the exporting company does not have control over foreign production and operations, also benefit from the opportunities for actual presence in a market and so most multinational companies decide on the second form that is the foreign direct investment. In this case, a company sets up base in a foreign country and invest its resources in production facilities and the foreign company has effective control. (Oded Shenkar, 2014, p. 60)

The life cycle of FDI can be explained by both the old method (theories) and new perspective. The old method is explained by four theories which are:

- Product life cycle theory
- Monopolistic advantage theory
- Internalization theory
- The eclectic paradigm

These four theories are explained briefly as follows:

2.2.1 Product life cycle theory

In the product life cycle theory, a manufacturer shifts from exporting to FDI. The manufacturer initially gains the monopolistic export advantage from product innovation developed for the home market. In the new product phase, the production continues to be concentrated in the home country even though production in foreign countries is cheaper. When production is standardized in its growth product phase, the domestic manufacturer will have an incentive to invest abroad and exploit lower manufacturing costs and prevent loss of export market to local manufacturers in the foreign country. The manufacturer first investment will be in an industrial country where export sales are large enough to support economies of scale in local production. In the mature product phase, cost competition among all producers, including imitating foreign firms, intensifies. At this phase the manufacturer may shift production from that foreign country where it initially invested FDI to another country with low production cost, sustaining

the old subsidiary with new products. This theory is more relevant to manufacturers than to multinational enterprises(MNE) that have FDI already in a foreign country. (Oded Shenkar, 2014, p. 68)

2.2.2 Monopolistic advantage theory

This theory states that multinational enterprises possess monopolistic advantage that enables it to maintain subsidiaries in foreign countries more profitably than local competing firms can. And monopolistic advantage here means that the firm has a monopoly power in the market. The monopolistic power is specific to the investing firm rather than the location of its production. It is also common that powerful Multinational Enterprises chooses markets and industries in which they have greater competitive advantage. Competitive advantage may also mean firm-specific or ownership-specific advantages. The theory states that monopolistic advantage comes from superior knowledge (including production technologies, managerial skills, industrial organization and knowledge of product) and economies of scale. Although the MNE may profit adversely from licensing the knowledge and selling it to foreign markets, most of this knowledge can not be directly sold. It's impossible to package knowledge and sell it because local producers may be unwilling to buy it due to uncertainty and therefore the MNE decide to produce directly through subsidiaries. Besides superior knowledge, the opportunity to achieve economies of scale is another factor. This is possible through horizontal and vertical FDI. (Oded Shenkar, 2014, p. 68)

2.2.3 Internalization theory

This theory states that available external markets fail to provide an efficient environment in which a firm profit by using its technology or production services. The firm then produces its own internal environment by investing in multiple countries and thus creating a needed market to achieve it's objectives. (Casson, 1976)

2.2.4 The Eclectic paradigm.

This paradigm offers a general explanation of international production. (Dunning, 1981). The paradigm has three variables: ownership-specific (O); Location-specific (L) and internalization (I) which are explained in the three earlier theories. The paradigm is referred to as the OLI framework because it offers explanation that lies between microeconomic theory of a firm (O and

I) and international trade (L). the explanation is that all these three factors are important in determining the extent and pattern of FDI. Overall the eclectic paradigm provides a comprehensive view explaining FDI than the product lifecycle, the monopolistic advantage and internalization theories. (Oded Shenkar, 2014, p. 71)

2.2.5 The New perspective on FDI lifecycle

These new perspectives include: the dynamic capability and the evolutionary. In Dynamic perspective the argument is that ownership-specific resources or knowledge-specific resources alone are not enough for success in a foreign market but the way these two are deployed and used in an efficient manner (Luo, 2000). However, being that FDI is not a one step activity but a dynamic process involving continuous resource commitment. For MNE to survive turbulent international environment, they need dynamic capabilities (this includes the ability for a firm to deploy, diffuse, utilize and rebuild firm-specific resources in order to attain a sustained competitive advantage) during international investment, production and operations. (Oded Shenkar, 2014, p. 72). On the other hand, the evolutionary perspective views international investment as an ongoing evolution process shaped by an MNE's organization capabilities, strategic objectives and environmental dynamics. The core of this model is the Uppsala model, where international expansion is viewed as a process involving a series of incremental decisions during which the firm develop in small steps. (Vahlne, 1977)

2.3 Investment

The term investment means different things to different people and in different context. From a macroeconomic point of view, investment is the process of putting in (spending on capital equipment, inventories and structures) resources with a long term perspective of the invested resources producing more resources. (Mishkin, Macroeconomics Policy and Practice, 2012)

Investment in macroeconomic theory is synonymous with savings. The general rule for this is in both closed and open economy investment is always equal to savings. Czech Republic is an open economy and thus investment is the same as savings.

The equation for Investment in a closed economy is demonstrated in equation 1:

Investment = Savings

I = S……...equation 1

Where I represent investment
And
S is Savings

The overall equation for investment in an open economy is:

$$I = Y - C - S - NX$$

This is from the macro economic identity

$$Y = S + C + I + NX$$

Where:
Y- is the Gross Domestic Product
S -is the national savings
C -is consumption
I- investment
NX- net export. (where negative NX is equivalent to net foreign saving)

Investments can be broadly categorized into capital investments and equity investment. Where capital investment is investment that is injected in to a company for the purpose of furthering the business activities of the company such as purchase of machinery and equipment. On the other hand, equity investment is the company issue shares and individual investors and firms are allowed to buy the shares in return for dividends or the company profits. Usually equity investment is meant to fund short term needs of a company.

Investment from abroad that is a capital investment and is owned by a foreign entity is called foreign direct investment. On the other hand an investment that is financed with foreign money but operated by domestic resident is called a foreign portfolio investment. (Mankiw, 2012, p. 247). The main aim of investing is to gain return on investment. In this thesis I use the term investment to mean both the foreign direct investment and the foreign portfolio investment.

Foreign direct investment has a very strong influence on the Gross National Product (GNP) and direct effect on the Gross Domestic Product (GDP) of a country (Mankiw, 2012, p. 247). Even to complicate matters worse is that, the return on investment by most multinational companies are channeled to tax Havens, this means that the investor's country of origin does not benefit from the return on investment. The tax evasion arbitrage that exist between tax havens and open economies has prompted a big debate and has let to the formulation of proposals on Base Erosion and Profit Shifting (BEPS) to try and curb this challenge especially by multinational companies which have their headquarters in these tax havens.

2.4 Open Economy

An open economy is an economy(country) that allows foreign investment (capital through trade) to flow into the country without much restrictions at the same time outflows of capital and investment from the economy(country) to other economies.

Specific characteristics of an open economy include:

- Export- this are goods and services produced in an economy and sold abroad
- Imports- this includes goods and services that are produced abroad and sold in the the local economy
- Trade balance- this is the difference between exports and imports
- Exchange rates

An open economy has a different economic model to a closed economy (which assumes that investment is equal to savings). In an open economy, Net Capital Outflow (NCO) is important. The general model for an open economy assumes with all other factors held constant, Savings of a country is equal to domestic Investment plus Net Capital Outflow

$$S = I + NCO$$

Where:

$$NCO = NX$$

$$NX = Exports - Imports$$

Various policies such as government deficits, trade policies, political stability and capital flight affects an open economy.

2.5 Balance of payment

The balance of payments is a statistical statement that systematically summarizes all economic transactions of the residents of a nation with the residents of all other nations during a particular time period.
Where economic transaction in our case is financial transactions that involves capital in-flows and out-flows. (Mishkin, Macroeconomics Policy and Practice, 2012)
Countries report balance of payments according to the international monetary fund rules and guidelines.

The balance of payments is divided into four main parts as follows:

- Current account
- Capital account
- Financial account
- Net Errors and Omissions

In macroeconomics, the fundamentals of balance of payments is:

- Current account + capital account = Financial account

a) The items of a current account include:

- Export of goods and services (Balance of trade in the old methodology)

This is the difference between exports and imports and it's the visible part of international trade.

Current account = Exports of a country – Imports of a country.

$$C.A = Ex - Im$$

Where:

C.A is current account
Ex. Is exports
Im is imports

- Import of goods and services (Balance of services in old methodology)

This part is always invisible part of international trade. It's the export and import of services between countries. Services may include insurance services, transport services and tourism amongst many others.

- Primary Income (Income balance in the old methodology)

  This is the transfer of income from ownership factors of production for example dividends, wages, reinvested profits.

- Secondary Income (Current transfers in the old methodology)

  This is a situation where a resident in a country provides a non-resident (someone from a different country) with an economic value that is a financial item, a real resource without receiving anything back in return. (Investopedia) A good example is contributions to foreign organizations.

b) Capital account.

This is an account that shows the net ownership of a country's asset. The capital account is influenced by public and private investors who invest in a country.

Finally, it is important to mention that this thesis concentrate on financial accounts section as foreign direct investment is found directly on the financial account section of the balance of payment.

c) Financial accounts

Financial accounts items include:

- Foreign Direct investment which is mainly ownership of equity investment that is 10 percent or more of capital by a foreigner in a company.
- Portfolio investment- this involves ownership of less than 10 percent of capital or bonds by a foreigner.
- Other investments that includes loans and deposits.

From an accounting perspective, balance of payment is usually balanced because for each credit, there is a debit and this ensures that the sum of the economic transaction is always zero.

2.6 Fiscal policies

Fiscal policies are government macroeconomic policies (rules and regulations) that which affects governments spending and taxes. (Paul R. Krugman, 2012)
Fiscal policies are usually implemented to achieve a short run or a long run effect in the economy. Changes in fiscal policies (such as changes in tax rate, government purchases and savings) affects investment and saving of a country. (Mishkin, Macroeconomics Policy and Practice, 2012, p. 79)

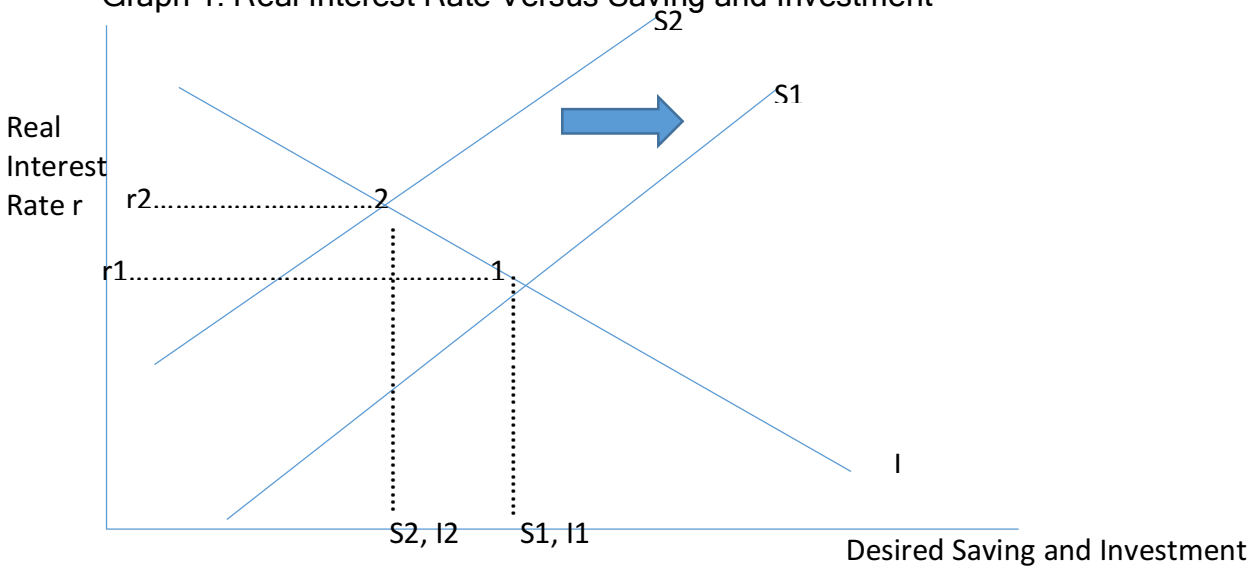
2.7 How Fiscal Policy affects FDI

Fiscal policy influence normal Investment. FDI can be considered as part of the normal investment and thus FDI is influenced by: changes in taxes; changes in government purchases and changes in government savings.

2.7.1 Changes in Taxes

If the government of a country raises income taxes, the household will have less income to spend. This means the household will consume less at any given real interest rate. The result is that saving, S=Y-C-G, will rise at any given real interest rate and the saving curve will shift from s1 to s2 as illustrated in the Graph 1.

Graph 1: Real Interest Rate Versus Saving and Investment



Graph 1 Source: (Mishkin, Macroeconomics Policy and Practice, 2012, p. 80)

The equilibrium will shift from point 1 to point 2 and we can conclude that a rise in tax has contributed to the rise in investment from S1, I1 to S2, I2. The equilibrium real interest rate will fall from r2 to r1 and the reverse of all this is true. This leads us to the conclusion that a rise in taxes will lead to a rise rise in saving and investment in an economy and the real interest rates will fall in the long run while a fall in taxes will cause saving and investment to fall and the real interest rate to rise. (Mishkin, Macroeconomics Policy and Practice, 2012, p. 80)

2.7.2 Changes in the government purchases

The fall of government spending will result into a rise in saving at any given interest rate because $S = Y - C - G$, so the saving curve will shift to the right as illustrated in figure 1 and saving and investment will rise to S2, I2 and the equilibrium real interest rate will fall to r1. This leads us to the conclusion that ***a fall in government spending causes saving and investment to rise and the real interest rate to fall in the long run and vice versa.*** (Mishkin, Macroeconomics Policy and Practice, 2012, p. 81)

The results of saving- investment analysis is called ***crowding-out*** because a rise in government spending causes private investments to fall as government spending increases.

2.7.3 Change in government Savings

Changes in government savings offers another way to observe the effects of fiscal policy. Government saving S_G = T- G, which is equivalent to budget surplus. A rise of budget surplus either from a raise in taxes or a decrease in government spending leads to a higher government saving and national saving. A high budget surplus shifts the saving curve in figure 1 to the right and leading to a rise in saving and investment and a fall in real interest rate and vice versa. This leads to the conclusion ***that increase in government budget deficit causes saving and investment to fall in the long run and real interest rates to rise.*** (Mishkin, Macroeconomics Policy and Practise, 2012, p. 81)

Due to the fact that government deficits can lead to crowding out of private investment and higher real interest rate, attempts to use fiscal policies to stimulate an economy are highly controversial. (Mishkin, Macroeconomics Policy and Practice, 2012, p. 81)

2.8 Monetary policies

Like fiscal policies, the central bank of a country has the power to enforce macroeconomic policies that affects money supply. Such kinds of policies are termed monetary policies. (Paul R. Krugman, 2012)

2.9 Major (relevant) monetary policies changes since 1993

The Czech National Bank intervenes through monetary policies in order to maintain stabile prices. Since 1993, the Czech National Bank (CNB) has the powers according to the Czech constitution to intervene in the Czech economy using monetary policies which are always in alignment with the government's fiscal policies.

The CNB achieves its targets by using monetary policy tools. These tools include:

2.9.1 Open market operations

To steer interest rates to increase or decrease, CNB like other central banks uses open market operations. This is mainly done through repo operations which are general agreements of trading on the financial markets. The CNB's open market operations can be classified as follows based on CNB's aim and target. Interest rates has an influence on normal investment and if we take FDI as part of the normal investment in a country, then it will consequently be affected by changes in interest rates.

a) Main monetary policy instrument
   In this case, the CNB takes the surplus liquidity from commercial banks and gives them eligible securities as collateral. This is done through repo tenders. Thee CNB and the banks agrees to reverse the transaction in the future, usually 14 days. Thus the 2- week repo rate

is always important for monetary policy. Due to the systematic liquidity of the Czech banks, 2W repo tenders are currently used extensively to absorb the liquidity. (CNB, 2016)

The CNB usually achieves this operation by conducting a variable tender rate. The variable tender rate is a situation where the declared repo rate is the maximum limit rate at which commercial banks bids can be satisfied in the tender. The bids are ranked from the one with the lowest interest rate having priority and successively higher rates are accepted until that point the total predicted liquidity surplus is exhausted. (CNB, 2016)

Repo rates are usually announced thrice a week by the CNB at about 9:30 A.M and commercial banks may submit their orders. Usually the minimum accepted volume is 300 million Czech Koruna. (CNB, 2016)

b) Supplementary monetary instrument

This is a three-month repo tender. The repo procedures are same as the two weeks' repo explained above. The difference in this case is that the CNB does not send intend to send signals to the market subsequently the 3-month repo used for this tender is not the CNB's rate, rather the money market rate. This instrument is not commonly used at present. The last time it was used was January 2001. (CNB, 2016)

c) Fine-tuning instruments.

This instrument is barely used. They are foreign exchange and security operations that are ad hoc to smooth the effects on interest rates caused by unexpected liquidity movements in the market. (CNB, 2016)

2.9.2 Automatic facilities

This instrument is used to provide depositing liquidity overnight. From a commercial banks perspective, this instrument provides a standing facility for borrowing and lending money. The interest rate applied to the commercial banks forms the channel for short term money market rates. There are two types of automatic facilities:

- Marginal lending facility- this is where banks with general repo agreements with CNB may obtain overnight liquidity from the CNB in the form of repos.
- Deposit facility- in this case, a standing facility without collateral with commercial banks may be used to make overnight surplus liquidity with CNB. (CNB, 2016)

2.9.3 Extraordinary facilities

This tool is rarely used, only during the financial crisis.

2.9.4 Minimum reserves

This instrument is used by most central banks. In the Czech Republic not so much because of liquidity surplus but it is used for interbank payment system.

2.9.5 Financial Exchange interventions

This mainly involves the purchase or sale of the Czech Koruna in the foreign exchange market to curb volatility in the foreign exchange market.

2.9.6 Current setting of main monetary policy instruments

Interest rates	Interest rate	Valid since
two-week repo operations - 2W repo rate	0.05%	2 November 2012
deposit facility - discount rate	0.05%	2 November 2012
marginal lending facility - Lombard rate	0.25%	2 November 2012
Reserve requirements	**Rate on primary deposits**	**Valid since**
banks	2.00%	7 October 1999
building societies and ČMZRB	2.00%	7 October 1999

Table 2.9.6-1: Current settings of main monetary policy instruments (CNB, 2016)

2.9.7 Equity

This is the real value of someone's stake in an investment investment. In accounting terms, it is simply all assets minus all liabilities.

$$E = A - L$$

Where:
E represents Equity
A represents Assets
L represents Liabilities

For investors, its important to know the value of the equity in a company and one goal of every investment is to increase the value of its equity.

a) Foreign Direct Investment Restrictiveness

Foreign Direct investment restrictiveness is an index by the Organization for Economic Co-operation and Development (OECD) that measures the restrictiveness a country has over FDI. One important parameter is the equity restrictiveness. (OECD, 2016). This is a situation where a country has policies that restricts for example the maximum amount of equity that can be owned by a non-resident. Be it a legal entity like most multinational corporations or individual investors. There are three other parameters (operational restriction; restriction on foreign personnel and discriminatory screening or approval procedures) which are also considered in the measurement but the most important is equity restrictiveness. The FDI restrictiveness index can be done for each specific industry or for general investment. Countries use the restrictive measures to protect their home manufacturers and industries from the fierce competition from international corporations. (OECD, 2016)

3. Introduction to Foreign Direct Investment in Czech Republic

This chapter goes deep down into the lifecycle of FDI and its impact on Balance of Payments in the Czech Republic; how Foreign Direct investment is measured and the various conventions such as BPM6 methodology standards; FDI and balance of payments; how foreign direct investment is measured in Czech Republic; fiscal and monetary policies in Czech Republic and finally, the factors that influence foreign direct investment in the Czech Republic.

3.2 FDI and Balance of Payments.

In Czech Republic, FDI is defined according to the international the BPM6 methodology standards (OECD, 2008) and requirements as defined by OECD. (ČNB, 2014, p. 1) The exact method is elaborated later on this chapter.

FDI trends (inflows and outflows) are usually studied through balance of payments of a country.

The balance of payment is a statistical summary of all the economic transactions between residents and non-residents within a specified period of time (which is usually one year) in the Czech Republic. FDI falls in the financial accounts section of the balance of payments.

3.2.1 Balance of payments in Czech Republic

The general structure of the balance of payments in Czech Republic is as displayed in table 3.3-1 below:

Indicator name	
1	CURRENT ACCOUNT
2	- exports of goods and services

3	- imports of goods and services
4	- primary income (balance)
5	- secondary income (balance)
6	CAPITAL ACCOUNT
7	FINANCIAL ACCOUNT
8	- direct investment
9	- portfolio investment
10	- financial derivatives (other than reserves) and employee stock options
11	- other investment
12	- reserve assets
13	NET ERRORS AND OMISSIONS

Table 3.3-1: Balance of payment format in the Czech Republic (CNB, 2016)

3.2.2 Czech Republic Principles of balance of payments

1. Double entry book keeping. This mean each transaction is debited and an equal credit is made simultaneously.
2. Records of only transactions between residents and non-residents and this is done through the economic interest of the participants of the transaction.
3. The transactions are recorded on accrual basis and this means at the time the economic value is realized.
4. Valuations are done at the market price but sometimes accounting values maybe used in the absence of market price.
5. Recording of transactions both connected to transfer and non-transfer of funds.
6. Changes which do not represent transactions such as the change in the exchange rate, are usually not recorded in balance of payments.
7. Movement principle is used in recording transactions in the case of current account and capital account. This means transactions are recorded as exports and imports or as expenses and income.
8. On the financial accounts section of the balance of payments, all transactions are recorded as assets or liabilities without factoring in the effect of foreign exchange on the prices of for example stocks.

Furthermore, they are recorded as net acquisitions of assets and net incurrence of liabilities.

9. Transactions on the balance of payments which are realized on foreign currencies are converted to Czech Koruna at the exchange rate which is effective at the time the transaction takes place or the average rate of the reporting period.
   (CNB, 2016)

The data for balance of payments from 1993 to 2007 have been prepared using BPM5 while the data since 2008 to present is prepared in accordance to IMF BPM6 manual. The new methodology (which has been in effect since 2013) is used to make up for the shortcomings of the preceding manual and cater for the new financial instruments as will be explained in details on the BPM6 methodology section of this thesis.

3.3 Foreign Direct Investment

According to the Czech National Bank, foreign direct investment shows the objective of obtaining a lasting interest by a resident entity of one economy also called the "direct investor" in another entity resident economy thus known as "direct investment enterprise" (CNB, 2016)

According to Czech National bank, a lasting interest means a long-term relationship between the direct investor and the enterprise in which the direct investor invests in. it also implies a significant amount of influence by the direct investor on the enterprise, especially on the management of the enterprise. (CNB, 2016)

FDI indicators shows, the amount of international investment activities, in form of equity participation and related loans and on income arising from such invested capital.

Foreign direct investment shows the initial capital and the subsequent amount of capital exchanged between the direct investor and the direct investment enterprise and affiliate enterprises. (CNB, 2016)

The Czech National bank stipulates that a direct investment enterprise can be directly owned or indirectly owned affiliate. The division comes about by

the percentage ownership of shares which also equals the voting power. A "subsidiary" is a direct investment enterprise in which a direct investor owns more than 50% of the company's shares (voting rights) whereas if the direct investor owns between 10% and 50% then the direct investment enterprise is categorized as an "associate". Finally, a "branch" is a direct investment enterprise that is fully owned permanent establishment by a direct investor and this may include: land and structures and mobile equipment that operates in an economy for a minimum of one year such as machinery. (CNB, 2016)

Reinvested capital (earning) and other capital are also included in the FDI according to the Czech National Bank. This makes the foreign direct investment to be composed of three components as expressed below:

Direct investment = equity capital + reinvested earning + other capital

Where:

- Equity capital is made up of non-resident investment in the equity of a company

- Reinvested earnings are made up of the direct investor's share in comparison to direct equity participation of earnings not distributed as dividends.
- Other capital consists of borrowed and lent of funds (including debt securities and trade credits) between direct investors and their affiliated enterprises also fellow companies in the same enterprise group. These transactions are noted in intercompany claims and liabilities. (CNB, 2016)

Valuations always arises when it comes to foreign direct investment. Market valuation is always done to measure the flow(stock) of FDI. When recording the FDI stock, the sum of "own funds" at book value and "other capital" is used.

According to the international methodology, FDI main presentation is done on the territory of the immediate investor and presented by the ultimate owner for analysis purposes. The ultimate owner and the immediate owner

differs in the sense that the ultimate owner can not be a subsidiary or an affiliate of another entity but can be a legal entity or a natural person. (CNB, 2016)

The Direct investment section of the balance of payment is subdivided as follows according to the Czech National Bank:

Ind. Number	Indicator name
1	3.1-FA-Direct investment (FD)-NET
2	3.1-FA-Direct investment (FD)-A
3	3.1-FA-Direct investment (FD)-L
4	3.1.1.1-FA-DI-Equity and investment fund shares (F5D)-Equity other than reinvestment of earnings-NET
5	3.1.1.1-FA-DI-Equity and investment fund shares (F5D)-Equity other than reinvestment of earnings-A
6	3.1.1.1-FA-DI-Equity and investment fund shares (F5D)-Equity other than reinvestment of earnings-L
7	3.1.1.2-FA-DI-Equity and investment fund shares (F5D)-Reinvestment of earnings-NET
8	3.1.1.2-FA-DI-Equity and investment fund shares (F5D)-Reinvestment of earnings-A
9	3.1.1.2-FA-DI-Equity and investment fund shares (F5D)-Reinvestment of earnings-L
10	3.1.2-FA-DI-Debt instruments-NET
11	3.1.2-FA-DI-Debt instruments-A
12	3.1.2-FA-DI-Debt instruments-L
13	3.1.2.1-FA-DI-Debt instruments-Direct investor in direct investment enterprises-NET
14	3.1.2.1-FA-DI-Debt instruments-Direct investor in direct investment enterprises-A
15	3.1.2.1-FA-DI-Debt instruments-Direct investor in direct investment enterprises-L
16	3.1.2.2-FA-DI-Debt instruments-Direct investment enterprises in direct investor (reverse investment)-NET
17	3.1.2.2-FA-DI-Debt instruments-Direct investment enterprises in direct investor (reverse investment)-A

18	3.1.2.2-FA-DI-Debt instruments-Direct investment enterprises in direct investor (reverse investment)-L
19	3.1.2.3-FA-DI-Debt instruments-Between fellow enterprises-NET
20	3.1.2.3-FA-DI-Debt instruments-Between fellow enterprises-A
21	3.1.2.3-FA-DI-Debt instruments-Between fellow enterprises-L

Table 3.3-2: Direct investment sub-section on the Balance of Payments (CNB, 2016)

It is important to mention that in the above table the direct investment asset represents the outflow of investments from Czech Republic and the liabilities represents the foreign direct investment.

3.4 BPM6 Methodology

The Acronym stands for the sixth edition of *Balance of Payments and international investment position manual* which was released by the International Monetary Fund (IMF) in 2009 this follows BPM5 which was released by the same organization in 1993. Since 1948, IMF has been releasing standardized framework manuals on how to measure FDI. (ECB) It is important to mention that most countries follow the standardized manual though with modifications as is the case of Czech Republic.

The main purpose for BPM6, on which the Czech balance of payment system is based, are:

- It provides the definition of FDI, explanations of FDI, classifications of FDI and international investment position statistics.
- Provision of international comparability of data and international accepted guidelines.
- Act as a link between balance of payments and international investment position statistics and other macroeconomic statistics. This promotes consistency in data.
- It introduces the uses of data on balance of payments, changes in balance sheet (financial assets and liabilities) and investment position as international accounts of a country (economy).

(IMF, 2013, p. 1)

The main reasons for the revision of the standardized framework BPM5 to BPM6 were:

- financial innovation that came with complex financial instruments.
- Globalization that mean that the financial environment had changed significantly since 1993 when BPM5 manual was published.
- Focus on specific issues on the balance sheet such as the international investment position statistics.
- Changes in statistical methods

Among other factors. (IMF, 2013)

The main principles of balance of payments remained the same as in the proceeding frameworks but on this sixth edition there is more elaboration on the gray areas that existed in the previous framework methodology standards.

3.4.1 Main changes introduced in the BPM6 methodology.

- The definition of residence is now changed to the "Centre of predominant economic interest"
- Financial accounts do not use the term "capital" to ensure consistency with capital accounts
- Sector grouping was changed to be consistent with the system of national accounts (SNA)
- The financial accounts section has the heading "Net acquisition of financial asset" which implies acquisition of assets minus reduction in assets and "Net Incurrence Liabilities" in the place of "debits" and "credits". At the same time negative signs are not used to indicate an increase in assets and positive signs to show a decrease in asset as was before.
- Finer classification of the financial assets and liabilities is harmonized with the system of national accounts when it comes to details and terminologies.
- Clarification of direct investment according to the OECD benchmark definition of foreign direct investment, redefining its terms of control and influence, treatments of chains of investments and related enterprises and presentations on gross asset and liability basis as well as according to the directional principle.

- Goods for processing are now grouped as manufacturing services on physical input owned by others.
- Merchanting of goods is grouped as goods
- Goods procured in ports are grouped as general merchandize
- Financial intermediation services indirectly measured (FISIM) and other implicit financial services have been transferred to services and they are calculated according to the reference rate.
- Primary and secondary income have been introduced to replace incomes and current transfer according to the Systems of National Accounts.
- Taxes and subsidies on products and productions are grouped as primary income and secondary income.
- A new method for measuring international remittances has been introduced.
- Financial assets, personal effects and liabilities of persons changing residence are not factored in on the capital transfer.

3.5 Factors influencing FDI in Czech Republic

The macroeconomic factors that makes Czech Republic attractive to investors includes the following:

- Strategic geographic location and good infrastructure
- Government incentives
- Stable political system and good standards of living
- Highly qualified labour
- Availability of financing and financial stability
- European union membership
- Availability of quality local suppliers
- Compact and high quality infrastructure
- Favorable labour costs and price stability

3.5.1 Strategic geographic location and good infrastructure

Located at the Centre of Europe, Czech Republic benefits from its proximity to Germany, which is the biggest economy in Europe, and also other EU member states. This makes it suitable for foreign investors who can then

easily trade within the EU and move freely and fast within Europe, thanks to the strategic position of the Czech Republic.
The availability of good infrastructure that includes rail transport, road transport and air transport amongst other infrastructure such as electricity makes Czech Republic a prime location for investors.

3.5.2 Government incentives

The Czech government has legislations that attracts foreign investors to invest in the Czech economy. The incentives include:

- Tax incentives which for a new company (legal entity) receives upto ten years of corporate income tax relief. If the investment comprises of an expansion project in an already existing Czech company, then partial tax relief applies. (CzechInvest, 2015).

- Job creation and training and retraining grant. This grant is provided for companies that have 25% higher unemployment than the national average and specific zones. This means if an investment is made in one of these areas then the investors receives a grant. (CzechInvest, 2015)

- Cash grant for capital investment. The grant is available for strategic investment projects and its determined by the government. It may be upto 10% of the capital (investment cost). Mainly its available for projects in manufacturing and technology centers. (CzechInvest, 2015)

- Property tax incentive. Investors can also benefit from tax exception for upto 5 years in special industrial zones designed by the government. (CzechInvest, 2015)

- Site support. The state can supplement the difference between purchase price and the market price of a given piece of land in case of transfer of land for favorable prices. (CzechInvest, 2015)

Czech Republic also has a very high credit rating as below:

Rating S&P Czech Republic

Long Term Rating				Short Term Rating			
Foreign Currency		Local Currency		Foreign Currency		Local Currency	
Date	Rating (Outlook)	Date	Rating	Date	Rating	Date	Rating
2011-08-24	AA- (Stable)	2011-08-24	AA	2011-08-24	A-1+	2011-08-24	A-1+

Table 3.5.2-3: Standard and Poor's Rating, March 2016 (countryeconomy.com, 2013)

3.5.3 Stable political system, social stability and good standards of living

The political system in the Czech Republic is very stable as democracy reigns supreme and even though there have been several changes in the political environment in the past few years, the country is very stable due to strong institutions such as the Czech parliament and the judiciary system.

Quality of living is also very important as most investors prefer to invest in countries with good standard of living. Prague, the capital of Czech Republic, is ranked 69th overall in 2016 and number 1 amongst central and eastern Europe countries. (MERCER, 2016)

3.5.4 Highly qualified labour

Czech Republic has a highly qualified and skilled labour which match the international standards and for investors this means more investment options as the cost of repatriating experts is cut. According to the world competitiveness report 2014-2015, education in Czech Republic is ranked highly 29th worldwide. (World Economic Forum, 2015-2016)

3.5.5 Availability of financing and financial stability

With a stable external and internal macroeconomic balance, the Czech Republic is highly rated as compared to other countries in the region and generally in Europe. Czech Republic is one of the few countries with low public debt and deficit. It also boasts good and stable banking system that was not much affected by the toxic assets of the 2007/8 financial crisis. (KPMG, 2014)

4. Trend and factors analysis of FDI in Czech Republic and the relevant fiscal and monetary policies.

This chapter starts by highlighting the lifecycle of FDI in the Czech Republic then it analyses the previous trends of FDI (that includes FDI stock, flows and restrictiveness) since 1993 to 2015. It also analyses relevant fiscal and monetary policy changes that have happened since 1993 and try and find out if there is a correlation between the FDI trends and the fiscal and monetary policy changes. Finally, the successful examples FDI in Czech Republic and factors analysis on what was the major factor that swayed this firms to invest in Czech Republic.

4.2 Life cycle of FDI and its Impact on Balance of Payment in the Czech Republic

In the late 1990's, the Czech Republic introduced policies to boost the inflow of foreign direct investment because in the early 1990's the FDI inflow was not so much. According to the Czech national bank, there are three phases of the lifecycle of FDI in the Czech Republic to this date. These three main phases involve the amount and structure of capital inflows and the distribution of earnings into dividends and reinvestments. (CNB, 2016)

The first phase covered the years from 1998-2002. In this period there was great inflow of capital from abroad as shown in figure 1. Most of the earnings gained from the FDI capital were reinvested. Most of this capital inflows were from the sale of state owned property to private investors from abroad. The average annual FDI inflow reached a high of 8.8% of GDP. (CNB, 2016)

The second phase started in 2003 and ended in 2007. This is the period that Czech Republic joined the European Union. in this period the investment structure changed gradually. Specifically, the amount of earnings generated and reinvested in the Czech Republic increased. The bad thing is that the Czech Republic's attractiveness to foreign investors started to decline during this phase. At this point in time also, the state property for sale was no longer playing a leading role on FDI. However, FDI inflows continued to come in at an average rate of 5% of GDP per annum. At the beginning of this period, the ratio of dividends to reinvestment was one to one but at the

end of this period the dividends had started to exceed reinvestment as depicted in figure 2. (CNB, 2016)

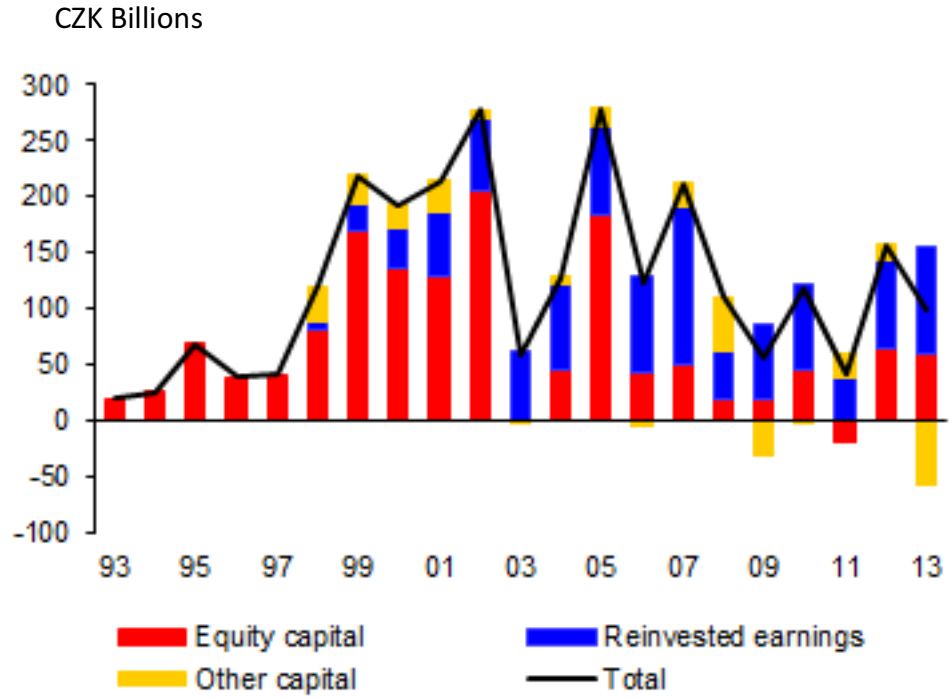


Figure 4.1: The FDI inflow structure has gradually changed in favor of reinvested earnings Source: (CNB, 2016)

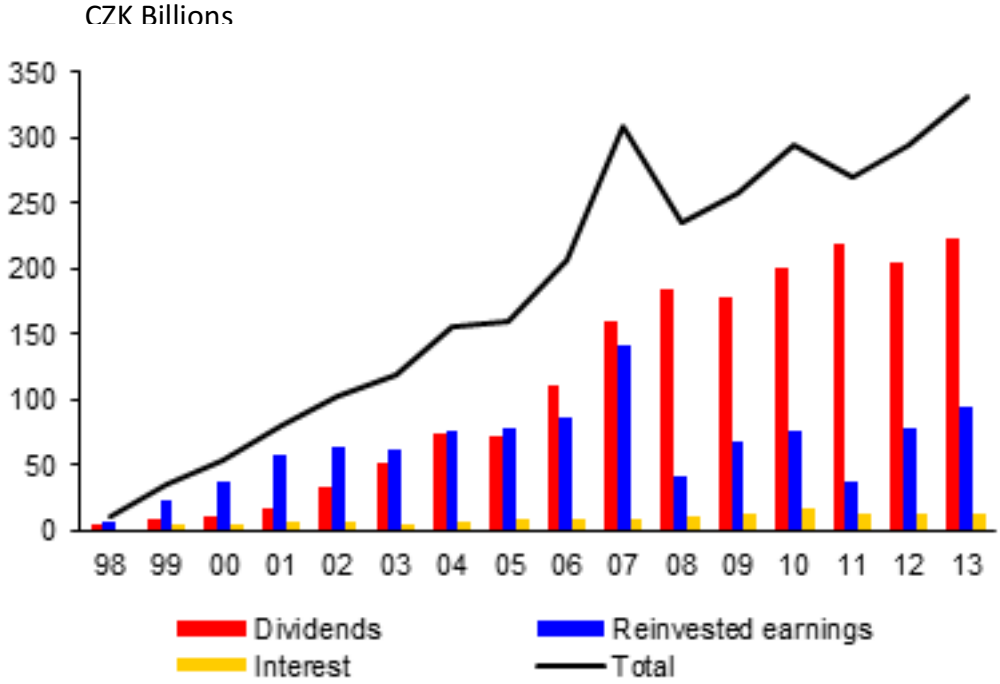


Figure 4.2: The ratio of dividends to reinvested earnings went up considerably during the economic crisis. Source : (CNB, 2016)

The third phase covers the period from 2008 to 2013. During this period the effects of the financial crisis resulted to a change in the external conditions and the annual average FDI to GDP fell to 2.5%. foreign companies were experiencing economic and financial strain and they were forced to use retained earnings and newly generated earnings to fund their operations abroad. Privatization almost stopped and some foreign companies sold off their assets either due to closure of operations; cutting of costs or for other reasons. The value of FDI earning generated fell drastically which was reflected in the reinvested earnings as firms struggled to maintain or increase their dividend payment as shown in figure 2. In general the FDI inflow to the Czech Republic decreased due to the significant decrease in investment in equity. (CNB, 2016)

4.3 Czech Republic Foreign Direct Investment Stock

FDI stock measures the total amount of investment at a given time. The inward stock corresponds to the amount invested (equity and net loans) in Czech Republic by non-residents while the outward stock is the amount the Czech Residents invests (equity and net loans) in foreign enterprises. FDI Stock is usually measured as a percentage of Gross Domestic Product. (GDP) (OECD, 2016).

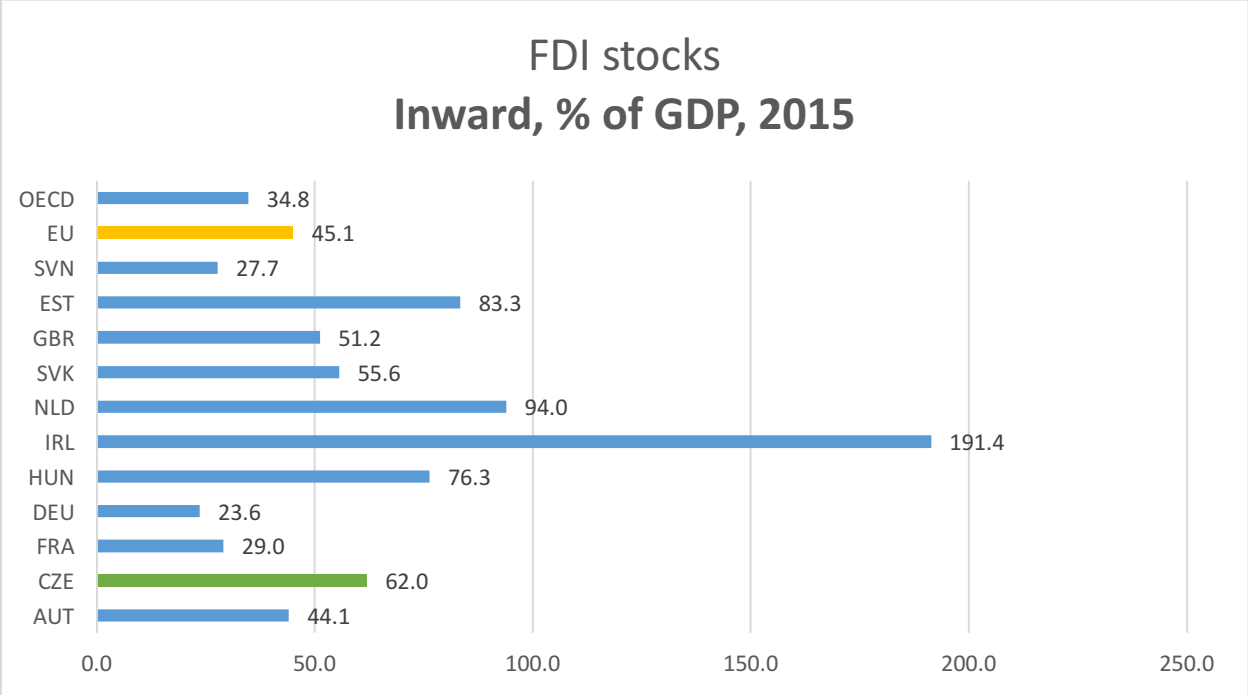


Figure 4.3: Inward stock as a % of GDP-2013 (OECD, 2016)

The figure 4.3 above show the FDI Inward stocks of the Czech Republic in 2015 as compared to other European countries. In 2015 it stands at 62% of GDP.
The inward stock of FDI above shows that in 2015, the amount invested in Czech Republic as compared to its GDP was the 5th highest as compared to all the 28 European countries, with Ireland being the highest but the data excludes Luxembourg.

Inward and Outward Foreign Direct Investment has grown in the Czech Republic since 1993 when, the former Czechoslovakia seceded into Czech Republic and Slovak Republic. Even though in some years there has been a reduction in the growth, overall the trend has been increasing since 1993. Figure 4.4 below shows the growth of Net FDI stock since 1993.

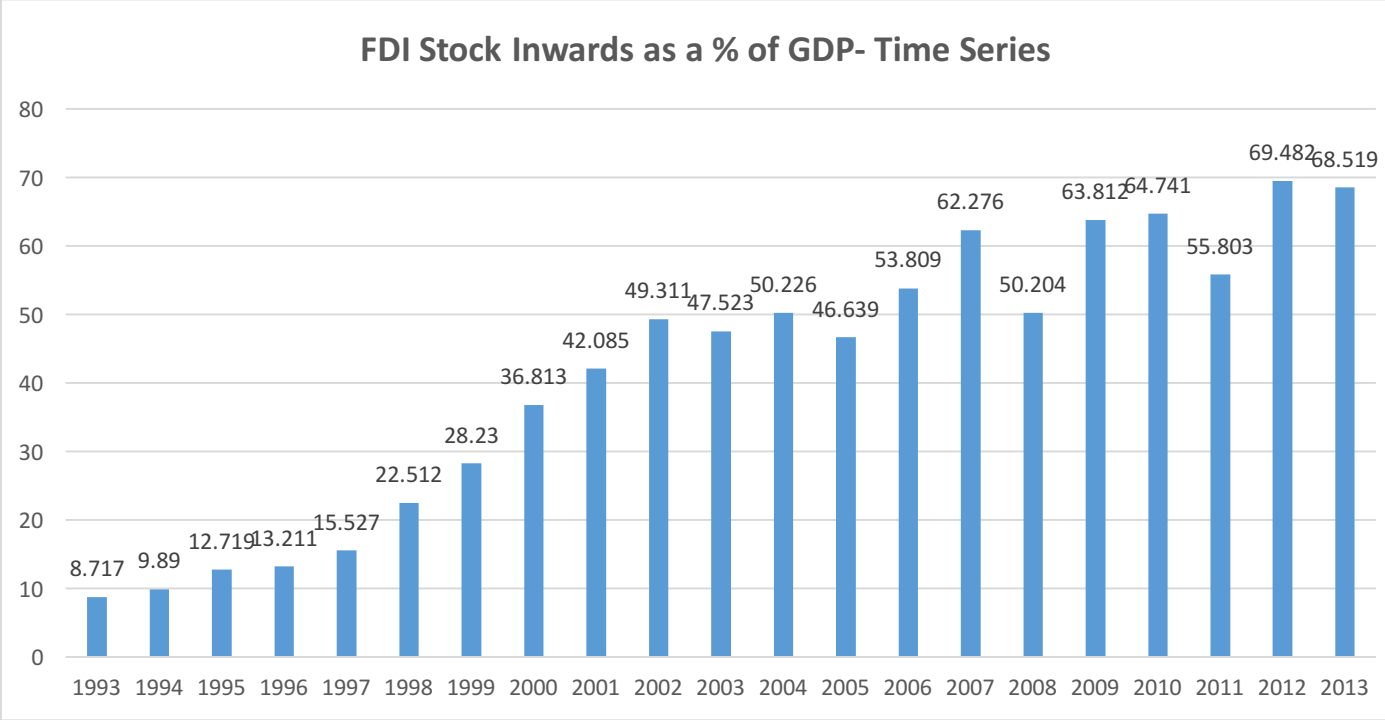


Figure 4.4: Czech Republic FDI stock inwards time series. (OECD, 2016)

It is worth noting that the inward FDI as a percentage of GDP is much higher than the outward FDI as a percentage of GDP and that means that overall the net FDI is positive meaning that more foreign investors are investing in the Czech Republic than the Czech residents are investing in other countries. This will later lead us to the international investment position of the Czech Republic in figure 4.5 of this thesis.

4.4 Foreign Direct Investment Flows in the Czech Republic

Foreign Direct Investment flows records the value in Czech crowns or in dollars of the transactions across borders within a specific period of time that can be measured quarterly or annually. The flows are made up of equity transactions; earning reinvestments and debt transactions between companies. Outward flows are those investments by residents of a Czech Republic to other countries and inwards flows on the other hand represent the investment into Czech Republic by non- residents. The inward flows can be grouped according to countries of origin of the investment or regions. (OECD, 2016)

As of the end of 2015, most of the foreign direct investment comes from the following countries and regions as shown on table 4.1.

Geographic and economic zones	Registered capital	Reinvestment of earnings	Other capital	Sum
REST OF THE WORLD	**1,332,907.2**	**1,189,925.7**	**251,767.9**	**2,774,600.8**
OECD countries (fixed composition)	**1,221,837.1**	**1,171,236.8**	**214,328.3**	**2,607,402.2**
EUROPE	**1,230,205.4**	**1,116,373.7**	**217,494.5**	**2,564,073.6**
EU28 (fixed composition)	**1,161,441.0**	**1,052,604.0**	**198,750.8**	**2,412,795.9**
Euro area 18 (fixed composition) (2014)	**1,064,180.5**	**1,009,473.8**	**174,842.3**	**2,248,496.5**
Netherlands	358,614.3	192,340.4	115,255.3	666,210.0
Austria	136,654.4	199,505.4	30,655.5	366,815.4
Germany	182,800.3	198,453.7	-31,932.2	349,321.8
Luxembourg	109,972.9	163,873.8	62,227.0	336,073.7
France	78,896.2	93,792.6	-4,077.5	168,611.3

EFTA (European Free Trade Association)	**50,010.8**	**63,784.9**	**20,193.6**	**133,989.3**
Switzerland	45,065.5	64,922.3	19,686.7	129,674.5
AMERICA	**42,152.9**	**51,149.0**	**19,145.4**	**112,447.3**
Cyprus	56,625.5	30,787.9	22,334.9	109,748.3
NAFTA (North American Free Trade Association)	**31,639.5**	**57,703.0**	**16,785.5**	**106,128.0**
Slovakia	53,254.4	38,525.3	12,913.8	104,693.5
United States	26,639.8	57,153.8	16,397.8	100,191.3

Table 4.1: FDI POSITIONS IN THE CZECH REPUBLIC as of 31.12.2015 - directional principle (CNB, 2016)

Table 4.2 below also shows the industries in 2014 into which the FDI into the Czech Republic goes went to.

Czech Republic: Foreign Direct Investment Inward Flows by Industry divided into Assets and Liabilities, 2014			
	assets	**liabilities**	**net**
Nonmanufacturing			
Agriculture, hunting, and forestry		151	151
Mining and quarrying	2,069	-3,596	-5,665
Electricity, gas, and water supply	-31,010	-49,710	-18,699
Construction	-3,956	-816	3,140
Trade, hotels and restaurants	2,964	3,893	929
Transport, storage and communications	223	-4,471	-4,694
Financial intermediation	-591	36,806	37,398
Real estate and business activities	-30,876	32,969	63,845
Education		10	10
Health and social work		136	136
Other social and personal services	0	198	198
Others		-316	-316

Total	**-61,177**	**15,256**	**76,433**
Manufacturing			
Food and tobacco	2,093	-1,762	-3,855
Textiles, wearing apparel, and leather	499	1,200	701
Wood, paper and publishing	38	3,445	3,407
Refined petroleum and chemicals	6,419	12,668	6,249
Basic metals and metal products	-3,959	6,883	10,842
Machinery and equipment	6,512	34,314	27,802
Recycling and other manufacturing	12,984	14,049	1,065
Total	**24,585**	**70,798**	**46,213**

Table 4.2: FDI inflow into Czech Republic by industry Source: (CNB, 2016)

4.5 Foreign Direct Investment Restrictiveness

FDI restrictiveness is an OECD index that measuring the restrictiveness a country like Czech Republic has against foreign investment.
It majorly focuses on four parameters: foreign equity restriction; operational restriction; restriction on foreign personnel and discriminatory screening or approval procedures(mechanisms). (OECD, 2016) the scale of the index runs from zero to one, where zero is completely unrestricted and one is completely restricted.

Year	Restrictiveness
1997	0.046
2003	0.023
2006	0.023
2010	0.012
2011	0.01
2012	0.01
2013	0.01
2014	0.01

Table4.3: FDI Restrictiveness Source: (OECD, 2016)

From the above table it is very evident from the numbers that there is very minimum restriction to foreign direct investment in the Czech Republic and this is an advantage for both the country and the investors.

4.6 International Investment Position

International investment position is an important statistical statement that shows the value of financial assets of Czech Residents that are claims of non-residents at a specific point in time. (CNB, 2016). Net International Investment Position is composed of three main investments. The Direct investment(FDI), the portfolio investment and other investments.
In the case of Czech Republic, the net international Investment Position (IIP) is negative meaning that there are more liabilities as compared to assets. There is more foreign investment as compared to what the Czech Residents invest abroad, assuming that FDI forms a bigger part of this investment.

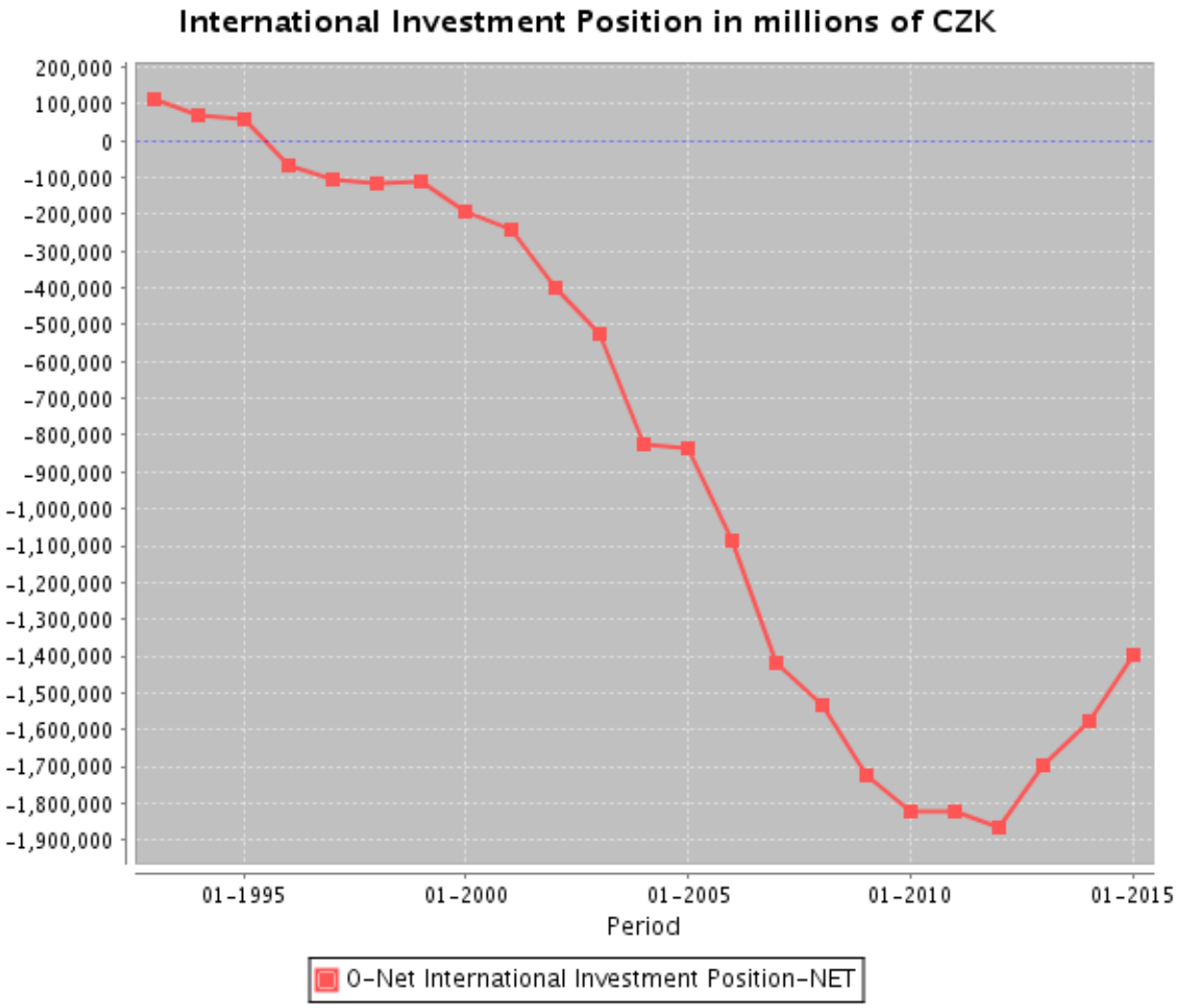


Figure 4.5: Net Investment position time series 1993-2015 (CNB, 2016)

This has been the case for a long time from the time series data on the table 4.5 above.

The trend was that in between 1993 to about 1995, the Czech Republic's Net International Investment position was positive due the fact that it just came from the communism regime and most foreign investors were still not interested in investing because of political reasons.

It is interesting to see how this changed with time as the Czech Republic grew following the communism regime and more and more foreign investors invested. Importantly is also the trend after the Czech Republic joined the European Union in 2004. As we can see from the graph on figure 5 the increments in FDI and the most interesting factor to notice on this trend is that the financial crisis of 2007/8 did not deter the increasing growth of the foreign investment until 2012 when the trend slowed down.

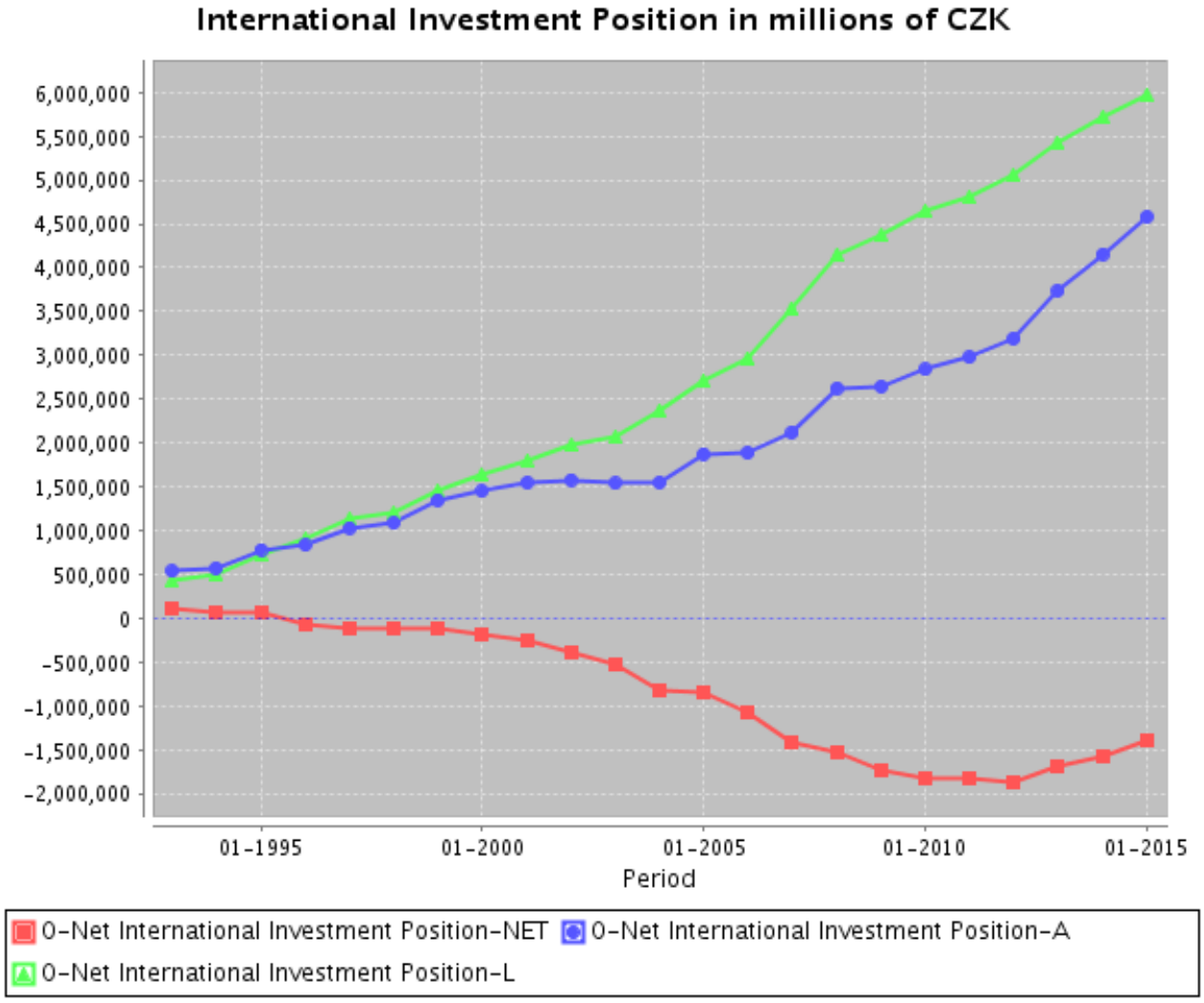


Figure 4.6: Direct Investment Inflows and outflows into Czech Republic. source CNB (CNB, 2016)

This is also partly due to the fact that the investment outflows from Czech residents to other foreign countries are increasing and figure 4.6 above attests to this trend
The graph in figure 4.6 above shows the investment inflows (green line) the net Investment Liability represented by -L, investment outflows (blue line) the Net Investment Assets represented by -A and the Net International Position represented by -NET (red line) of direct investment into and out of Czech Republic from 1993 to 2015.

It is clear that the trend has been upwards for both inflows and outflows of investment. The inflow is more than the outflow though. This means that a lot of foreign investors are investing in the Czech Republic.

Another way of representing the net international investment position is as shown on figure 8. This is basically the result of subtracting the Net investment liabilities from Net invested assets and the difference is as on graph on figure 4.7.

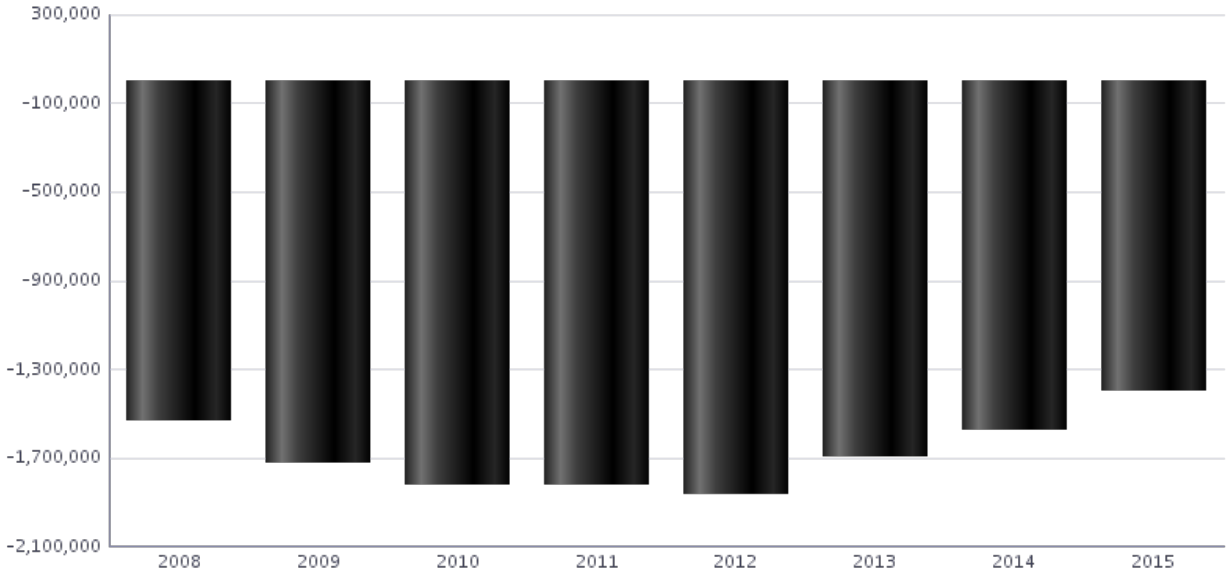


Figure4.7: Net Investment Position of Czech Republic (CNB, 2016)

4.7 Main instruments of monetary policy- history of settings (development of CNB rates)

Monetary policy tools tools such as discount rates have an effect on FDI as we described in the theoretical part of this thesis. The monetary policy tools are not the main factor that affects the FDI even though a correlation analysis and regression analysis was done just to find out the correlation and the relationship of this monetary policy relationship to FDI.

Figure 4.8 above was obtained by averaging the data of the discount rates of each year since 1990 to 2012. It is evident that the discount rates have declined since the 1990's. it is also interesting to note that the discount rates rose highly during the Asia financial crisis in 1997/1998. During the global financial crisis 2007/2008, the discount rate also rose but just slightly.

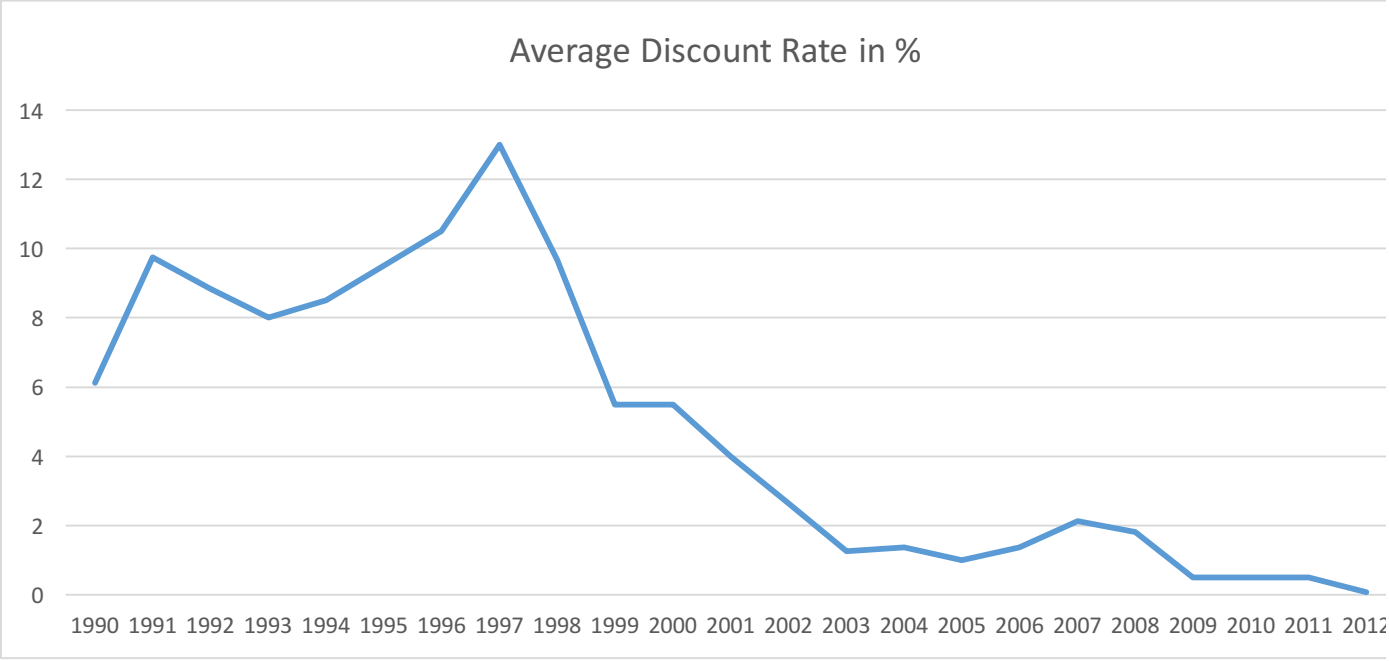


Figure 4.8: Discount rates 1990- 2016 Source: (CNB, 2016)

The data from the graph 4.8 above was compared through correlation analysis using Microsoft Excel with with the FDI inward flow to find out the nature of the correlation of the two trends. The results are as illustrated in section 4.7 below.

4.8 Correlation analysis between FDI Inward Flows and Monetary policy instruments

A correlation analysis was carried out to try and map out trends of monetary policy (discount rate) and FDI inward flows flows. The time period covered was twenty-year period from 1993 to 2012.

Table 4.3 below shows the correlation factor between the Discount rates (which is a monetary policy tool and FDI Inward flow to the Czech Republic).

The analysis shows a strong negative (-0.811975809) correlation between the two. This means that with a higher discount rates the FDI inflow is lower and with a lower discount rate the FDI inward inflow into the Czech Republic is higher. This is in line with theoretical assumptions.

	Discount Rates	*FDI Inwards*
Discount Rates	1	
FDI Inwards	-0.811975809	1

Table 4.4a: Correlation analysis between Discount rates and FDI Inwards flow

Since the monetary policy instruments, all move in the same way (they have a high positive correlation between them), the correlation factors with respect to FDI Inwards of Lombard rates (-0.633592062) and 2-weeks repo rates (-0.764351274) had both negative correlations with the strengths as shown in the table 3.5 below.

	FDI Inwards	*Discount Rates*	*Lombard rates*	*2-weeks Repo*
FDI Inwards	1			
Discount Rates	-0.811975809	1		
Lombard rates	-0.633592062	0.890698701	1	
2-weeks Repo	-0.764351274	0.990582755	0.943819654	1

Table 4.4b: Correlations results between FDI and monetary policy instruments.

It is important to mention here that even though there is a higher correlation between the monetary policy tools and FDI, the reality is that these tools play a very minor role in influencing FDI. After determining that

there was a strong negative correlation, a regression analysis was done to find the equation that relates the Discount rate to FDI inwards flow. Also of importance to mention is that these results are from historical data and so we can not accurately predict the FDI flow precisely using the regression equation.

4.9 Regression Analysis

Regression analysis is important to focus the future inward flows of FDI and that is why it was important to have a general regression formula that helps in focusing the future trends.

Regression analysis was done to find a mathematical formula for the relation of the correlation result in section 4.7 above that foreign direct investment inflow in the Czech Republic is negatively related to monetary policy tools. The analysis was done using FDI inward inflow data and the yearly average Discount rate data. The results are as follows:

SUMMARY

OUTPUT

Regression Statistics	
Multiple R	0.811975809
R Square	0.659304715
Adjusted R Square	0.640377199
Standard Error	29401.43973
Observations	20

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30111317452	30111317452	34.83313498	1.37846E-0
Residual	18	15560003845	864444658		
Total	19	45671321297			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	99226.69723	9763.68999	10.16282751	6.96143E-09	78713.9457
Discount Rates	-9757.008913	1653.181058	-5.901960265	1.37846E-05	13230.2134

Table Table 4.5: Regression Analysis

4.9.1 Results/ Findings and Interpretation

The equation for the regression analysis carried out is:

FDI =99226.69723 -9757.008913 Discount Rate

The Statistical interpretation of the regression formula above is that if the discount rate is raised by 1% point, the consequence on FDI will decrease be 89469.6883 (99226.69723 – 9757.008913) Czech Crowns. We can only say with 81.20% certainty that the relationship between FDI Inflow is related according to the equation. This leads us to the conclusion that discount rate and in consequence monetary policy alone has very minimal effect on the FDI inflow into the Czech Republic. And thus this leads us to our second part of analysis that is factor analysis which will be done by comparing by ranking the most important factors for greenfield investments into Czech Republic based on already successful foreign companies that invested resources into Czech Republic. The equation above also tells us that a higher interest rate, can affect foreign companies (especially if they finance their activities using local borrowing) has a negative effect on FDI.

Changes in incentives and fiscal policies affects FDI as will be illustrated in the two following case studies. Generally, a higher Corporate tax rate demotivates potential investors from investing and subsequently lowers the FDI inflows. The same principle applies to interest rate because most investors fund their operations by borrowing from local banks and if the interest rate is high, then a potential investor may not be motivated to invest in a country and subsequently this lowers FDI. The two case studies analyses portray this picture in the case of Czech Republic.

4.10 Examples of Foreign Direct Investment in Czech Republic.

This part deals with successful examples of foreign companies that have successfully been attracted and invested into the Czech Republic. To be specific greenfield investments and some brownfield investments. We are going to look at the main factors that influenced these foreign companies to invest in the Czech Republic.

There are several foreign companies that have been attracted to set up base and invest in the Czech Republic. We are going to do an empirical analysis of these factors based on two examples of companies that set up production in the Czech Republic. The two companies are NEXEN TIRES and HYUNDAI.

4.10.1 Example 1: NEXEN TIRES

NEXEN is a leading global tire and tube manufacture from South Korea that wanted to strengthen its position in the European market and provide a stable supply of original equipment tires for global car manufacturers in 2015, the company held a ground breaking ceremony and invested more than 829 Euros million to build the new plant on 650,000 square meters of land in Zatec, Czech Republic. (NEXEN, 2015)

Nexen Tire plans for the plant to be operational by 2018 and then to gradually increase its annual production capacity to over 12 million units, based on prevailing market conditions. It is expected that the new plant will create more than 1,000 jobs in the region. This plant will be the second biggest NEXEN tires facility outside Korea after the one in Qingdao, China. The construction of the plant in Zatec was planned to meet demand of European market and to ensure a stable supply of tires for car manufacturers such as Skoda Auto, Volkswagen, SEAT among others. (NEXEN, 2015)

The company cites the strategic location of the Czech Republic as their main FDI incentive factor because the Czech Republic is centrally located and its proximity to 30 car manufacturer’s plants in a 400 kilometer radius from Zatec which is very advantageous. For NEXEN tires it is also next sourcing as their will be producing just next to their target market which includes Germany, France And the United Kingdom. (NEXEN, 2015)

The second important factor that tipped this FDI in favor of Czech Republic is the available large stable workforce and the wages that they receive are not as high as in other European countries. (NEXEN, 2015)

In addition to the geographical benefits, proactive efforts to attract investment by the Czech Republic government played another decisive role in the construction of the new plant in Zatec. (NEXEN, 2015)

4.10.2 HYUNDAI MOTORS

Hyundai Motor Manufacturing Czech Company based in the Industrial Zone of Nošovice was founded on 7th July 2006. An agreement on the highest foreign investment in the history of the Czech Republic was concluded by representatives of the Czech Republic, Moravian-Silesian region, CzechInvest agency and Hyundai Motor Group in Korea one year earlier. (HYUNDAI, 2016)

The whole construction was done very fast with the erection of the first pillar in April 2007 it took only 18 months to build the plant. This plant is one of the most modern car manufacturing plants in Europe according to industry professionals. The current plant manufacturing capacity is 300000 cars per year but in 2016 the target is 350000 cars. The total investment was 1.12 billion Euros (HYUNDAI, 2016)

The main reason cited by Hyundai for the FDI was the strategic location of Czech Republic and the proximity to the European market, skilled workforce reliable infrastructure and cost competitiveness. (HYUNDAI, 2016) some of the incentives obtained by Hyundai from the Czech government was a special manufacturing zone with lower tax rate. Czechinvest which is a government agency also facilitated the transactions and eased all restrictiveness to make the legal process easier and faster.
The above examples tend to score high on the importance and geographical location of the Czech Republic. If We were to base our results only on this two case studies, then the most important factor that attracts FDI into the Czech Republic would be the strategic location of Czech Republic. However, I would like to mention that the case studies are biased inasmuch as these are the two biggest FDI deals in the Czech Republic, the two case studies lie in the same industry which is the automobile industry and thus the bias. But an important thing to note from these case studies is that, when it comes to the

automobile industry, most FDI into the Czech Republic is due to the strategic location of the country.

According to IMD world competitiveness Report 2015, the following factors are listed as the prime factors that attract FDI into the Czech Republic.

- Skilled workforce
- Reliable infrastructure
- Cost competitiveness
- High Education level
- Strategic location

The factors above are listed based on their importance and they are ranked according to the factors that attracted more FDI according to investors survey that were carried out by the organization. (KPMG, 2014)

5. Conclusions and Recommendations.

This chapter deals with the conclusion of the analysis mad on the previous chapter and it proposes recommendations that the policy makers in the Czech Republic could use to attract and control the FDI flows into the Czech Republic.

This thesis set out to analyze the trend of inward Foreign direct investment (FDI) flow into the Czech Republic and find out the main factors that attract Foreign direct investment into the Czech Republic. It also looked into the effects of monetary and fiscal policies of Czech Republic on FDI. It started out with the theoretical explanation of major concepts and macroeconomic explanations of FDI. Then it looked at the methodology that is employed when measuring FDI in the Czech Republic. Also included was a detailed explanation of the important factors that affect FDI inward inflows to the Czech Republic. The main aim which was to look at the trends of FDI since the 1990's and try and pinpoint the factors that affected FDI was and also explain this patterns. This was achieved using different methodologies. The methodology used include factor analysis using two examples of NEXEN TIRES and HYUNDAI MOTORS, correlation analysis and regression analysis which came up with an equation relating FDI to interest rate.

Through theoretical information and empirical analysis, the thesis has come to the conclusion that there is no one single factor that is more important by itself. When foreign investors decide to invest in a country, they consider a wide rage of factors and in as much as the investors have a list of priorities of factors, the overall decision is usually due to more than one single factor. Nevertheless, this thesis has come to the conclusion that the order of priority of these factors is:

- skilled workforce
- reliable infrastructure
- cost competitiveness
- high education level and
- the strategic location of Czech Republic respectively in that order.

The other important conclusion from the regression analysis is that when the discount rate or interest rates rises by one percentage point, the FDI inflow into the Czech Republic goes down by 89469.6883 U.S. dollars. This does not only apply to brownfield investments but also greenfield investments.

For example, foreign owned countries in the Czech Republic usually borrow (take loans) from the Czech banks to fund their operations. This is because they need the Czech Crowns to pay wages and for purchases from local supplies just to mention a few. If the interest rate rises, these means that the firms will have pay more for their operations and these reduces the profit margin. This amount is not so significant but it is interesting to know the general effect of some of these factors.

This thesis also comes up with a recommendation that further in-depth studies should be carried out to find out the relationship of each incentive factor on FDI in the Czech Republic, that way more precise issues on FDI in the Czech Republic can be solved.

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